



October 15, 2024

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 87, April through September 2024
GM Casting Operations 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 Casting Operations (BCO) 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 from April through September 2024 for the RCRA Corrective Action (CA) Project at the GM BCO – Bedford Facility (Facility) and select surrounding properties (Site), Bedford, Indiana.

The next RCRA progress report covering October 2024 through March 2025 will be submitted on or before April 15, 2025.

1. List of Completed Activities

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

1. The Groundwater Treatment Plant (GWTP) collected and treated water from the Pilot Trench, Phase II Trench, Vault sumps, and wet wells during April through September 2024. An estimated 0.24 pounds of PCBs were removed during the reporting period through collection and treatment of the groundwater. A summary of the volumes and sample results used for this calculation is provided in Table 1. Operational and compliance samples were collected quarterly. Monthly discharge monitoring reports have been submitted to the State of Indiana in conformance with the National Pollutant Discharge Elimination System (NPDES) Permit Number IN0064424. A total of 14,453,789 gallons of treated groundwater were discharged during the reporting period.
2. Absorbent socks were removed and replaced from CH-5, MW-X209Y053, CAMW-2, and CAMW-3 monthly from April through September 2024. Table 2 summarizes NAPL removal (based on disposal weights) from the AOI 8 area.
3. Routine project meetings updates were held with U.S.EPA and IDEM on April 18, May 16, June 24, July 17, August 15, and September 25, 2024. Agendas outlining meeting discussion points provided via email on day of meeting.
4. GHD submitted Progress Report 86 to U.S. EPA on April 8, 2024.

5. GM provided U.S. EPA with a copy of the cover letter documenting GM's procurement of Financial Assurance for 2024 on April 14, 2024.
6. GHD provided a summary of NAPL recovery at CAMW-2 to U.S. EPA on April 23, 2024.
7. East Plant Area Cover System was mowed in May 2024.
8. GHD conducted the semi-annual cap inspection on May 21, 2024. The electronic field inspection form and photos are not available. However, during the post-monitoring wrap up meeting, it was verbally relayed that the cover systems had no issues. The next cover system inspection is scheduled for November 2024.
9. Quarterly groundwater level monitoring was conducted May 20-22, 2024, and August 26-28, 2024. Data is provided in the EI CA750 summary memorandums.
10. Semi-annual groundwater sampling was conducted May 20-23, 2024. Data is provided in the EI CA750 summary memorandums.
11. Additional Pilot Trench performance water quality monitoring for PCB was conducted August 27, 2024, at select monitoring wells. Data will be provided in the revised Pilot Trench Performance Monitoring Report.
12. Wet well #5 electrical and communication hookup and testing for the Phase II Trench construction was completed on May 3, 2024.
13. U.S. EPA provided comments on the Pilot Trench performance Monitoring Report (PMR) on May 15, 2024. GHD provided responses to U.S. EPA's comments regarding the Pilot Trench PMR to U.S. EPA on July 10, 2024. The revised Pilot Trench PMR was submitted to U.S. EPA on July 12, 2024.
14. GHD submitted the 2023 Vault Report to U.S. EPA and IDEM on May 21, 2024.
15. GHD provided U.S. EPA with copies of GM's written communication with the Parcel 15 property owner on July 5, 2024.
16. GM received notice on July 16, 2024, from Indyre, LLC that they would not grant access to Parcel 15.
17. GM informed U.S. EPA in writing of Indyre, LLC's denial of access to Parcel 15 on July 16, 2024.
18. GM, U.S. EPA, IDEM, and GHD held a mid-year project review meeting at the U.S. EPA offices in Chicago, Illinois, on July 17, 2024.
19. .
20. GHD provided responses to U.S. EPA's comments regarding the Long-Term Operation, Monitoring, and Maintenance Plan (LTOMMP) on August 9, 2024.
21. GHD provided a revised copy of the Residential Well Survey to U.S. EPA on August 15, 2024.
22. GHD provided a summary of mass PCB removal between October 2023 through July 2024, to U.S. EPA on August 16, 2024.
23. GHD provided U.S. EPA information on proposed new monitoring well locations on August 20, 2024. U.S. EPA requested additional information on the proposed new monitoring wells on September 3, 2024. GHD provided responses later the same day.
24. GHD submitted the EI CA750 First Half 2024 sampling event summary on August 20, 2024. U.S. EPA provided comments on September 9, 2024. GHD provided the revised sampling summary on September 26, 2024.
25. GHD provided additional responses to U.S. EPA's comments regarding the Corrective Measures Proposal (CMP) on August 29, 2024.
26. GM provided the Parcel 15 creek maintenance plan drawings to U.S. EPA on August 29, 2024.
27. GM met with bidders on September 6, 2024, to reviewed planned construction activities.

