



**Global Environmental
Compliance & Sustainability**

January 14, 2015

Reference No. 013968

Mr. Peter Ramanauskas
Project Manager for IND 0060306099
Waste, Pesticide and Toxins Division
U.S. EPA Region 5
77 West Jackson Blvd. (DW-8J)
Chicago, IL 60604-3590

Dear Mr. Ramanauskas:

Re: RCRA Corrective Action Administrative Order on Consent (AOC)
Progress Report #55, Fourth Quarter 2014
GM CET – Bedford Facility, IND 006036099, Docket No. RCRA-05-2014-0011
Bedford, Indiana

Please find enclosed the Progress Report #55 (Fourth Quarter 2014) for the Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) project at the GM Castings, Engines, and Transmissions (CET; formerly Powertrain) Bedford Facility (Facility) at 105 GM Drive Bedford, Indiana, and select surrounding properties (Site). This report is being submitted in accordance with the Administrative Order on Consent, effective August 4, 2014 (United States Environmental Protection Agency (U.S. EPA) Docket No. RCRA-05-2014-011).

The next RCRA quarterly progress report covering the first Quarter of 2015 will be submitted on or before April 15, 2015.

Should you have any questions regarding this document, please do not hesitate to contact me at (313) 510-4328.

Yours truly,

General Motors LLC

Cheryl R. Hiatt
Project Manager

PG/jdh/152
Encl.

cc: See Attached Distribution List

Mr. Ramanaukas
January 14, 2015

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GM Bedford Distribution List

Peter Ramanaukas	U.S. EPA, Region 5
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Lisa LaCouver	GM Bedford Environmental Compliance
James McGuigan	CRA Project Manager
Bill Steinmann	CRA Project Geologist
Katie Kamm	CRA Oversight Engineer
Stephen Song	ENVIRON International Corporation, Inc.



RCRA Facility Investigation and CERCLA Removal Action

Progress Report 55 Fourth Quarter 2014

GM CET – Bedford Facility
105 GM Drive
Bedford, Indiana

EPA ID# IND006036099
AOC Docket No. RCRA-05-2014-0011

Prepared for: GM LLC

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**Progress Report
Distribution List**

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Section 1.0 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 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 fourth calendar quarter of 2014 for the RCRA Corrective Action (CA) Project at the GM Castings, Engines, and Transmissions (CET; formerly Powertrain) – Bedford Facility (Facility) and select surrounding properties (Site), Bedford, Indiana.

The next RCRA progress report covering the first Quarter of 2015 will be submitted on or before April 15, 2015.

Section 2.0 List of Completed Activities

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

- Maintenance of storm water and erosion controls continued on an as-needed basis.
- 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 IDEM as they became available. As of the December 2014 sampling, the 12-month rolling average concentration of PCBs in the Spring 018 discharge is 0.17 micrograms per liter ($\mu\text{g/L}$). Regular monthly sampling was conducted on October 8, November 12 and December 10, 2014. Precipitation conditions for opportunistic sampling were not met during the 4th Quarter 2014 and so no samples were taken after a large rainfall.
 - Accumulated sediment within the Spring 018 containment area berm was removed in early October 2014. A work plan for the sediment removal was submitted to U.S. EPA and IDEM in a Memo dated October 6, 2014. A sediment sample was collected from within the Spring 018 berm, with results showing PCBs above criteria. The impacted sediment was removed and properly disposed.
- The 300 gpm design capacity (Site Source Control [SSC]) and 2,000 gpm design capacity water treatment plants (WTPs) collected and treated 2,340,000 gallons of water this past quarter. Based on influent samples, the total PCB removal mass for the quarter for the groundwater collection systems was 0.031 pounds. A summary of the volumes and sample results used for this calculation is provided in Table 2.2. This table was first provided at U.S. EPA's and IDEM's request in an October 1, 2014 email and subsequently will be

incorporated into the quarterly progress report and updated on a quarterly basis. An estimated 0.57 pounds of PCBs were removed during 2014 through collection and treatment of the groundwater.

