



**Global Environmental
Compliance & Sustainability**

April 13, 2017

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 64, First Quarter 2017
GM GPS – Bedford Facility, IND 006036099, Docket No. RCRA 05-2014-0011
Bedford, Indiana

Please find enclosed the Progress Report 64 (First Quarter 2017) for the Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) project at the GM Bedford Global Propulsion Systems (GPS) (formerly Castings, Engines, and Transmissions (CET) and formerly Powertrain) Facility (Facility) at 105 GM Drive in 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 Second Quarter of 2017 will be submitted on or before July 15, 2017.

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

YD/lc/170
Encl.

c.c.: See Attached Distribution List

Mr. Ramanauskas
April 13, 2017

Page 2

GM Bedford Distribution List

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First Quarter 2017 Progress Report 64

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

GHD | 651 Colby Drive Waterloo Ontario N2V 1C2 Canada
013968 | Report No 407 | April 13 2017



Table of Contents

1.	Introduction.....	1
2.	List of Completed Activities	1
3.	Summaries of Problems and Planned Resolutions.....	4
4.	Summaries of Changes Made in the Corrective Action (CA) During the Reporting Period.....	6
5.	Community Relations	6
6.	Changes in Personnel During the Reporting Period	6
7.	Projected Work for the Next Reporting Period	6
8.	Copies of Daily Reports, Inspection Reports, Laboratory/Monitoring Data	7

Table Index

Table 2.1	Spring 018 Sampling Results
Table 2.2	Storm Water and Groundwater Water Treatment Plant PCB Mass Removal Estimate
Table 2.3	SES WWTP Sampling Results – January/February/March 2017

Appendix Index

Appendix A	First Quarter 2017 Cover System Inspection: Field Logs, Transect Figures, and Photograph Log
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1. Introduction

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 2017 for the RCRA Corrective Action (CA) Project at the GM GPS (formerly Castings, Engines & Transmissions (CET) and formerly Powertrain) – Bedford Facility (Facility) and select surrounding properties (Site), Bedford, Indiana.

The next RCRA progress report covering the second quarter of 2017 will be submitted on or before July 15, 2017.

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 2017 sampling, the 12-month rolling average concentration of polychlorinated biphenyls (PCBs) in the Spring 018 discharge is 0.12 micrograms per liter ($\mu\text{g/L}$). Routine monthly sampling was conducted on January 11, February 8, and March 8. An opportunistic sample was collected on January 20, 2017, following a rainfall event of greater than 1 inch in 24-hours. The routine samples collected on January 11, February 8, and March 8, in addition to the January opportunistic sample were non-detect for PCBs.
- The groundwater water treatment plant (GWTP) collected and treated approximately 15,707,000 gallons of water this past quarter from the Pilot Trench, Vault sumps, and wet wells. An estimated 0.24 pounds of PCBs were removed during the first quarter of 2017 through collection and treatment of the groundwater and an estimated 0.64 pounds of PCBs have been removed over the last 12 months (April 2016 through March 2017). A summary of the volumes and sample results used for this calculation is provided in Table 2.2.
- 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 began July 11, 2016.
 - A memo summarizing the results from the sampling activities was completed by GHD and submitted to U.S. EPA and IDEM on February 23, 2017.



- A Memo summarizing the results of the First Half 2016 EI CA750 Groundwater Monitoring was submitted to U.S. EPA and IDEM on September 13, 2016.
 - U.S. EPA provided comments on the Memo on September 14th and 30th, 2016.
 - GM submitted responses to U.S. EPA's comments on February 17, 2017.
 - U.S. EPA provided additional comments on March 2, 2017
 - GHD is revising the Memo to incorporate U.S. EPA's comments
- The Second Half 2016 EI CA 750 Groundwater sampling was conducted on December 5 through 8, 2016. A Memo summarizing the results has been compiled and is currently under review by GM.
- The first quarter 2017 EI CA750 monitoring of static groundwater levels was completed during the week of March 8, 2017.
- A Request to Terminate Groundwater Collection and Monitoring of the GUS Sump was submitted by GM to U.S. EPA on January 18, 2017.
 - U.S. EPA provided comments and requested additional information via an email dated February 24, 2017.
 - GHD requested clarification on some of the U.S. EPA's questions on February 27, 2017.
 - U.S. EPA provided the requested clarification to GM on February 28, 2017.
 - GM provided a response to U.S. EPA's comments on March 21, 2017 and is awaiting U.S. EPA's review.
- SES continued operation of the temporary construction WTP in support of the Storm Pond dredging operations under a Rule 5 Permit.
 - Testing of the treated effluent water from the SES temporary WTP was initiated in November 2015 as part of the Pilot Trench construction project.
 - As described in the fourth quarter 2016 Quarterly Progress Report, SES discontinued treatment and direct discharge from the temporary WTP in December 2016 when elevated levels of PCBs were detected in the influent to the WTP. In January 2017 SES upgraded their WTP with the addition of Organo-clay filters to replace the multi-media filters, two additional carbon vessels, and reduced sizes on the influent and effluent bag filters.
 - In February 2017 SES began "batch" testing of the upgraded treatment system to insure its effectiveness in meeting the discharge criteria under the Rule 5 Permit. Table 2.3 presents a summary of the sample results from the batch testing. The results listed on the summary table for February 1, 4, 6, 9, 10, 13, & 15 are related to "batch" tests performed on the system prior to discharge (the water is treated through the system and held in a 20,000 gallon frac-tank until lab results are received confirming successful treatment). As outlined on the summary table the last batch test was conducted on February 15th, with the last batch test results showing non-detect for PCBs throughout the carbons and in the system effluent (which was collected in the frac-tank and not discharged to the creek).



- SES began treating stormwater with effluent discharge to the creek on February 16, 2017. Treatment continued through February 23rd, when the Pond was essentially drained.
- GHD collected a sample from the WTP on February 22nd for effluent analysis. The effluent sample had a reported total PCB concentration of 0.51 ug/L. Reanalysis of the sample reported a PCB concentration of 0.44 µg/L. Upon receipt of February 22nd effluent sample results on the afternoon of February 24th Pete Bridcut spoke to Mike Reynolds at the City of Bedford and Cheryl Hiatt sent an email notification to both Mike and Misty Adams at the City. Since the Pond had been drained on February 23rd, the WTP was not running at the time.
- Cheryl Hiatt sent an email notification to both U.S. EPA and IDEM on Friday, February 24th upon notification of the initial analytical result. Calculations of possible maximum release amounts indicated that an NRC reporting threshold had not been reached and a report was not submitted to the NRC.
- SES was instructed to not run the WTP until further evaluation was performed. SES made additional modifications to the WTP as follows:
 - SES changed the sequencing of the water flow to the treatment system – water from the Pond is now pumped to the Lake Tank east of Bailey Scales Road and allowed to settle. Once settling has occurred the water is transferred to the Equalization Tank west of Bailey Scales Road. Coagulant is added to the water as it is being transferred from the Lake Tank to the Modutank. The water is given additional settling time in the Modutank.
 - The bag filters after the carbon vessels were changed to 0.5 micron lead bag filters followed by 0.5 micron cartridge filters.
 - Additional frac-tanks (a total of 7 frac-tanks are now on site) were brought on site to allow more batch testing to be performed in a single day.
- Following implementation of the above modifications, resumption of stormwater treatment through the SES WTP began. Water was treated in batches to ensure successful treatment. A total of 9 “batch” tests were performed over the period from March 2nd through March 9th. The total PCB results for the 9 batches were non-detect. SES resumed treatment with direct discharge to the creek on March 13th.
- Weekly sampling of the SES WTP was conducted on March 15th, March 23rd, and March 30th. Effluent results were non-detect for total PCBs.
- SES has treated and discharged approximately 865,000 gallons from the SES WTP since March 13th.
- Table 2.3 presents a summary of the sample results from the batch testing and effluent sampling for the first quarter 2017.
- By March 29th, SES was able to essentially drain the Pond and sediment stabilization in the Pond resumed, with the stabilized material being removed for placement on the Staging Pad pending off-site disposal.