28. U.S. EPA informed GM that on September 11, 2024, Indyre, LLC. indicated they were denying a meeting with to discuss access to Parcel 15.
29. U.S. EPA informed GM on September 19, 2024, that Indyre, LLC. had requested \$5,000 to sign the GM proposed access agreement.

2. Summaries of Problems and Planned Resolutions

2.1 Concrete Sealing Upstream of Confluence

Plans have been developed to address the concrete heave and cracking in a limited area just upstream of the confluence of Bailey's Brach Creek and Tributary 3 including installing a headwall at Tributary 2 that is keyed into the bedrock and creating a lined pool in the area where the concrete broke. This should reduce the potential from cracking due to freeze/thaw cycling. GM and U.S. EPA are working with the property owner to access the area to conduct the work. Contractor bids for this work are under review.

2.2 Asphalt Crack Sealing

Cover system inspections noted the asphalt cover system cracks are widening. These cracks will need to be cleaned and sealed. Asphalt work is included as part of the 2024 construction work. Contractor bids for this work are under review.

2.3 Access to Parcel 15

GM has offered reasonable compensation to Indyre, LLC., owner of Parcel 15, for long term access to the parcel. Long term access is needed to conduct the upcoming maintenance and expected monitoring associated with dye trace studies. GM is waiting for Indyre LLC.'s response to its last offer.

3. 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 monthly transducer data from the Pilot Trench monitoring locations.
4. Obtain a Notice of Termination for the Phase II Trench construction stormwater general permit.
5. Submit the Phase II Trench Performance Monitoring Plan.
6. Initiate conduct of the Phase II Trench Performance Monitoring Plan upon approval of U.S. EPA.
7. Submit the Phase II Trench Construction Completion Report.
8. Respond to U.S. EPA comments on the 2023 TSCA Vault Annual Report.
9. Mow the East Plant Area cover system.
10. Conduct the semi-annual cover system inspection.
11. Finalize the CMP and LTOMMP.
12. Finalize the Pilot Trench PMR.
13. Conduct the second half 2024 EI CA750 sampling event and the quarterly static water level gauging events.
14. Provide U.S. EPA and IDEM project updates via emails and/or telephone calls.

15. Select a contractor for the Parcel 15 maintenance work.
16. Install monitoring wells to support Phase II Trench performance monitoring.
17. Install monitoring wells in the AOI 1 area in accordance with the CMP.
18. Submit plan to digitize rock cores, temporarily stored at the project site.
19. Request IDEM and U.S. EPA approval to modify Vault sampling and monitoring frequencies.
20. Request U.S. EPA approval to discontinue the EI CA750 groundwater monitoring program and begin the perimeter groundwater control system monitoring program in accordance with the LTOMMP.
21. Request U.S. EPA approval to modify the NAPL collection program in accordance with the LTOMMP.

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

Sincerely,



Ed Peterson
Senior Project Manager, Remediation Services
GM Sustainable Workplaces

Encl.

cc: Corey Peaslee; U.S. EPA
Chris Myer; IDEM
Nathan Milliman; General Motors

Katie Kamm; GHD
Julie Luzwick; GHD
Nick Cooper; General Motors

Table 1

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

	Groundwater Treatment Plant (GWTP) Treated Volume (gallon)	PCB Influent Concentration ^(1,2) (µg/L)	Mass PCB Treated ⁽³⁾ (pound)
April 2024	4,368,489	2.1	0.077
May 2024	3,867,582	2.1	0.068
June 2024	1,512,262	2.1	0.027
July 2024	1,632,582	1.7	0.023
August 2024	1,878,095	1.7	0.027
September 2024	1,194,779	1.7	0.017
Total Estimated Volume of Water Treated During Reporting Period(gallons)			14,453,789
Total Estimated Mass of PCB Treated During Reporting Period (pounds)			0.24
Total Estimated Mass of PCB Treated, Since January 2019 (pounds)			3.07

Notes:

¹ PCB concentration based on an average of parent and duplicate sample, if collected.

² Influent sampling reduced from monthly to quarterly in April 2021.