- Concrete filling of Pool #2 upstream of the confluence with Tributary 3 and Spring 018 was delayed due the status of the permits to work in the creek. An amendment to the CERCLA Administrative Order on Consent (CERCLA AOC) is being prepared to allow GM LLC to conduct remaining creek work in the Spring 018 area. Following the amendment, the filling will be scheduled as the weather allows.
- GM continued the assessment of the ability to equip the current diesel-powered backup pump located at Wet Well #3 (WW#3) with reserve floats and other components for the diesel pump to automatically start in case of a potential overflow condition should the current electric pumps in WW#3 lose power. This retrofit was completed on December 22, 2014.
- The fourth quarter 2014 EI CA750 monitoring of static groundwater levels was conducted in October 2014.
- The First Half 2014 EI CA750 Sampling Results memo was submitted to the U.S. EPA on December 8, 2014.
- The Second Half 2014 EI CA750 Sampling was conducted in November and December 2014. As communicated in the responses to U.S. EPA comments on the Vault reports, borehole 9-4 was added to the sampling scope of work for EI CA750 and will be included in the Second Half 2014 EI CA750 Sampling Results memo.
- GM and CRA chemists continue to review the surrogate recovery issues with the laboratory. A technical summary of the issue, including corrective measures to address the issue in the future will be submitted in the first quarter 2015.
- The East Plant and West Plant cover continues to be monitored.
- A final inspection of the road surface along the haul routes was conducted to determine if any final repairs are needed. Repair (road/bridge connection) along Peerless Road at the bridge was conducted in November 2014 to address some slight settling.
- U.S. EPA provided additional comments on the 2012 Annual Vault Report, the Vault Post-Closure Plan and the Vault Construction Certification Report on November 25, 2014.
- A memorandum summarizing the work plan for additional surficial sampling in previously unsampled areas that are not covered with a barrier was submitted to the U.S. EPA on October 31, 2014.
 - U.S. EPA emailed comments on the work plan on December 5, 2014.
- The Downstream Parcels Monitoring and Maintenance Plan was submitted to the U.S. EPA and IDEM on November 7, 2014.

- The Construction Certification Report for the Downstream Parcels Removal Action was submitted to the U.S. EPA and IDEM on December 12, 2014.
- The Construction Certification Report for the West Plant Area Interim Measures (IMs) was submitted to the U.S. EPA and IDEM on November 12, 2014.
- The Pilot Perimeter Groundwater Collection Trench Study was submitted to the U.S. EPA and IDEM on December 2, 2014.
- The AOI 8 Groundwater Source Collection System Interim Measure was submitted to the U.S. EPA and IDEM on December 31, 2014.
- A public meeting and Community Liaison Panel (CLP) meeting were held on December 10, 2014.
 - The Bedford Times reported on the meeting in a December 12, 2014 article titled "PCB work at GM ongoing".
- Fact Sheet #39 was published December 3, 2014.
- Conference calls were held with U.S. EPA and IDEM on October 16 and 30, November 13, and December 4, 2014, to discuss items related to the project.
- On-Site construction meetings for the reporting period have been held informally daily and formally as needed. Formal SES construction meetings were held the first Tuesday of the month on October 7, November 4, and December 2, 2014. Tailgate safety meetings are held daily for both the consultant and the contractor.
- The RCRA/CERCLA Quarterly Progress Report #54, covering the third Quarter of 2014, was submitted to the U.S. EPA and IDEM on October 14, 2014.

Section 3.0 Summaries of all Problems and Planned Resolutions

- During the course of the remediation work, approximately 40 tires were found on Parcel 216. These tires were on Parcel 216, but not in the remediation area. They were stockpiled on Parcel 216, and the tires will be sent to a tire recycling facility (Seals Tire – a IDEM registered tire recycling facility).

Section 4.0 Summaries of all Changes Made in the Corrective Action (CA) During the Reporting Period

- Submittal of the Unsampled Areas Soil Sampling Work Plan on October 31, 2014
- Submittal of the Downstream Parcels Maintenance and Monitoring Plan on November 7, 2014
- Submittal of the West Plant IM Construction Certification Report on November 12, 2014
- Submittal of the Pilot Perimeter Groundwater Trench Collection System Study on December 2, 2014
- Publication of Fact Sheet #39 on December 3, 2014
- Submittal of the Downstream Parcels RA Construction Certification Report on December 12, 2014
- Submittal of the AOI 8 Groundwater Source Removal IM Work Plan on December 31, 2014

Section 5.0 Community Relations

The telephone number for public contact is 812-277-8955 (Katie Kamm, Conestoga-Rovers & Associates [CRA]). Individual meetings can be arranged to discuss project progress with residents as requested.