- 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 is set to be submitted during the second quarter of 2017.
- 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.
 - GHD completed the AOI 8 IM Work Plan (Rev. 1) and submitted for U.S. EPA review on March 3, 2017.
 - GHD received additional comments from U.S.EPA on April 10, 2017.
- GHD received comments from U.S. EPA on March 3, 2017 regarding the 2015 Vault Annual Report
 - GHD responded to U.S. EPA comments on March 21, 2017
- Formal monitoring of the East Plant, West Plant and Vault cover systems for the First Quarter was completed on March 23, 2017.
- The Parcels 400, 430, and 431 Excavation and Disposal Remedy was approved with modifications by the U.S. EPA.
 - The plan, the TSCA disposal approval permit, and the deed restriction language are anticipated to be reviewed by the property owners in the second quarter of 2017.
- The Draft Detailed (100%) Design Report Stormwater Pond Sediment Remediation; AOI 10 Interim Measure was submitted to U.S. EPA and IDEM on December 23, 2016
- The next Public and Community Liaison Panel meeting to provide an update of the project and address questions and concerns from local residents is scheduled for June, 2017.
- Conference calls were held with U.S. EPA and IDEM on January 11, 26, February 9, 24, and March 9, 30, 2017 to discuss items related to the project.
- With the resumption of daily construction activities related to the Storm Pond dredging project, on-Site construction meetings for the reporting period have been held informally daily and formally on Wednesdays. Formal construction meetings during this quarter were held on January 4, 11, 18, and 25; February 1, 8, 15, and 22; and March 1, 8, 15, 22, and 29.
- The RCRA/CERCLA Quarterly Progress Report #63, covering the fourth quarter of 2016, was submitted to the U.S. EPA and IDEM on January 13, 2017.

3. Summaries of Problems and Planned Resolutions

- Additional concrete sealing may be completed on a swallet identified upgradient of Spring 018, in what is known as Pool 2 if it appears necessary to reduce infiltration to the spring further. However, there are potential risks with further changing flow patterns in the rock if the Spring is



maintaining the 0.3 ppb or less levels and GM and GHD will consult with US EPA to determine the next course of action. Monthly monitoring of the spring water continues.

- The 2nd Quarter 2016 Progress Report discussed an issue with the pumps in the Leachate Collection System (LCS) sump. In summary, the pumps in the LCS failed and the riser pipe had become sufficiently corroded to prevent direct replacement pumps from working. A replacement pump has been installed to allow pumping as needed based on manual measurements. Issues related to treatment of water from the Stormwater Pond and the resolutions during the first Quarter 2017 are outlined in Section 2 above.
- During a routine inspection at the discharge location in the creek for the SES WTP on Friday afternoon, March 17, 2017, GHD noticed a layer of fine dark sediment had accumulated within the pond upstream of the SES discharge point and upstream of Spring 018. The pond is located just north of the confluence of Tributary 3 (the creek that runs along the north side of the GM landfill to the east under Bailey Scales Road) and Baileys Branch Creek. This pond is in the main channel of Baileys Branch Creek just south of the Spring 018 containment area. Upon further inspection of the creek, dark colored water and sediment was observed in several pools from upstream near Spring 018 to Bailey Scales Road. The dark material was not observed downstream of Spring 018. Although the source of the material was not believed to be related to the Plant's discharge, in an abundance of caution GM notified the City of Bedford, U.S. EPA, and IDEM of the observation.
 - On Saturday, March 18, 2017 GHD collected two surface water samples: one from the pond south of Spring 018, and one from a small pool contiguous to the creek upstream of the City of Bedford's sewage lift station on Parcel 13. These samples were analyzed for total PCBs, SVOCs, VOCs, and total Metals.
 - GHD also collected two sediment samples along Baileys Branch Creek. The first sediment sample was collected on Monday, March 20, 2017 from the pond in the creek south of the Spring 018 containment area. The second sediment sample was collected on Tuesday, March 21, 2017 south of (upstream) the City of Bedford sewage lift station. These samples were analyzed for total PCBs, SVOCs, VOCs, and total Metals
 - A status update was provided to U.S. EPA and IDEM on March 23, 2017 stating that surface water and sediment samples had been collected from the creek and GM was awaiting lab results.
 - Upon receipt of the lab reports GM forwarded the results for the two surface water samples and two sediment samples to U.S. EPA and IDEM via email on March 28, 2017. No PCBs were detected in any of the samples. Upon review of the data GM concluded that nothing in the data suggested that the dark sediment or water observed on March 17, 2017 was related to a release or discharge from the Plant. GM noted that GM had been advised that the City of Bedford had a release from the sewer system around the time the dark water and sediment was observed. No further action was planned.
 - On March 31, 2017, IDEM provided a copy of a Bypass/Overflow Incident Report filed by the City of Bedford showing approximately 23,000 gallons of sewage had been released to Baileys Branch Creek due to a pump station failure.



- There was a property damage construction safety incident on Friday March 10, 2017; when a cable used to load roll off box onto a flatbed truck at the pond SWTP failed causing the box to slide back into the north maintenance door. No one was injured. SES will ensure the door is repaired. Prior to loading the box, the JSA for the procedure was reviewed prior to the incident, the area cordoned off, and the cable inspected. The primary cause of the incident was failure of the cable lifting the roll-off box off the ground. The roll-off box may have been too heavy for the truck's cable capabilities. In the future, larger trucks, capable of handling the weights, will be used to transport roll-off boxes.

4. Summaries of 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). Individual meetings can be arranged to discuss project progress with residents as requested.

A public meeting was held on December 7, 2016 at the GHD trailers to the update the public on the status of the clean-up efforts. The next neighborhood/public meeting will be scheduled for June/July 2017. 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. 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., Storm Pond dredging and restoration) remain unchanged. On-Site staffing levels are expected to remain the same as construction work on the Stormwater Pond and GWTP operation continues.

7. Projected Work for the Next Reporting Period

Work anticipated for the next reporting period includes:

- Completing the sediment removal and liner construction in the Stormwater Pond (Area of Interest [AOI] 10).



