Second Quarter 2016 Progress Report 61

GM CET – Bedford Facility
105 GM Drive
Bedford, Indiana
EPA ID# IND006036099
AOC Docket No. RCRA-05-2014-0011

651 Colby Drive Waterloo Ontario N2V 1C2 Canada

013968 | Report No 397 | July 15, 2016

Global Environmental
Compliance & Sustainability

July 15, 2016 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 61, Second Quarter 2016
GM CET – Bedford Facility, IND 006036099, Docket No. RCRA 05-2014-0011
Bedford, Indiana

Please find enclosed the Progress Report 61 (Second Quarter 2016) 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 third Quarter of 2016 will be submitted on or before October 15, 2016.

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/jp/162
Encl.

c.c.: See Attached Distribution List

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GM Bedford Distribution List

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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 second 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 third quarter of 2016 will be submitted on or before October 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 June 2016 sampling, the 12-month rolling average concentration of polychlorinated biphenyls (PCBs) in the Spring 018 discharge is 0.16 micrograms per liter (µg/L). Regular monthly sampling was conducted on April 13, May 11, and June 8, 2016. An opportunistic sample was collected on June 15, 2016, following a rainfall event of greater than 1 inch in 24-hours. The regular samples collected on May 11, and June 6 were non-detect for PCBs. The regular sample collected on April 13, 2016 resulted in an estimated concentration of 0.067J µg/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 4,891,000 gallons of water this past quarter. An estimated 0.09 pounds of PCBs were removed during the second quarter of 2016 through collection and treatment of the groundwater and an estimated 0.36 pounds of PCBs in the twelve months inclusive of June 2016. 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
    - Based on discussions with U.S. EPA on April 27, 2016, GM submitted a revised CERCLA order to U.S. EPA.

- The Downstream Parcels Monitoring Report for 2015 was submitted to U.S. EPA on March 4, 2016.
    - U.S. EPA indicated they had no comments on the report on June 17, 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.
    - Sampling activities under this plan were scheduled to commence July 11, 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 and will be finalized in the third quarter.
    - U.S. EPA was notified of an issue with the Vault Leachate Collection System (LCS) Sumps on April 8, 2016.
    - U.S. EPA was updated on the condition of the LCS Sumps on May 23, 2016.
- The second quarter 2016 EI CA750 monitoring of static groundwater levels was completed the week of April 25, 2016. The first half 2016 semi-annual groundwater quality sampling was completed in the week of April 27, 2016. The validated results will be reported in the third quarter 2016.
- The Pilot Perimeter Groundwater Collection Trench Study (Pilot Trench) work plan was submitted to the U.S. EPA and IDEM on December 2, 2014.
    - 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.
        - Temporary WTP plant is currently operational and treating water.
    - SES has completed working on piping from the Pilot Trench and SSC sources to the new Groundwater Treatment Plant this past quarter. Trench is now completed with piping and gravel backfill.
    - SES is completing placement of the gravel blanket above the south end of the trench followed by the placement of clay backfill. The north end was completed this past quarter.
    - The cover system liner restoration at the trench area continued this past quarter.
    - GM and GHD are currently developing a pilot test interim groundwater monitoring program ("the Pilot Trench") study to collect operational data and monitor the impact of the pilot trench to groundwater. The pilot test interim groundwater monitoring plan will be submitted in the third quarter 2016.

- 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 was commissioned this past quarter.
    - Permanent power installation was completed this past quarter.
- 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 to be completed within the third quarter 2016.
- Formal monitoring of the East Plant, West Plant and Vault cover systems for the Second Quarter was completed on June 16, 2016.
- The Parcel 400 Sampling Plan (covering Parcels 400, 430 and 431) was approved with modifications by the U.S. EPA.
    - Delineation is completed and GHD is developing the CFR 761.61(c) request for disposal to complete the excavation and restoration of the properties. The plan is anticipated to be reviewed by the property owners and U.S. EPA in the third quarter 2016.
- 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 was completed during this past quarter; GHD completed a 30% design in the second quarter and preliminary details were described to U.S. EPA and IDEM at the Annual Review meeting on June 30. The 30% design will be completed and submitted to U.S. EPA in July with mobilization work anticipated to commence mid-July and dredging to commence in August.
- Public and Community Liaison Panel meetings to provide an update on the project and address questions and concerns from local residents were held on June 29, 2016.
- Conference calls were held with U.S. EPA and IDEM on April 14, 27, and June 16, 2016, to discuss items related to the project.
- An Annual Meeting was held in Bedford with the U.S. EPA and IDEM on June 30, 2016 to discuss project progress and future activities.
- 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 April 6, 13 and 20, May 4, 11, 18 and 25, and June 1, 8, 15, 22 and 29, 2016.