³ Mass removed = $\frac{\text{treated volume (gallons)} \times \text{PCB concentration} \left(\frac{\mu\text{g}}{\text{L}}\right) \times 3.7854}{453.59 \times 1,000,000}$

Table 2

**AOI 8 NAPL Removal
GM BCO Facility
Bedford, Indiana**

Date	Well	Oil Mass (lbs)	PCB Content (mass %)	PCB Mass (lbs) ¹
4/30/2024	CH-5	1.48	11%	0.16
5/22/2024	CH-5	0.98	11%	0.11
6/24/2024	CH-5	1.98	11%	0.22
7/31/2024	CH-5	0.98	11%	0.11
8/28/2024	CH-5	1.98	11%	0.22
9/24/2024	CH-5	1.98	11%	0.22
Total PCB Removed from CH-5 (LNAPL) During Reporting Period ^{1,3}				1.02
Total PCB Removed from CH-5 (LNAPL) Since 2018 ^{1,3}				11.39
4/30/2024	MW-X209Y053	0.98	40%	0.39
5/22/2024	MW-X209Y053	0.54	40%	0.22
6/24/2024	MW-X209Y053	0.98	40%	0.39
7/31/2024	MW-X209Y053	1.98	40%	0.79
8/28/2024	MW-X209Y053	1.23	40%	0.49
9/24/2024	MW-X209Y053	0.98	40%	0.39
Total PCB Removed from MW-X209Y053 (DNAPL) During Reporting Period ^{1,2,4}				2.68
Total PCB Removed from MW-X209Y053 (DNAPL) Since 2019 ^{1,2,4}				29.35
4/4/2024	CAMW-2 (pump)	128.53	31%	39.84
4/30/2024	CAMW-2	0.98	31%	0.30
5/22/2024	CAMW-2	0.98	31%	0.30
6/24/2024	CAMW-2	1.18	31%	0.37
7/31/2024	CAMW-2	1.48	31%	0.46
8/28/2024	CAMW-2	1.23	31%	0.38
9/24/2024	CAMW-2	1.48	31%	0.46
Total PCB Removed from CAMW-2 (DNAPL) During Reporting Period ⁵				42.12
Total PCB Removed from CAMW-2 (LNAPL & DNAPL) Since 2022 ⁵				73.14
4/30/2024	CAMW-3	0.98	31%	0.30
5/22/2024	CAMW-3	0.98	31%	0.30
6/24/2024	CAMW-3	1.18	31%	0.37
7/31/2024	CAMW-3	1.48	31%	0.46
8/28/2024	CAMW-3	1.23	31%	0.38
9/24/2024	CAMW-3	1.48	31%	0.46
Total PCB Removed from CAMW-3 (DNAPL) During Reporting Period ^{5,6}				2.27
Total PCB Removed from CAMW-3 (DNAPL) Since 2021 ^{5,6}				10.19

Table 2

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

Notes:

1 PCB weight based on average of analytical data

Location	Sample Date	PCB (mg/kg)	Average (mg/kg)
CH-5	9/19/2005	224,500	109,067
	8/16/2011	89,700	
	4/9/2014	13,000	
MW-X209Y053	9/19/2006	400,000	400,000
CH-2A	11/5/2008	380,000	580,000
	4/9/2014	780,000	
CAMW-2 (lower)	11/21/2019	310,000	310,000
CAMW-2 (upper)	11/21/2019	160,000	160,000

2 PCB weight from solar sipper and the initial removal from MW-X209Y053 (3/25/2019) is based on an approximate gallons of oil removal. DNAPL density of 1.16 g/cc used when converting volume (gallons) to mass (pounds). Density value determined by laboratory analysis from the 4/19/2014 sampling event.

3 CH-5 Mass $\frac{\text{Sock net weight (lbs)} \times 109,067(\text{mg/kg})}{1,000,000 (\text{mg/kg})}$
(lbs)=

4 MW-X209Y053 $\frac{\text{Sock net weight (lbs)} \times 400,000 (\text{mg/kg})}{1,000,000 (\text{mg/kg})}$
Mass(lbs) =

3/25/2019 mass removal calculated based on removal of 2.5 gallons of NAPL

5 CAMW-3 [or $\frac{\text{Sock net weight (lbs)} \times 310,000(\text{mg/kg})}{1,000,000 (\text{mg/kg})}$
CAMW-2] Mass
(lbs)=

6 PCB concentration at CAMW-2 used for removal calculations as no data is available for CAMW3 and the two locations are in close proximity.