- Completing additional pump installations at the LCS sump system.
- Completing outstanding responses to comments on documentation and/or finalize reports for the following:
 - AOI 8 Groundwater Source Collection System Design
- Completion of the Pilot Trench Monitoring Plan and Construction Certification Report.
- 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)
- Executing 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 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 manufacturers and installation companies and confirmed that the small animals do not burrow deep enough to damage the liner; therefore, there is no immediate risk to the Cover. The vegetation will continue to be monitored.
3. There was evidence of larger burrowing animals, which is believed to be attributed to groundhogs, near EV6 during the first quarter 2017 inspection. Indiana Department of Natural Resources (IDNR) has been consulted on identifying, and subsequently live trapping and relocating the animal(s), if necessary. The burrow appears to still be inactive during this quarter’s inspection. Burrow areas will be filled in the second or third quarter of 2017.
4. Light erosion was identified again along EV4, EV5, and in ES6. These areas will be filled in, monitored, and re-seeded again, as necessary, in the second or third quarter of 2017.



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 (filling in of the erosional areas) will be addressed after the power pole work is completed. Work is expected to be completed in April 2017.
6. 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 - January/February/March 2017
GM CET Bedford Facility
Bedford, Indiana

Sample Location:	Spring 018C	Spring 018C	Spring 018C	Spring 018C
Sample Identification:	SW-015-011117-MC-40651	SW-015-012017-MC-40659	SW-015-020817-MC-40701	SW-015-030817-MC-40827
Sample Date:	1/11/2017	1/20/2017	2/8/2017	3/8/2017
Laboratory:	TestAmerica	TestAmerica	TestAmerica	TestAmerica
Parameters	Units			
PCBs				
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND	ND
Wet				
Total suspended solids (TSS)	ug/L	2300	27000	2100

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

12 month rolling average (April 2016 – March 2017) is 0.12 ug/L PCBs.

Table 2.2

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

	300 gpm Design Capacity System Treated Volume (gallon)	Groundwater Treatment Plant (GWTP) Treated Volume (gallon)	PCB Influent Concentration (µg/L)	Mass PCB Treated (pound)
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
July 2016	410,000	1,950,000	3.3	0.065
August 2016	-	3,223,000	3.3	0.089
September 2016	-	1,130,000	4.3	0.041
October 2016	-	1,939,000	2.35	0.038
November 2016	-	1,775,000	3.5	0.052
December 2016	-	4,108,000	0.94	0.032
January 2017	-	7,303,000	2.1	0.128
February 2017	-	2,678,000	3.1	0.069
March 2017	-	5,726,000	0.79	0.038
Total Estimated Volume of Water Treated, First Quarter 2017 (gallons)			15,707,000	
Total Estimated Mass of PCB Treated, First Quarter 2017 (pounds)			0.24	
Total Estimated Mass of PCB Treated, Since April 2017 (pounds)			0.64	

Notes:

1 Used half of the detection limit value at the associated limit to calculate the mass PCB treated.

P TestAmerica: The %RPD between the primary and confirmation column/detector is >40%.
The lower value has been reported.

The 300 gpm water treatment system did not run after July 11, 2016, when groundwater sources were shifted to the new GWTP.

Table 2.3
SES WWTP Sampling Results – January/February/March 2017
GM CET Bedford Facility
Bedford, Indiana

Area		P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216
Sample Location:		SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 1
Sample Identification:		WW-216-011817-PB-40657	WW-216-020117-PB-40682	WW-216-020417-PB-40692	WW-216-020617-PB-40700	WW-216-020917-PB-40713	WW-216-021017-PB-40722	WW-216-021317-PB-40730	WW-216-021317-PB-40731	WW-216-021517-PB-40739	WW-216-022217-PB-40749	WW-216-022717-PB-40757	WW-216-022717-PB-40766
Sample Date:		1/18/2017	2/1/2017	2/4/2017	2/6/2017	2/9/2017	2/10/2017	2/13/2017	2/13/2017 Duplicate	2/15/2017	2/22/2017	2/27/2017	2/27/2017
Sample Type:													
	Units	System Influent From Modutank	System Influent From Modutank	System Influent From Modutank	MS/MSD, System Influent From Modutank	System Influent From Modutank	System Influent From Modutank	System Influent From Modutank	System Influent From Modutank	System Influent From Modutank	System Influent From Modutank	System Influent From Modutank	System Influent From Modutank
Polychlorinated biphenyl (PCBs)													
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.95 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	1.9 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.95 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	1.9 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.95 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	1.9 U
Aroclor-1242 (PCB-1242)	ug/L	6.0	3.6	2.0	1.3	1.4	1.0	0.53	0.64	1.0	7.9	3.6	5.9
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.95 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	1.9 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.56 JP	0.22	0.15 J	0.19 U	0.22	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	1.9 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.95 U	0.19 U	0.19 U	0.10 J	0.066 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	1.9 U
Total PCBs	ug/L	6	4.16 JP	2.22	1.45 JP	1.5	1.066 J	0.53	0.64	1	7.9	3.6	5.9
General Chemistry													
Ethylene glycol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
 U - Not detected at the associated reporting limit.
 J - Estimated concentration.
 P-TestAmerica: The %RPD between the primary and confirmation column/detector is >40%.
 The lower value has been reported.

Table 2.3

SES WWTP Sampling Results – January/February/March 2017
GM CET Bedford Facility
Bedford, Indiana

Area		P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	
Sample Location:		SES WWTP Tag 1	SES WWTP Tag 3	SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 1	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	
Sample Identification:		WW-216-030217-PB-40776	WW-216-030217-PB-40775	WW-216-030617-PB-40813	WW-216-030917-PB-40831	WW-216-030917-PB-40841	WW-216-030917-PB-40844	WW-216-020117-PB-40680	WW-216-020117-PB-40681	WW-216-020417-PB-40690	WW-216-020417-PB-40691	WW-216-020617-PB-40699	WW-216-020917-PB-40711	WW-216-020917-PB-40712	
Sample Date:		3/2/2017	3/2/2017	3/6/2017	3/9/2017	3/9/2017	3/9/2017	2/1/2017	2/1/2017	2/4/2017	2/4/2017	2/4/2017	2/6/2017	2/9/2017	
Sample Type:								Duplicate	Duplicate			Duplicate		Duplicate	
Units		System Influent From Modutank	MS/MSD, Organo-Clay Filter #1 Effluent	System Influent From Modutank	System Influent From Modutank	System Influent From Modutank	System Influent From Modutank	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent
Polychlorinated biphenyl (PCBs)															
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	2.6	2.7	2.1	0.19 U	0.19 U	0.19 U	0.19 U	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	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	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	0.10 U	0.10 U	0.10 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	2.0	1.7	2.7	0.10 U	0.10 U	0.10 U	0.45	0.54	0.52	0.35	0.41 p	0.19 U	0.19 U	
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.10 U	0.10 U	0.10 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.24	0.27
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.10 U	0.10 U	0.10 U	0.052 JP	0.084 J	0.084 J	0.083 J	0.11 J	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.10 U	0.10 U	0.10 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.10 J
Total PCBs	ug/L	2	1.7	2.7	2.6	2.7	2.1	0.502 JP	0.624 J	0.604 J	0.433 J	0.52 J	0.24	0.37 J	
General Chemistry															
Ethylene glycol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
 U - Not detected at the associated reporting limit.
 J - Estimated concentration.
 P-TestAmerica: The %RPD between the primary and confirmation column/detector is >40%.
 The lower value has been reported.