- The RCRA/CERCLA Quarterly Progress Report #60, covering the first quarter of 2016, was submitted to the U.S. EPA and IDEM on April 15, 2016.

3. Summaries of all Problems and Planned Resolutions

- Additional concrete sealing may be completed for a swallet identified, upgradient of Spring 018, in what is known as Pool 2. It is thought that a further reduction in surface water infiltration to the epikarst supplying Spring 018 may provide further stabilization of the PCB detections at the spring. Monthly monitoring continues.
- On April 8, 2016 the GHD technician attempted to manually operate the LCS sump pump. The water level elevation in the LCS sump had reached the operating limit of 674 ft (the pump-on level) and the water was not removed. Upon manual operating, the technical audibly confirmed their operation. However, the pumps did not remove water based on the flowmeter reading, which did not advance, and manual water level measurements of the sump which remained static. Initially water was manually bailed to bring the water level down and a temporary well pump was installed to to manage the water in the sump while the change out is occurring (connected the port the Leak Detection Sump is pumped into).

  GHD pulled the pumps the week of April 11 and noted that both pumps were inoperable. An assessment as to whether to repair or replace was required and it was determined that replacement was necessary.

  Pumps are set in place by sliding the pump down a set of rails. Once the pump is at the bottom of the sump, it normally slips into place with the discharge pipe from the pump lining up and joining with the face of the forcemain. The first attempt to reseat the new pumps failed and it was determined that a confined space entry would be required to manually set and confirm the pumps were properly seated in the sump.

  Water was removed from the sump using the temporary pump so that the entrant could see the sump and connections to be able to complete the work. The entrant noted that the pumps had seated correctly. In trying to troubleshoot why the pump could not remove water, the entrant removed the pumps to make sure there weren't any obstructions. He noted that the face of the forcemains was pitted. The pitting may have caused enough of a loss of pressure that the pumps could not be primed. New gaskets were ordered to provide a better seal. The forcemain (riser pipe section within the manhole sump) was also inspected to see if there were any small holes that had developed in the pipe that might be contributing to the problem. In both cases, holes were noted in the riser pipe within the manhole. No 'visible water flow' into the sump was noted.

  GHD is reviewing the pipe material type, water quality, sediment/'slag-ish' material found, etc. to determine what may have contributed to the deterioration of the riser pipe section of the forcemain so that a permanent fix can be implemented. The initial thought is that pitting and erosion of the forcemains and pump impellers was caused by the silica sand fines coming into the sump from the foundry sand waste within the vault.

  GHD and GM are evaluating replacing the riser pipes with the same or new material, or making the temporary pump operable with the automated system as a permanent installation. Water

level in the LCS sump continues to be maintained using the temporary well pump. A resolution is expected to be completed in the Third Quarter 2016.

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 GHD trailers to the update the CLP and public on the status of the clean-up efforts on June 29, 2016. The next neighborhood/public meeting and CLP meeting will be scheduled for December 2016. GM has discussed the possibility of combining the CLP and public meeting into one evening meeting for all to attend. 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 remain the same as construction work on the Stormwater Pond and GWTP operation commences and final programming is completed.

7. Projected Work for the Next Reporting Period

Work anticipated for the next reporting period includes:

- Completing the Stormwater Pond sediment removal design and initiating sediment removal in the Stormwater Pond (Area of Interest [AOI] 10).
- Installation of the backup electric generator and the backup diesel powered pump at the Pilot Trench.
- Completing repairs to the LCS sump system.

- 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
  - AOI 8 Groundwater Source Collection System IM
- Continuing monitoring Spring 018 on a monthly basis and collection of an "opportunistic" sample if weather conditions dictate (a rainfall event of greater than 1 inch in 24-hours).
- Submission of the CFR 761.61(c) request for disposal for the off-Site fill properties west of the Facility (Parcels 400, 430 and 431)
- Completion of the Unsampled Areas Soil Sampling.
- Completing the third quarter EI CA750 static groundwater levels and submission of the first half 2016 groundwater sampling report in the third quarter.
- Finalizing the proposed CERCLA Administrative Order on Consent for Removal Action.