Community Liaison Panel (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 10, 2014. The next neighborhood/public meeting and CLP meetings are tentatively scheduled for June, 2015. 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.

Section 6.0 Changes in Personnel during the Reporting Period

Oversight personnel for CRA remain unchanged. The demobilization of SES's WTP commenced during the first quarter of 2014 and is complete as of end of December 2014.

Section 7.0 Projected Work for the Next Reporting Period

Work anticipated for the next reporting period includes:

- Respond to U.S. EPA comments on the unsampled Areas Soil Sampling Work Plan. Upon concurrence of the Work Plan perform additional on-site soil sampling within the unsampled areas and report results to U.S. EPA
- Respond to additional comments received on the Vault 2012 Annual Report, Post-Closure Plan, and Construction Certification Reports
- Continue monitoring Spring 018 on a monthly basis
- Conduct groundwater monitoring and sampling activities related to the EI CA750
- Submit the EI CA750 Second Half 2014 Results Memorandum
- Complete the first quarter EI CA750 groundwater level statics
- Finalization of the proposed Amendment to the CERCLA Administrative Order on Consent for Removal Action (Docket No. V-W-03-C-747)

The following documents will be submitted in accordance with the schedule set out by the RCRA AOC:

- Submit East Plant Construction Certification Report, including OMM activities, by March 2, 2015.

Section 8.0 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 site source control systems for the past 12 months.

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

Table 2.1

Spring 018 Sampling Results - October/November/December 2014
GM CET Bedford Facility
Bedford, Indiana

Area:		P015	P015	P015
Sample Location:		Spring 018C	Spring 018C	Spring 018C
Sample Identification:		SW-015-100814-GS-400052	SW-015-111214-GS-400058	SW-015-121014-GS-400063
Sample Date:		10/8/2014	11/12/2014	12/10/2014
	Units			
PCBs				
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.20 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.20 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.20 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.081 J	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.092 J	0.20 U	0.13 J
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.20 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.20 U	0.19 U
Total PCBs	µg/L	0.092 J	0.081 J	0.13 J
General Chemistry				
Total suspended solids (TSS)	µg/L	3000 J	4000 U	5000

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

Twelve month average as of December 2014 - 0.17 µg/L PCBs

Table 2.2

**300 gpm Design Capacity Water Treatment System PCB Mass Removal Estimate
GM Bedford CET Facility
Bedford, Indiana**

	<i>Estimated 300 gpm Design Capacity System Treated Volume ⁽¹⁾ (gallon)</i>	<i>300 gpm Design Capacity System Treated Volume (gallon)</i>	<i>Estimated PCB Influent Concentration ⁽²⁾ (µg/L)</i>	<i>PCB Influent Concentration (µg/L)</i>	<i>Mass PCB Treated (pound)</i>
January 2014	1,394,952	--	4.7	--	0.055
February 2014	1,392,062	--	4.7	--	0.055
March 2014	2,150,655	--	4.7	--	0.084
April 2014	1,735,126	292,720	--	3.1	0.052
May 2014	--	2,020,660	--	2.6	0.044
June 2014	--	1,614,800	--	7.1	0.096
July 2014	--	440,460	--	4.4	0.016
August 2014	--	791,734	--	3.7	0.024
September 2014	--	1,068,718	--	2.4	0.021
October 2014	--	1,359,936	--	4.9	0.056
November 2014	--	1,198,730	--	3.5	0.035
December 2014	--	2,340,508	--	1.6	0.031
	Total Estimated Volume of Water Treated ⁽¹⁾	17,801,061		Total Mass PCB Removed	0.57

Note:

⁽¹⁾ The groundwater treatment system was down from Oct. 2013-April 2014. During this time, groundwater was redirected to the storm water pond. Estimated treated volumes are estimated based on the treated volumes for the corresponding month for years 2008 - 2013.

⁽²⁾ Estimated PCB influent concentration calculated based on the average influent concentration for years 2008-2014