Table 2.3
SES WWTP Sampling Results – January/February/March 2017
GM CET Bedford Facility
Bedford, Indiana

Area		P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216
Sample Location:		SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 3	SES WWTP Tag 4	SES WWTP Tag 4
Sample Identification:		WW-216-021017-PB-40720	WW-216-021017-PB-40721	WW-216-021317-PB-40729	WW-216-021517-PB-40738	WW-216-022217-PB-40748	WW-216-022717-PB-40756	WW-216-022717-PB-40765	WW-216-030217-PB-40775	WW-216-030217-PB-40793	WW-216-030617-PB-40812	WW-216-011817-PB-40656	WW-216-012617-PB-40669	
Sample Date:		2/10/2017	2/10/2017	2/13/2017	2/15/2017	2/22/2017	2/27/2017	2/27/2017	3/2/2017	3/2/2017	3/6/2017	1/18/2017	1/26/2017	
Sample Type:			Duplicate											
	Units	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	Organo-Clay Filter #1 Effluent	General Motors LLC - Sand Filter #2 Effluent	Organo-Clay Filter #2 Effluent
Polychlorinated biphenyl (PCBs)														
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.95 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.95 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.29	0.33	0.083 J	0.16 J	3.4	2.5	2.6	1.8	1.4	1.6	3.0	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.95 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.038 J	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	0.29	0.368 J	0.083 J	0.16 J	3.4	2.5	2.6	1.8	1.4	1.6	3	ND	
General Chemistry														
Ethylene glycol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
 U - Not detected at the associated reporting limit.
 J - Estimated concentration.
 P-TestAmerica:The %RPD between the primary and confirmation column/detector is >40%.
 The lower value has been reported.

Table 2.3
SES WWTP Sampling Results – January/February/March 2017
GM CET Bedford Facility
Bedford, Indiana

Area		P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216
Sample Location:		SES WWTP Tag 4	SES WWTP Tag 4	SES WWTP Tag 4	SES WWTP Tag 4	SES WWTP Tag 4	SES WWTP Tag 4	SES WWTP Tag 4	SES WWTP Tag 4	SES WWTP Tag 4	SES WWTP Tag 4	SES WWTP Tag 4	SES WWTP Tag 4
Sample Identification:		WW-216-020117-PB-40679	WW-216-020417-PB-40689	WW-216-020617-PB-40698	WW-216-020917-PB-40710	WW-216-021017-PB-40719	WW-216-021317-PB-40728	WW-216-021517-PB-40737	WW-216-022217-PB-40747	WW-216-022717-PB-40755	WW-216-022717-PB-40764	WW-216-030217-PB-40774	WW-216-030217-PB-40792
Sample Date:		2/1/2017	2/4/2017	2/6/2017	2/9/2017	2/10/2017	2/13/2017	2/15/2017	2/22/2017	2/27/2017	2/27/2017	3/2/2017	3/2/2017
Sample Type:													
	Units	Organo-Clay Filter #2 Effluent	Organo-Clay Filter #2 Effluent	Organo-Clay Filter #2 Effluent	Organo-Clay Filter #2 Effluent	Organo-Clay Filter #2 Effluent	Organo-Clay Filter #2 Effluent	Organo-Clay Filter #2 Effluent	Organo-Clay Filter #2 Effluent	Organo-Clay Filter #2 Effluent	Organo-Clay Filter #2 Effluent	Organo-Clay Filter #2 Effluent	Organo-Clay Filter #2 Effluent
Polychlorinated biphenyl (PCBs)													
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.39	0.46	0.45	0.19 U	0.28	0.098 J	0.22	3.5	3.4	3.7	1.6	1.2
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.26	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.056 J	0.11 J	0.061 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.049 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U
Total PCBs	ug/L	0.446 J	0.57 J	0.511 J	0.309 J	0.28	0.098 J	0.22	3.5	3.4	3.7	1.6	1.2
General Chemistry													
Ethylene glycol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
 U - Not detected at the associated reporting limit.
 J - Estimated concentration.
 P-TestAmerica:The %RPD between the primary and confirmation column/detector is >40%.
 The lower value has been reported.

Table 2.3
SES WWTP Sampling Results – January/February/March 2017
GM CET Bedford Facility
Bedford, Indiana

Area		P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216
Sample Location:		SES WWTP Tag 4	SES WWTP Tag 4	SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 6
Sample Identification:		WW-216-030617-PB-40810	WW-216-030617-PB-40811	WW-216-011817-PB-40654	WW-216-012617-PB-40665	WW-216-020117-PB-40675	WW-216-020117-PB-40676	WW-216-020417-PB-40685	WW-216-020617-PB-40694	WW-216-020917-PB-40706	WW-216-021017-PB-40715	WW-216-021317-PB-40724	WW-216-021517-PB-40733
Sample Date:		3/6/2017	3/6/2017	1/18/2017	1/26/2017	2/1/2017	2/1/2017	2/4/2017	2/6/2017	2/9/2017	2/10/2017	2/13/2017	2/15/2017
Sample Type:			Duplicate										
	Units	Organo-Clay Filter #2 Effluent	Organo-Clay Filter #2 Effluent	Carbon Unit #2 Effluent	Carbon Unit #2 Effluent (Train 1)	MS/MSD, Carbon Unit #2 Effluent (Train 1)	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 1)	Carbon Unit #2 Effluent (Train 1)	Carbon Unit #2 Effluent (Train 1)	Carbon Unit #2 Effluent (Train 1)	Carbon Unit #2 Effluent (Train 1)	Carbon Unit #2 Effluent (Train 1)
Polychlorinated biphenyl (PCBs)													
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	1.5	1.4	0.19 U	0.19 U	0.19 U	0.057 JP	0.19 U	0.20	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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.16 J	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.046 J	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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	1.5	1.4	ND	ND	ND	0.057 JP	ND	0.246 J	ND	0.16 J	ND	ND
General Chemistry													
Ethylene glycol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	--	--	--	--	--	--	--	--	1200

Notes:
 U - Not detected at the associated reporting limit.
 J - Estimated concentration.
 P-TestAmerica: The %RPD between the primary and confirmation column/detector is >40%.
 The lower value has been reported.