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, which is also typically accompanied by some bare patches.
2. Small animal burrow holes, likely attributed to moles are present over parts of the East Plant cover system. GHD contacted the liner companies and the small animals 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. There is also evidence of larger burrowing animals, which is believed to be attributed to woodchucks, 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. Traps were placed this spring and checked daily while deployed with no success. It is thought the animals may have moved on. Traps will be redeployed in the third quarter to confirm. Soil and vegetation repairs will be made as necessary.
4. Light erosion was identified again along EV4, EV5, and in ES6. These areas will be monitored and re-seeded again in the third or fourth quarter during the less dry season to promote new growth.

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 has retained a contractor and asphalt repairs are scheduled to be completed in July 2016.

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. Asphalt repairs are scheduled to be completed in July 2016.

8. Repairs to portions of the Cover System, including Detention Basin 4, affected by the Pilot Groundwater Collection Trench construction are complete. Documentation of this portion of Cover System reconstruction will included in the submission of the Pilot Trench Construction Certification Report.

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

Table 2.1

Spring 018 Sampling Results - April/May/June 2016
GM CET Bedford Facility
Bedford, Indiana

Area		**P015**	**P015**	**P015**	**P015**
Sample Location:		**Spring 018C**	**Spring 018C**	**Spring 018C**	**Spring 018C**
Sample Identification:		**SW-015-041316-GS-40381**	**SW-015-051116-GS-40390**	**SW-015-060816-GS-40398**	**SW-015-061516-GS-40340**
Sample Date:		**4/13/2016**	**5/11/2016**	**06/08/2016**	**06/15/2016**
Sample Type:					
	Units				
PCBs					
		0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.067 J	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 UJ	0.19 UJ	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 UJ	0.19 UJ	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.067 J	ND	ND	ND
Total PCBs	ug/L				
Wet					
Total suspended solids (TSS)	ug/L	5200	4700	3700	13000

Notes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
12 month rolling average (July 2015 – June 2016) is 0.13 ug/L PCBs.

Table 2.2

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

	300 gpm Design Capcity System Treated Volume (gallon)	PCB Influent Concentration (µg/L)	Mass PCB Treated (pound)
July 2015	1,582,640	1.6	0.021
August 2015	1,026,256	1.3	0.011
September 2015	530,080	5.1	0.023
October 2015	347,000	5.6	0.016
November 2015	1,196,000	4.8	0.048
December 2015	1,545,000	ND (0.19U)[1]	0.001
January 2016	1,840,000	1.5 p / 1.2 p	0.021
February 2016	1,296,000	5	0.054
March 2016[2]	2,422,000	3.8	0.077
April 2016	2,336,000	1.1	0.021
May 2016	1,947,000	1.4	0.023
June 2016	608,000	9.3	0.047

Total Estimated Volume of Water Treated, Second Quarter 2016 (gallons)	4,891,000
Total Estimated Mass of PCB Treated, Second Quarter 2016 (pounds)	0.09
Total Estimated Mass of PCB Treated, Since July 2015 (pounds)	0.36

Notes:

1. Used half of the detection limit value at the associated limit to calculate the mass PCB treated.
2. Influent not sampled March 2016, so used average of previous 12 months inclusive of March 2015.
P-TestAmerica:The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Table 2.3

SES WWTP Batch Sampling Results – April/May/June 2016
GM CET Bedford Facility
Bedford, Indiana

Area		P216	P216	P216	P216	P216	P216
Sample Location:		SES WWTP Tag 1	SES WWTP Tag 3	SES WWTP Tag 6	SES WWTP Tag 7	SES WWTP Tag 8	SES WWTP Tag 1
Sample Identification:		WW-216-040416-PB-40380	WW-216-040416-PB-40379	WW-216-040416-PB-40377	WW-216-040416-PB-40378	WW-216-040416-PB-40376	WW-216-050316-PB-40388
Sample Date:		4/4/2016	4/4/2016	4/4/2016	4/4/2016	4/4/2016	5/3/2016
Sample Type:							
	Units	General Motors LLC - System Influent From Modutank	General Motors LLC - Sand Filter #1 Effluent	General Motors LLC - Carbon Unit #2 Effluent	General Motors LLC - Carbon Unit #1 Effluent (series)	MS/MSD, General Motors LLC - Effluent Post Bag Filter	General Motors LLC - System Influent From Modutank
Polychlorinated biphenyl (PCBs)							
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND	ND	ND	ND	ND

Note:

U - Not detected at the associated reporting limit.