Table 2.3

SES WWTP Sampling Results – January/February/March 2017
 GM CET Bedford Facility
 Bedford, Indiana

Area		P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216
Sample Location:		SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 6	SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 7
Sample Identification:		WW-216-022217-PB-40742	WW-216-022717-PB-40751	WW-216-022717-PB-40759	WW-216-030217-PB-40769	WW-216-030217-PB-40787	WW-216-030617-PB-40806	WW-216-011817-PB-40655	WW-216-012617-PB-40667	WW-216-020117-PB-40677	WW-216-020117-PB-40678	WW-216-020417-PB-40687	WW-216-020617-PB-40696
Sample Date:		2/22/2017	2/27/2017	2/27/2017	3/2/2017	3/2/2017	3/6/2017	1/18/2017	1/26/2017	2/1/2017	2/1/2017	2/4/2017	2/6/2017
Sample Type:													
	Units	Carbon Unit #2 Effluent (Train 1)	Carbon Unit #2 Effluent (Train 1)	Carbon Unit #2 Effluent (Train 1)	Carbon Unit #2 Effluent (Train 1)	Carbon Unit #2 Effluent (Train 1)	Carbon Unit #2 Effluent (Train 1)	Carbon Unit #1 Effluent (series)	Carbon Unit #1 Effluent (Train 1)	Carbon Unit #1 Effluent (Train 1)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 1)	Carbon Unit #1 Effluent (Train 1)
Polychlorinated biphenyl (PCBs)													
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.39	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.077 J	0.064 JP	0.10 J	0.17 J
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.049 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.039 J
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	0.39	ND	0.049 J	ND	ND	ND	ND	0.077 J	0.064 JP	0.1 J	0.209 J	0.238 J
General Chemistry													
Ethylene glycol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
 U - Not detected at the associated reporting limit.
 J - Estimated concentration.
 P-TestAmerica:The %RPD between the primary and confirmation column/detector is >40%.
 The lower value has been reported.

Table 2.3

SES WWTP Sampling Results – January/February/March 2017
GM CET Bedford Facility
Bedford, Indiana

Area		P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216
Sample Location:		SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 7	SES WWTP Tag 8	SES WWTP Tag 8
Sample Identification:		WW-216-020917-PB-40708	WW-216-021017-PB-40717	WW-216-021317-PB-40726	WW-216-021517-PB-40735	WW-216-022217-PB-40744	WW-216-022717-PB-40753	WW-216-022717-PB-40762	WW-216-030217-PB-40772	WW-216-030217-PB-40789	WW-216-030617-PB-40808	WW-216-011817-PB-40653	WW-216-020117-PB-40674
Sample Date:		2/9/2017	2/10/2017	2/13/2017	2/15/2017	2/22/2017	2/27/2017	2/27/2017	3/2/2017	3/2/2017	3/6/2017	1/18/2017	2/1/2017
Sample Type:													
	Units	Carbon Unit #1 Effluent (Train 1)	Carbon Unit #1 Effluent (Train 1)	Carbon Unit #1 Effluent (Train 1)	Carbon Unit #1 Effluent (Train 1)	Carbon Unit #1 Effluent (Train 1)	Carbon Unit #1 Effluent (Train 1)	Carbon Unit #1 Effluent (Train 1)	Carbon Unit #1 Effluent (Train 1)	Carbon Unit #1 Effluent (Train 1)	Carbon Unit #1 Effluent (Train 1)	MS/MSD, Effluent Post Bag Filter	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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.094 U	0.095 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.094 U	0.095 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.094 U	0.095 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.080 Jp	0.19 U	0.19 U	0.52	0.41	0.19 U	0.19 U	0.19 U	0.19 U	0.094 U	0.095 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.59	0.19 U	0.19 U	0.18 J	0.094 U	0.095 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.094 U	0.095 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.10 J	0.19 U	0.19 U	0.19 U	0.094 U	0.095 U
Total PCBs	ug/L	ND	0.08 JP	ND	ND	0.52	0.41	0.69 J	ND	0.18 J	ND	ND	ND
General Chemistry													
Ethylene glycol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	5000	--	--	--	--	--	--	--	--

Notes:
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 J - Estimated concentration.
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 The lower value has been reported.

Table 2.3

SES WWTP Sampling Results – January/February/March 2017
GM CET Bedford Facility
Bedford, Indiana

Area		P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216	P216
Sample Location:		SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8
Sample Identification:		WW-216-020417-PB-40684	WW-216-020617-PB-40693	WW-216-020917-PB-40705	WW-216-021017-PB-40714	WW-216-021317-PB-40723	WW-216-021517-PB-40732	WW-216-022217-PB-40741	WW-216-022717-PB-40750	WW-216-022717-PB-40758	WW-216-030217-PB-40768	WW-216-030217-PB-40786	WW-216-030617-PB-40803
Sample Date:		2/4/2017	2/6/2017	2/9/2017	2/10/2017	2/13/2017	2/15/2017	2/22/2017	2/27/2017	2/27/2017	3/2/2017	3/2/2017	3/6/2017
Sample Type:													
	Units	Effluent Post Bag Filter	Effluent Post Bag Filter	Effluent Post Bag Filter	Effluent Post Bag Filter	Effluent Post Bag Filter	Effluent Post Bag Filter	Effluent Post Bag Filter	MS/MSD, Effluent Post Bag Filter	Effluent Post Bag Filter	Effluent Post Bag Filter	Effluent Post Bag Filter	Effluent Post Bag Filter
Polychlorinated biphenyl (PCBs)													
Aroclor-1016 (PCB-1016)	ug/L	0.095 U	0.095 U	0.19 U	0.095 U	0.095 U	0.094 U	0.094 U Dup 0.094 U	0.094 U	0.19 U	0.094 U	0.094 U	0.094 U
Aroclor-1221 (PCB-1221)	ug/L	0.095 U	0.095 U	0.19 U	0.095 U	0.095 U	0.094 U	0.094 U Dup 0.094 U	0.094 U	0.19 U	0.094 U	0.094 U	0.094 U
Aroclor-1232 (PCB-1232)	ug/L	0.095 U	0.095 U	0.19 U	0.095 U	0.095 U	0.094 U	0.094 U Dup 0.094 U	0.094 U	0.19 U	0.094 U	0.094 U	0.094 U
Aroclor-1242 (PCB-1242)	ug/L	0.095 U	0.23	0.19 U	0.095 U	0.099	0.094 U	0.51 Dup 0.44	0.094 U	0.19 U	0.094 U	0.094 U	0.094 U
Aroclor-1248 (PCB-1248)	ug/L	0.095 U	0.095 U	0.19 U	0.095 U	0.095 U	0.094 U	0.094 U Dup 0.094 U	0.094 U	0.14 J	0.094 U	0.094 U	0.094 U
Aroclor-1254 (PCB-1254)	ug/L	0.095 U	0.095 U	0.19 U	0.095 U	0.095 U	0.094 U	0.094 U Dup 0.094 U	0.094 U	0.19 U	0.094 U	0.094 U	0.094 U
Aroclor-1260 (PCB-1260)	ug/L	0.095 U	0.095 U	0.049 J	0.095 U	0.095 U	0.094 U	0.094 U Dup 0.094 U	0.094 U	0.19 U	0.094 U	0.094 U	0.094 U
Total PCBs	ug/L	ND	0.23	0.049 J	ND	0.099	ND	0.51 Dup 0.44	ND	0.14 J	ND	ND	ND
General Chemistry													
Ethylene glycol	ug/L	--	--	5000 U	4700 U	--	--	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	--	--	1500	--	--	--	--	--	--

Notes:
 U - Not detected at the associated reporting limit.
 J - Estimated concentration.
 P-TestAmerica:The %RPD between the primary and confirmation column/detector is >40%.
 The lower value has been reported.

Table 2.3
SES WWTP Sampling Results – January/February/March 2017
GM CET Bedford Facility
Bedford, Indiana

Area		P216	P216	P216	P216	P216	P216	216	216	216	216	216	216
Sample Location:		SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 8	SES WWTP Tag 6A	SES WWTP Tag 6A	SES WWTP Tag 6A	SES WWTP Tag 6A	SES WWTP Tag 6A	SES WWTP Tag 6A
Sample Identification:		WW-216-030617-PB-40805	WW-216-030617-PB-40823	WW-216-030617-PB-40825	WW-216-030917-PB-40830	WW-216-030917-PB-40833	WW-216-030917-PB-40843	WW-216-012617-PB-40666	WW-216-020417-PB-40686	WW-216-020617-PB-40695	WW-216-020917-PB-40707	WW-216-021017-PB-40716	WW-216-021317-PB-40725
Sample Date:		3/6/2017	3/6/2017	3/6/2017	3/9/2017	3/6/2017	3/9/2017	1/26/2017	2/4/2017	2/6/2017	2/9/2017	2/10/2017	2/13/2017
Sample Type:													
	Units	Effluent Post Bag Filter	Effluent Post Bag Filter	MS/MSD, Effluent Post Bag Filter	Effluent Post Bag Filter	Effluent Post Bag Filter	Effluent Post Bag Filter	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 2)	MS/MSD, Carbon Unit #2 Effluent (Train 2)
Polychlorinated biphenyl (PCBs)													
Aroclor-1016 (PCB-1016)	ug/L	0.094 U	0.094 U	0.094 U	0.095 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.094 U	0.094 U	0.094 U	0.095 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.094 U	0.094 U	0.094 U	0.095 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.094 U	0.094 U	0.094 U	0.095 U	0.095 U	0.095 U	0.19 U	0.19 U	0.22	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.094 U	0.094 U	0.094 U	0.095 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U	0.19 U	0.17 J	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.094 U	0.094 U	0.094 U	0.095 U	0.095 U	0.095 U	0.19 U	0.19 U	0.032 JP	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.094 U	0.094 U	0.094 U	0.095 U	0.095 U	0.095 U	0.19 U	0.19 U	0.19 U	0.039 J	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	0.252 JP	0.039 J	0.17 J	ND
General Chemistry													
Ethylene glycol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
 U - Not detected at the associated reporting limit.
 J - Estimated concentration.
 P-TestAmerica:The %RPD between the primary and confirmation column/detector is >40%.
 The lower value has been reported.

Table 2.3

SES WWTP Sampling Results – January/February/March 2017
GM CET Bedford Facility
Bedford, Indiana

Area		216	216	216	216	216	216	216	216	216	216	216	216
Sample Location:		SES WWTP Tag 6A	SES WWTP Tag 6A	SES WWTP Tag 6A	SES WWTP Tag 6A	SES WWTP Tag 6A	SES WWTP Tag 6A	SES WWTP Tag 6A	SES WWTP Tag 6A	SES WWTP Tag 6A	SES WWTP Tag 7A	SES WWTP Tag 7A	SES WWTP Tag 7A
Sample Identification:		WW-216-021517-PB-40734	WW-216-022217-PB-40743	WW-216-022717-PB-40752	WW-216-022717-PB-40760	WW-216-022717-PB-40761	WW-216-030217-PB-40770	WW-216-030217-PB-40771	WW-216-030217-PB-40788	WW-216-030617-PB-40807	WW-216-012617-PB-40668	WW-216-020417-PB-40688	WW-216-020617-PB-40697
Sample Date:		2/15/2017	2/22/2017	2/27/2017	2/27/2017	2/27/2017	3/2/2017	3/2/2017	3/2/2017	3/6/2017	1/26/2017	2/4/2017	2/6/2017
Sample Type:						Duplicate		Duplicate					
	Units	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #2 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)
Polychlorinated biphenyl (PCBs)													
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.35	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.062 J	0.20
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.13 J	0.20	0.15 J	0.19 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.058 J
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	0.35	0.13 J	0.20	0.15 J	ND	ND	ND	ND	ND	0.062 J	0.258 J
General Chemistry													
Ethylene glycol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	1500	--	--	--	--	--	--	--	--	--	--	--

Notes:
 U - Not detected at the associated reporting limit.
 J - Estimated concentration.
 P-TestAmerica:The %RPD between the primary and confirmation column/detector is >40%.
 The lower value has been reported.

Table 2.3

SES WWTP Sampling Results – January/February/March 2017
GM CET Bedford Facility
Bedford, Indiana

Area		216	216	216	216	216	216	216	216	216	216	216	216
Sample Location:		SES WWTP Tag 7A	SES WWTP Tag 7A	SES WWTP Tag 7A	SES WWTP Tag 7A	SES WWTP Tag 7A	SES WWTP Tag 7A	SES WWTP Tag 7A	SES WWTP Tag 7A	SES WWTP Tag 7A	SES WWTP Tag 7A	SES WWTP Tag 7A	SES WWTP Tag 7A
Sample Identification:		WW-216-020917-PB-40709	WW-216-021017-PB-40718	WW-216-021317-PB-40727	WW-216-021517-PB-40736	WW-216-022217-PB-40745	WW-216-022217-PB-40746	WW-216-022717-PB-40754	WW-216-022717-PB-40763	WW-216-030217-PB-40773	WW-216-030217-PB-40790	WW-216-030217-PB-40791	WW-216-030617-PB-40809
Sample Date:		2/9/2017	2/10/2017	2/13/2017	2/15/2017	2/22/2017	2/22/2017	2/27/2017	2/27/2017	3/2/2017	3/2/2017	3/2/2017	3/6/2017
Sample Type:							Duplicate					Duplicate	
	Units	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)	Carbon Unit #1 Effluent (Train 2)
Polychlorinated biphenyl (PCBs)													
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.14 J	0.19 U	0.19 U	0.52	0.45	0.43	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.098 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.48	0.19 U	0.14 J	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	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	0.19 U	0.19 U	0.19 U	0.063 J	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	0.098 J	0.14 J	ND	ND	0.52	0.45	0.43	0.543 J	ND	0.14 J	ND	ND
General Chemistry													
Ethylene glycol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	800	--	--	--	--	--	--	--	--

Notes:
 U - Not detected at the associated reporting limit.
 J - Estimated concentration.
 P-TestAmerica:The %RPD between the primary and confirmation column/detector is >40%.
 The lower value has been reported.