Table 2.3

SES WWTP Batch Sampling Results – April/May/June 2016
GM CET Bedford Facility
Bedford, Indiana

Area		**P216**	**P216**	**P216**	**P216**	**P216**	**P216**
Sample Location:		**SES WWTP Tag 3**	**SES WWTP Tag 5**	**SES WWTP Tag 6**	**SES WWTP Tag 8**	**SES WWTP Tag 1**	**SES WWTP Tag 3**
Sample Identification:		**WW-216-050316-PB-40387**	**WW-216-050316-PB-40389**	**WW-216-050316-PB-40386**	**WW-216-050316-PB-40385**	**WW-216-060216-PB-40397**	**WW-216-060216-PB-40396**
Sample Date:		**5/3/2016**	**5/3/2016**	**5/3/2016**	**5/3/2016**	**6/2/2016**	**6/2/2016**
Sample Type:							
	Units	**General Motors LLC - Sand Filter #1 Effluent**	**General Motors LLC - Carbon Unit #1 Effluent**	**General Motors LLC - Carbon Unit #2 Effluent**	**General Motors LLC - Effluent Post Bag Filter**	**General Motors LLC - System Influent From Modutank**	**General Motors LLC - Sand Filter #1 Effluent**
Polychlorinated biphenyl (PCBs)							
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND	ND	ND	ND	ND

Note:

U - Not detected at the associated reporting limit.

Table 2.3

SES WWTP Batch Sampling Results – April/May/June 2016
GM CET Bedford Facility
Bedford, Indiana

Area		**P216**	**P216**	**P216**	**P216**
Sample Location:		**SES WWTP Tag 5**	**SES WWTP Tag 6**	**SES WWTP Tag 8**	**SES WWTP Tag 8**
Sample Identification:		**WW-216-060216-PB-40395**	**WW-216-060216-PB-40394**	**WW-216-060216-PB-40392**	**WW-216-060216-PB-40393**
Sample Date:		**6/2/2016**	**6/2/2016**	**6/2/2016**	**6/2/2016**
Sample Type:					**Duplicate**
	Units	**General Motors LLC - Carbon Unit #1 Effluent**	**General Motors LLC - Carbon Unit #2 Effluent**	**General Motors LLC - Effluent Post Bag Filter**	**General Motors LLC - Effluent Post Bag Filter**
Polychlorinated biphenyl (PCBs)					
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND	ND	ND

Note:

U - Not detected at the associated reporting limit.

Appendix A
Second Quarter 2016 Cover System Inspection: Field Logs, Transect Figures, and Photograph Log

TABLE D.1

COVER SYSTEMS INSPECTION LOG
CONSTRUCTION CERTIFICATION REPORT EAST PLANT COVER SYSTEM
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

Date of Inspection: 6/16/2016 SUNNY

Inspector: MIKE CURTIS 91 DEGREES

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED		
VEGETATED SOIL COVER SYSTEM						
	Transect EV1	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EXPPOSURE OF LINER				
		- EROSION				
		- LOCALIZED SETTLEMENT/SLUMPING				
		- PONDING OF WATER/DRAINAGE				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES			small trees	cut down small trees 06/16/2016
	Transect EV2	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EXPPOSURE OF LINER				
		- EROSION				
		- LOCALIZED SETTLEMENT/SLUMPING				
		- PONDING OF WATER/DRAINAGE				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				

TABLE D.1

COVER SYSTEMS INSPECTION LOG
CONSTRUCTION CERTIFICATION REPORT EAST PLANT COVER SYSTEM
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED		
VEGETATED SOIL COVER SYSTEM (CONTINUED)						
	Transect EV3	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EXPPOSURE OF LINER				
		- EROSION				
		- LOCALIZED SETTLEMENT/SLUMPING				
		- PONDING OF WATER/DRAINAGE				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				
	Transect EV4	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EXPPOSURE OF LINER				
		- EROSION	X		slight erosion	
		- LOCALIZED SETTLEMENT/SLUMPING				
		- PONDING OF WATER/DRAINAGE				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				
	Transect EV5	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EXPPOSURE OF LINER				
		- EROSION	X		slight erosion	
		- LOCALIZED SETTLEMENT/SLUMPING				
		- PONDING OF WATER/DRAINAGE				
		- SIGNS OF BURROWING BY ANIMALS				
		- ROOTING OF TREES				

TABLE D.1

COVER SYSTEMS INSPECTION LOG
CONSTRUCTION CERTIFICATION REPORT EAST PLANT COVER SYSTEM
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED		
VEGETATED SOIL COVER SYSTEM (CONTINUED)						
	Transect EV6	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EXPPOSURE OF LINER				
		- EROSION				
		- LOCALIZED SETTLEMENT/SLUMPING				
		- PONDING OF WATER/DRAINAGE				
		- SIGNS OF BURROWING BY ANIMALS	X		groundhog hole	
		- ROOTING OF TREES				
	Transect EV7	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EXPPOSURE OF LINER				
		- EROSION				
		- LOCALIZED SETTLEMENT/SLUMPING				
		- PONDING OF WATER/DRAINAGE				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				
	Transect EV8	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EXPPOSURE OF LINER				
		- EROSION				
		- LOCALIZED SETTLEMENT/SLUMPING				
		- PONDING OF WATER/DRAINAGE				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				

TABLE D.1

COVER SYSTEMS INSPECTION LOG
CONSTRUCTION CERTIFICATION REPORT EAST PLANT COVER SYSTEM
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED		
VEGETATED SOIL COVER SYSTEM (CONTINUED)						
	Transect EV9	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EXPPOSURE OF LINER				
		- EROSION				
		- LOCALIZED SETTLEMENT/SLUMPING				
		- PONDING OF WATER/DRAINAGE				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				
	Transect WV1	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EXPPOSURE OF LINER				
		- EROSION				
		- LOCALIZED SETTLEMENT/SLUMPING				
		- PONDING OF WATER/DRAINAGE				
		- SIGNS OF BURROWING BY ANIMALS				
		- ROOTING OF TREES				

TABLE D.1

COVER SYSTEMS INSPECTION LOG
CONSTRUCTION CERTIFICATION REPORT EAST PLANT COVER SYSTEM
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED		DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED			
HARD SURFACE COVER SYSTEMS							
	Transect EA1	- QUALITY OF ASPHALT COVER					
		- PRESENCE OF CRACKING OR DISCOLORATION	X		fill cracks,sealcoat		
	Transect EA2	- QUALITY OF ASPHALT COVER					
		- PRESENCE OF CRACKING OR DISCOLORATION	X		fill cracks,sealcoat		
	Transect WA1	- QUALITY OF ASPHALT COVER					
		- PRESENCE OF CRACKING OR DISCOLORATION	X		fill cracks,sealcoat		
ACCESS ROAD							
	ACCESS ROAD	- EROSION	X		fill with gravel		
		- OBSTRUCTIONS/DEBRIS					
		- POTHOLES	X		fill with gravel		
		- DAMAGE CAUSED BY VEHICULAR TRAFFIC	X		fill with gravel		

TABLE D.1

COVER SYSTEMS INSPECTION LOG
CONSTRUCTION CERTIFICATION REPORT EAST PLANT COVER SYSTEM
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED		
SWALE/DRAINAGE DITCHES						
	Transect ES1	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	trees need cut
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				
	Transect ES2	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	trees need cut
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				
	Transect ES3	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				

TABLE D.1

COVER SYSTEMS INSPECTION LOG
CONSTRUCTION CERTIFICATION REPORT EAST PLANT COVER SYSTEM
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED		
SWALE/DRAINAGE DITCHES (CONTINUED)						
	Transect ES4	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				
	Transect ES5	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				
	Transect ES6	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EROSION	X		slight erosion	
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				

TABLE D.1

COVER SYSTEMS INSPECTION LOG
CONSTRUCTION CERTIFICATION REPORT EAST PLANT COVER SYSTEM
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED		
SWALE/DRAINAGE DITCHES (CONTINUED)						
	Transect ES7	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				
	Transect ES8	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				
	Transect ES9	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				