Appendix A
First Quarter 2017 Cover System Inspection:
Field Logs, Transect Figures, and
Photographic Log

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

Date of Inspection: 3/23/2017 sunny
 Inspector: mike curtis and george seng 64 degrees, sunny

ITEM	TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	DATE AND NATURE OF ACTIONS COMPLETED
		NO PROBLEMS	CORRECTIVE ACTION REQUIRED		
VEGETATED SOIL COVER SYSTEM					
<u>Transect EV1</u>	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
	- EXPOSURE OF LINER				
	- EROSION				
	- LOCALIZED SETTLEMENT/SLUMPING				
	- PONDING OF WATER/DRAINAGE				
	- SIGNS OF BURROWING BY ANIMALS				
	- ROOTING OF TREES				
<u>Transect EV2</u>	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
	- EXPOSURE 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		
VEGETATED SOIL COVER SYSTEM (CONTINUED)					
<u>Transect EV3</u>	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
	- EXPOSURE OF LINER				
	- EROSION				
	- LOCALIZED SETTLEMENT/SLUMPING				
	- PONDING OF WATER/DRAINAGE				
	- SIGNS OF BURROWING BY ANIMALS				
	- ROOTING OF TREES				
<u>Transect EV4</u>	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
	- EXPOSURE OF LINER				
	- EROSION	X		slight erosion	
	- LOCALIZED SETTLEMENT/SLUMPING				
	- PONDING OF WATER/DRAINAGE				
	- SIGNS OF BURROWING BY ANIMALS				
	- ROOTING OF TREES				
<u>Transect EV5</u>	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
	- EXPOSURE 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)					
<u>Transect EV6</u>	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
	- EXPOSURE OF LINER				
	- EROSION				
	- LOCALIZED SETTLEMENT/SLUMPING				
	- PONDING OF WATER/DRAINAGE				
	- SIGNS OF BURROWING BY ANIMALS	X		groundhog hole	
	- ROOTING OF TREES				
<u>Transect EV7</u>	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
	- EXPOSURE OF LINER				
	- EROSION				
	- LOCALIZED SETTLEMENT/SLUMPING				
	- PONDING OF WATER/DRAINAGE				
	- SIGNS OF BURROWING BY ANIMALS				
	- ROOTING OF TREES				
<u>Transect EV8</u>	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
	- EXPOSURE OF LINER				
	- EROSION				
	- LOCALIZED SETTLEMENT/SLUMPING				
	- PONDING OF WATER/DRAINAGE				
	- SIGNS OF BURROWING BY ANIMALS				
	- ROOTING OF TREES				

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)					
<u>Transect EV9</u>	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
	- EXPOSURE OF LINER				
	- EROSION				
	- LOCALIZED SETTLEMENT/SLUMPING				
	- PONDING OF WATER/DRAINAGE				
	- SIGNS OF BURROWING BY ANIMALS				
	- ROOTING OF TREES				
	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	
- EXPOSURE OF LINER					
- EROSION					
- LOCALIZED SETTLEMENT/SLUMPING					
- PONDING OF WATER/DRAINAGE					
- SIGNS OF BURROWING BY ANIMALS					
- ROOTING OF TREES					

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					
<u>Transect EA1</u>	- QUALITY OF ASPHALT COVER				
	- PRESENCE OF CRACKING OR DISCOLORATION	X		fill cracks,sealcoat	
<u>Transect EA2</u>	- QUALITY OF ASPHALT COVER				
	- PRESENCE OF CRACKING OR DISCOLORATION	X		fill cracks,sealcoat	
<u>Transect WA1</u>	- QUALITY OF ASPHALT COVER				
	- PRESENCE OF CRACKING OR DISCOLORATION	X		fill cracks,sealcoat	
ACCESS ROAD					
<u>ACCESS ROAD</u>	- 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					
<u>Transect ES1</u>	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	trees cut
	- EROSION				
	- OBSTRUCTIONS				
	- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
	- SIGNS OF BURROWING BY ANIMALS				
	- ROOTING OF TREES				
<u>Transect ES2</u>	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	X		heavy weed growth and some bare spots	trees cut
	- EROSION				
	- OBSTRUCTIONS				
	- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION				
	- SIGNS OF BURROWING BY ANIMALS				
	- ROOTING OF TREES				
<u>Transect ES3</u>	- 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				

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)					
<u>Transect ES4</u>	- 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				
<u>Transect ES5</u>	- 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				
<u>Transect ES6</u>	- 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				
	- ROOTING OF TREES				

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)					
<u>Transect ES7</u>	- 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				
<u>Transect ES8</u>	- 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				
<u>Transect ES9</u>	- 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	filled with top soil
	- ROOTING OF TREES				

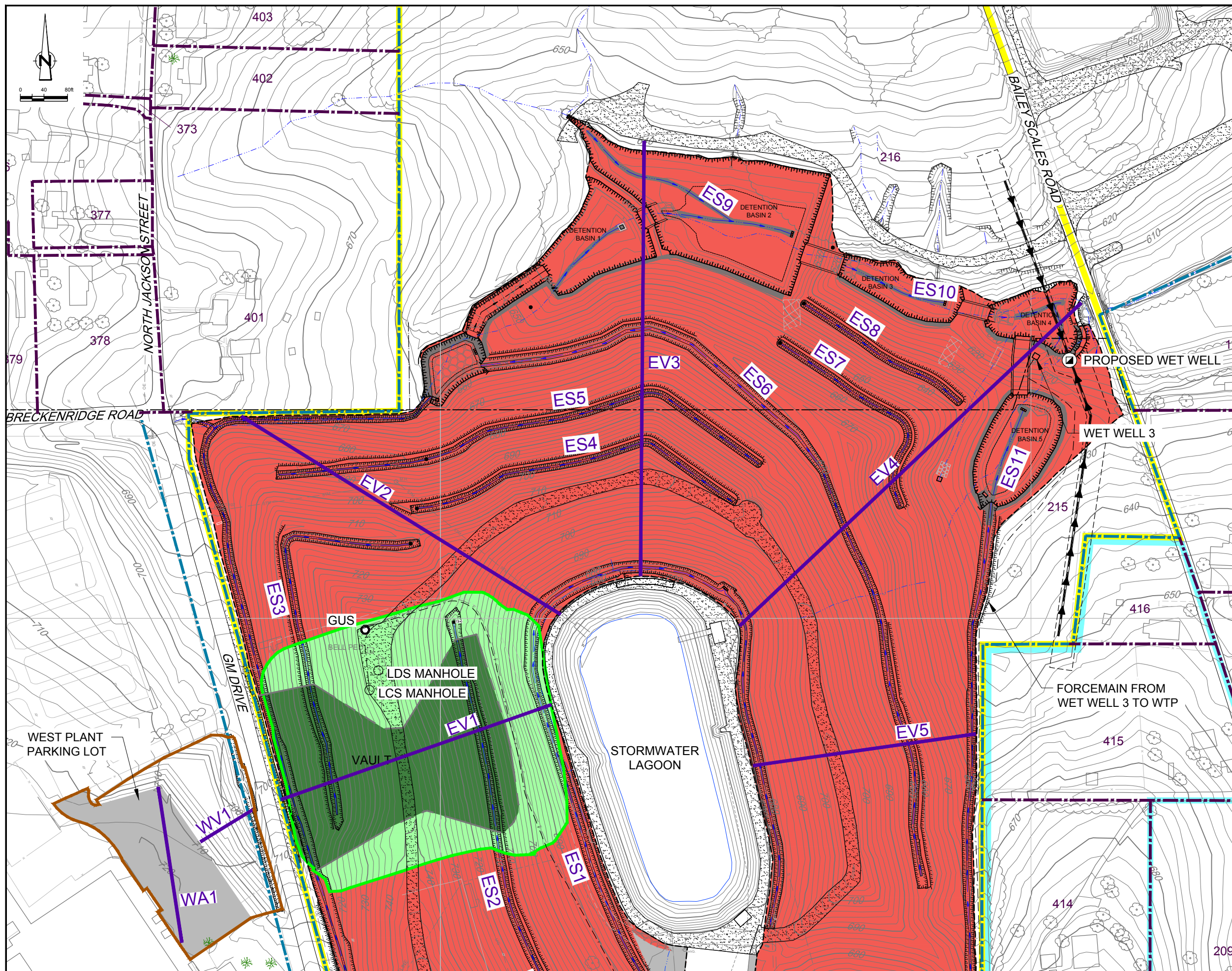
TABLE D.1

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)					
<u>Transect ES10</u>	- 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	filled with top soil
	- ROOTING OF TREES				
<u>Transect ES11</u>	- 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				
<u>Transect ES12</u>	- 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				