TABLE D.1

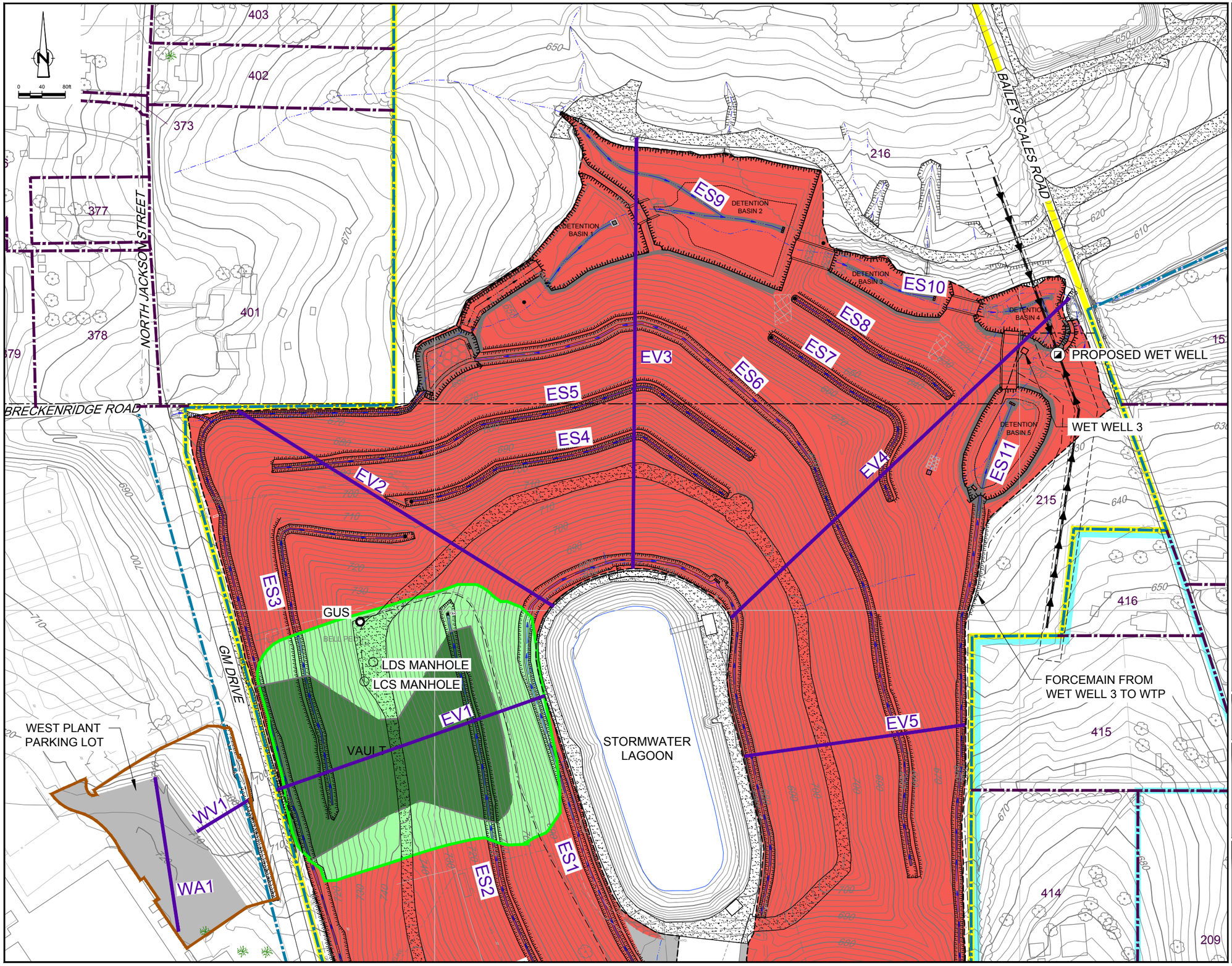
COVER SYSTEMS INSPECTION LOG
CONSTRUCTION CERTIFICATION REPORT EAST PLANT COVER SYSTEM
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED		
SWALE/DRAINAGE DITCHES (CONTINUED)						
	Transect ES10	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				
	Transect ES11	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS				
		- ROOTING OF TREES				
	Transect ES12	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS				
		- ROOTING OF TREES				

TABLE D.1

COVER SYSTEMS INSPECTION LOG
CONSTRUCTION CERTIFICATION REPORT EAST PLANT COVER SYSTEM
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED		
SWALE/DRAINAGE DITCHES (CONTINUED)						
	Transect ES13	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS	X		mole holes	
		- ROOTING OF TREES				
	Transect ES13	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
		- EROSION				
		- OBSTRUCTIONS				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
		- SIGNS OF BURROWING BY ANIMALS				
		- ROOTING OF TREES				



LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- EXISTING FENCE LINE
- EXISTING RAILROAD TRACKS
- EXISTING DIRT ROADS
- EXISTING ROADS / PAVED AREAS
- EXISTING ELECTRICAL POWER LINE
- EXISTING FORCEMAIN TO TREATMENT FACILITY
- EXISTING OVERHEAD ELECTRICAL POWER LINE
- APPROXIMATE SURFACE WATER LOCATION
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- EXISTING STORM SEWER
- WEST PLANT COVER LIMIT
- VAULT LIMIT
- EAST PLANT COVER LIMIT
- DRAINAGE DITCH
- ASPHALT PAVEMENT AREA
- LOW FLOW CHANNEL
- EAST PLANT AREA
- GM LLC OWNED RESIDENTIAL
- EAST PLANT COVER SYSTEM
- FINAL VAULT COVER SYSTEM AT SURFACE
- FINAL VAULT COVER SYSTEM BURIED BY EAST PLANT AREA COVER SYSTEM
- GRAVEL BED
- PAVED COVER SURFACE
- PROPOSED PILOT TRENCH
- GUS — VAULT GROUNDWATER UNDERDRAIN SYSTEM SUMP
- LDS — LEAK DETECTION SYSTEM SUMP
- LCS — LEACHATE COLLECTION SYSTEM SUMP
- TRANSECT

TRANSECT LABELING

E	EAST PLANT COVER
V	VEGETATIVE COVER
A	ASPHALT COVER
W	WEST PLANT COVER
S	SWALE

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

GM CET BEDFORD FACILITY
BEDFORD, INDIANA

INTERIM OPERATIONS, MAINTENANCE AND MONITORING PLAN
EAST PLANT COVER SYSTEM

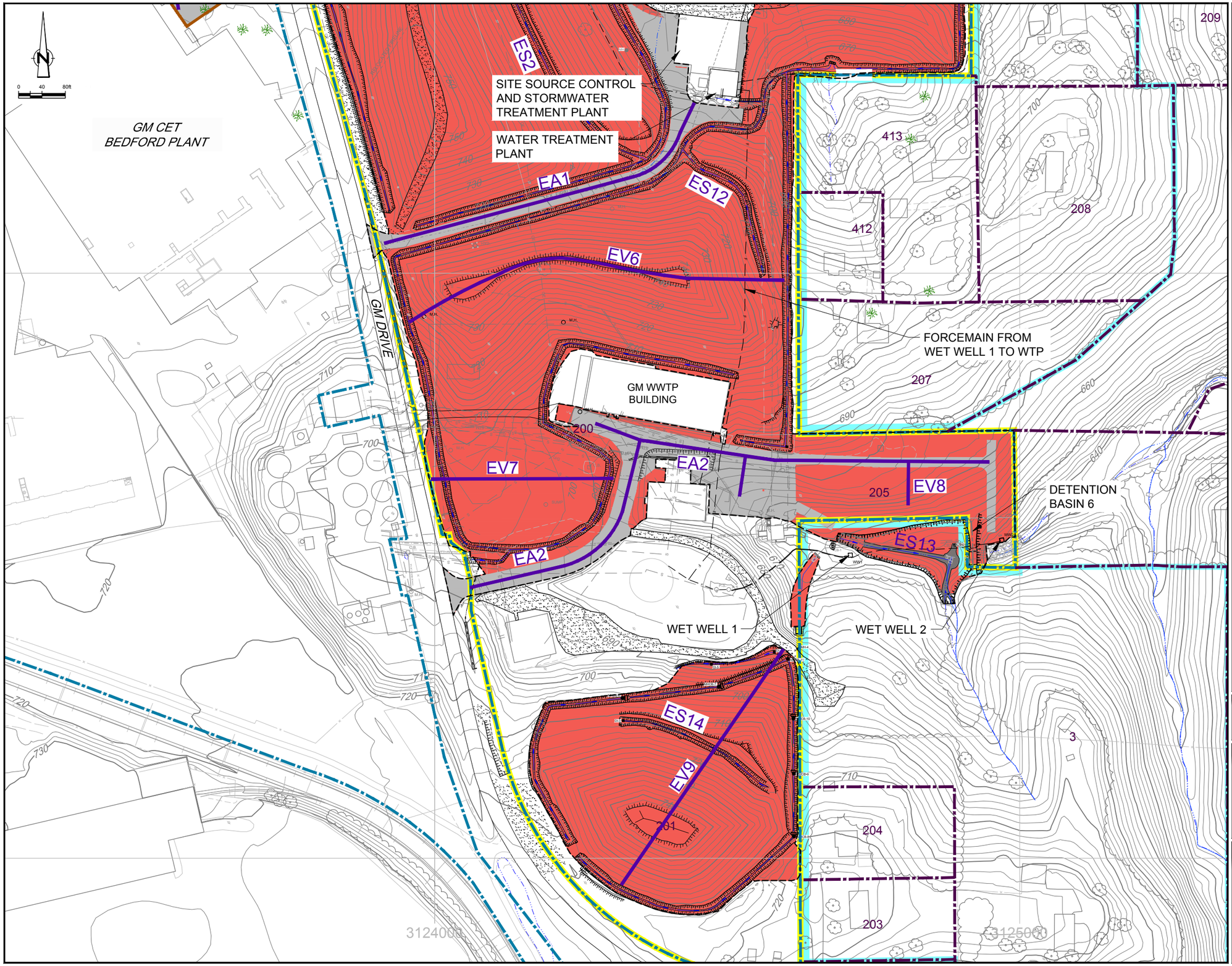
EAST PLANT COVER SYSTEM INSPECTIONS NORTHERN SECTION AND WEST PLANT COVER SYSTEM INSPECTIONS