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)					
<u>Transect ES13</u>	- 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	filled with top soil
	- ROOTING OF TREES				
<u>Transect ES13</u>	- 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

- 8'0" — 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
- — — — — VAULT GROUNDWATER UNDERDRAIN SYSTEM SUMP
- — — — — LEAK DETECTION SYSTEM SUMP
- — — — — 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**

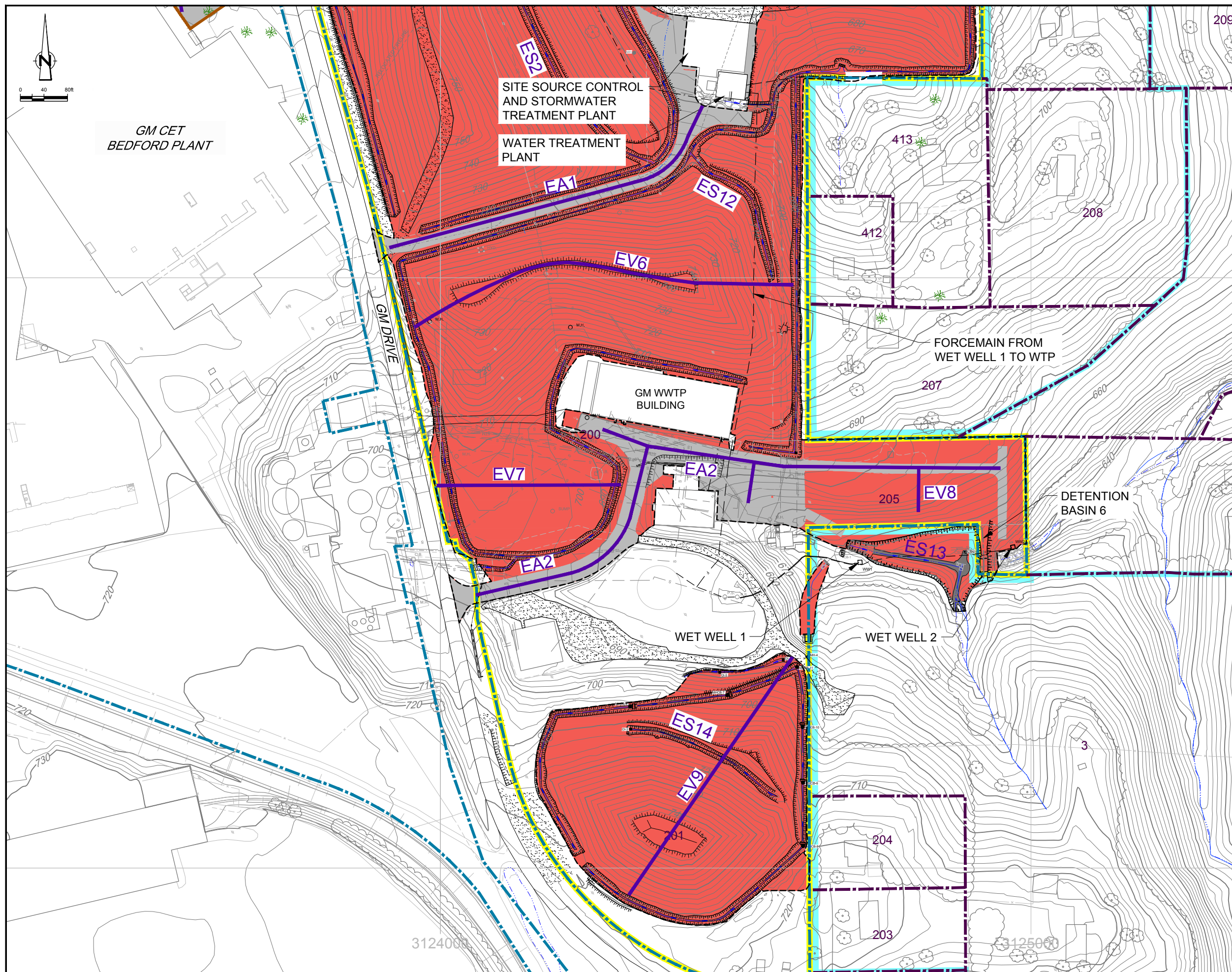
INTERIM OPERATIONS, MAINTENANCE AND MONITORING PLAN
EAST PLANT COVER SYSTEM
**EAST PLANT COVER SYSTEM INSPECTIONS
NORTHERN SECTION AND WEST PLANT
COVER SYSTEM INSPECTIONS**

CRA CONESTOGA-ROVERS & ASSOCIATES

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

Project Manager: J.M.	Reviewed By: P.G.	Date: FEBRUARY 2015
Scale: 1:80	Project N ^o : 13968-00	Report N ^o : 350 Drawing N ^o : 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
- VAULT GROUNDWATER UNDERDRAIN SYSTEM SUMP
- LEAK DETECTION SYSTEM SUMP
- 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**

CRA CONESTOGA-ROVERS & ASSOCIATES

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

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

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



Photo 1: EV1 Vault Cover System west slope vegetation.



Cover System Inspection First Quarter 2017



Photo 2: EV1 Vault Cover facing northeast toward pond



Cover System Inspection First Quarter 2017



Photo 3: Vegetation at ES2.



Cover System Inspection First Quarter 2017



Photo 3: Vegetation at EV2



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Photo 4: West of ES3 East Plant Area Cover, along GM Drive, facing south.



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Photo 5: EV2 East Plant Area Cover facing northwest



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Photo 6: Drainage channel at ES6 East Plant Area Cover facing northeast.



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Photo 7: EV3 East Plant Area Cover facing south.



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Photo 8: Temporary pumping lines in ES1 East Plant Area Cover at north end of Pond.



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Photo 9: ES9 East Plant Area Cover.



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Photo 10: ES9 East Plant Cover System facing west through detention basins.



Cover System Inspection First Quarter 2017



Photo 11: EV4 East Plant Area Cover looking northeast toward ES11 East Plant Area Cover.



Cover System Inspection First Quarter 2017



Photo 12: ES11 East Plant Area Cover looking northeast



Cover System Inspection First Quarter 2017



Photo 13: Vegetative growth along EV5 East Plant Area facing east, away from pond.



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Photo 14: Vegetation growth at ES12 East Plant Area Cover facing west.



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Photo 15: Facing west along EV7 East Plant Cover.



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Photo 16: East Plant Area Cover System southeast of EV6.



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Photo 17: ES14 East Plant Area Cover facing south towards EV9.



Cover System Inspection First Quarter 2017



Photo 18: EV9 East Plant Area Cover patchy vegetation.



Cover System Inspection First Quarter 2017



Photo 19: ES14 East Plant Area Cover vegetation.



Cover System Inspection First Quarter 2017