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001
AND CRA SURVEYS 2002 TO 2008

Project Manager:	Reviewed By:	Date:	
J.M.	P.G.	FEBRUARY 2015	
Scale: 1:80	Project N°: 13968-00	Report N°: 350	Drawing N°: figure D.1

13968-00(350)GN-WA007 FEB 25/2015



LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- EXISTING FENCE LINE
- EXISTING RAILROAD TRACKS
- EXISTING DIRT ROADS
- EXISTING ROADS / PAVED AREAS
- EXISTING ELECTRICAL POWER LINE
- EXISTING FORCEMAIN TO TREATMENT FACILITY
- EXISTING OVERHEAD ELECTRICAL POWER LINE
- APPROXIMATE SURFACE WATER LOCATION
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- EXISTING STORM SEWER
- WEST PLANT COVER LIMIT
- VAULT LIMIT
- EAST PLANT COVER LIMIT
- DRAINAGE DITCH
- ASPHALT PAVEMENT AREA
- LOW FLOW CHANNEL
- EAST PLANT AREA
- GM LLC OWNED RESIDENTIAL
- EAST PLANT COVER SYSTEM
- FINAL VAULT COVER SYSTEM AT SURFACE
- FINAL VAULT COVER SYSTEM BURIED BY EAST PLANT AREA COVER SYSTEM
- GRAVEL BED
- PAVED COVER SURFACE
- PROPOSED PILOT TRENCH
- GUS — VAULT GROUNDWATER UNDERDRAIN SYSTEM SUMP
- LDS — LEAK DETECTION SYSTEM SUMP
- LCS — LEACHATE COLLECTION SYSTEM SUMP
- TRANSECT

TRANSECT LABELING

E	EAST PLANT COVER
V	VEGETATIVE COVER
A	ASPHALT COVER
W	WEST PLANT COVER
S	SWALE

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

GM CET BEDFORD FACILITY
BEDFORD, INDIANA

INTERIM OPERATIONS, MAINTENANCE AND MONITORING PLAN EAST PLANT COVER SYSTEM

EAST PLANT COVER SYSTEM INSPECTIONS SOUTHERN SECTION

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2008

Project Manager:	Reviewed By:	Date:	
J.M.	P.G.	FEBRUARY 2015	
Scale: 1:80	Project N°: 13968-00	Report N°: 350	Drawing N°: figure D.2

Photo 1: EV1 Vault Cover System, looking west along ES3.

Cover System Inspection
2nd Quarter 2016

Photo 2: EV1 north edge of Vault Cover facing northwest.

Photo 3: Facing northwest across pond toward EV2 East Plant Area Cover.

Photo 4: ES4 East Plant Area Cover, east of EV2, facing north.

Photo 5: Patchy vegetative growth ES6 East Plant Area Cover.

Photo 6: Looking along ES5 East Plant Area Cover facing east.

Photo 7: EV3 East Plant Area Cover facing North toward ES9 (Detention Basins 1 and 2) and ES6.

Photo 8: Patchy vegetative growth at EV5.

Photo 9: Looking west toward ES11 East Plant Area Cover.

Photo 10: EV6 East Plant Area Cover facing southeast.

Photo 11: EV6 East Plant Area cover facing southeast.

Photo 12: Weed growth and patchy spots along ES1 East Plant Area Cover System facing South.

Photo 13: EV6 and EV8 East Plant Area cover (Parcel 205) facing south.

Photo 14: ES14 East Plant Area Cover System looking North.

Photo 15: Looking South from EV6.

Photo 16: Facing north across EV8 from ES13.

Photo 17: Woodchuck of burrowing at EV7 East Plant Area Cover.

Photo 18: EV9 East Plant Area Cover System at ES14.

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