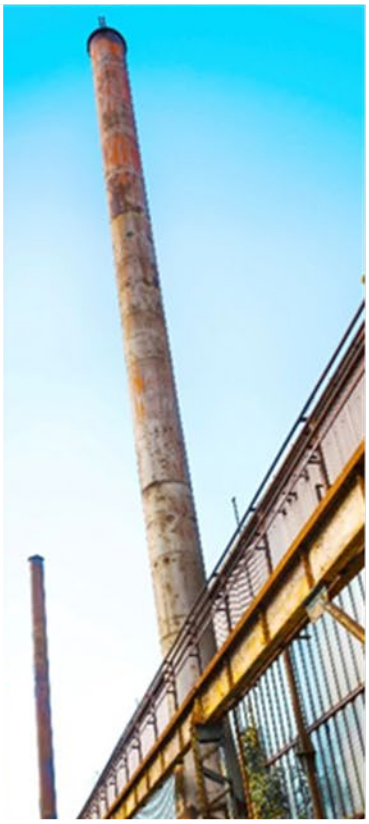


East Plant Area TSCA Vault
Annual Report
Revision 2
Calender Year 2019

GM Bedford Castings Operations
105 GM Drive
Bedford, Indiana
EPA ID# IND0060036099

General Motors, LLC

Table of Contents

Figure Index

Table Index

Appendix Index

Terms and Acronyms

AFOS	above the floor of sump
AMSL	above mean sea level
Approval(s)	U.S. EPA and IDEM PCB Risk-Based Disposal Approvals
CA	Corrective Action
CFR	Code of Federal Regulations
EI	Environmental Indicator
EQ tank	equalization tank
Facility	GM GPS Bedford Facility in Bedford, Indiana
ft	foot/feet
GHD	formerly Conestoga-Rovers & Associates, Inc.
GM	General Motors LLC
gpm	gallons per minute
GSP	Global Propulsion Systems
GUS	gravel underdrain system
GWTP	Ground Water Treatment Plant
HASP	Health and Safety Plan
IDEM	Indiana Department of Environmental Management
IM	Interim Measure
LAR	Leakage Action Rate
LCS	leachate collection system
LDS	leak detection system
mg/L	milligram-per-liter
NPDES	National Pollutant Discharge Elimination System
PCB	Polychlorinated biphenyl
PCP	Post-Closure Plan
RA	Removal Action
RCRA	Resource Conservation and Recovery Act
Report	East Plant Area Vault Annual Monitoring Report Covering the Calendar Year of 2018
SSC	Site Source Control
SSC WTP	the on-Facility 300 gallon per minute design capacity water treatment plant
TSCA	Toxic Substance Control Act
U.S. EPA	United States Environmental Protection Agency
Vault	East Plant Area TSCA landfill vault
VOCs	volatile organic compounds
µg/L	microgram-per-liter

1. Introduction

This Annual Monitoring Report (Report) summarizes data from calendar year 2019 for post-closure monitoring activities for the Toxic Substances Control Act (TSCA) landfill vault (Vault), located in the East Plant Area of the General Motors LLC (GM) Bedford Casting Operations (BCO) Facility (Facility), in Lawrence County, Bedford, Indiana. This Report has been prepared by GHD on behalf of GM in accordance with the Resource Conservation and Recovery Act (RCRA) Administrative Order on Consent effective August 14, 2014 (U.S. EPA Docket No. RCRA-05-2014-0011), and the East Plant Area Vault Post-Closure Plan (PCP) (GHD, February 3, 2012; as amended by Revision 1, August 25, 2016). The Vault is a part of the RCRA Corrective Action (CA) activities being conducted at the Facility under the East Plant Area Interim Measure (IM) concurrent with other IMs at the Facility. The agency Approvals for the Vault were effective October 18, 2006, and were issued pursuant to 40 Code of Federal Regulations (CFR) § 761.61 (c) for the risk-based approval for the disposal of PCB contaminated waste in the Vault. The Vault was constructed as a component of the East Plant Area IM during RCRA CA activities initiated under the Performance-Based CA Agreement (effective March 20, 2001, and amended October 1, 2002, March 29, 2007, and May 9, 2008) for the Facility. A RCRA Order between U.S. EPA and GM LLC was executed on August 4, 2014 (Administrative Order on Consent (AOC) EPA Docket No. RCRA-05-2014-0011) and replaces the Performance-Based CA Agreement, which has been terminated.

Final closure of the Vault occurred on March 27, 2012. A Post-Closure Plan (PCP) was submitted to U.S. EPA on February 3, 2012, which stated that the post-closure monitoring of the Vault would continue to include the quantity of liquid collected from the leachate collection system (LCS), leak detection system (LDS), and gravel underdrain system (GUS), the water elevations in these systems, analytical results from samples collected from these systems, and effluent quantity/quality from the on-Site groundwater treatment plant (GWTP). The PCP prescribes a reduced frequency of record keeping procedures to, at a minimum, once per month. Monitoring was generally completed on a weekly basis in 2019 for the LCS and LDS through manual readings (taken by lowering a water level tape into the sumps), recorded in the site log, maintained at the GWTP. In addition, daily elevations are recorded electronically by the automated systems (for the LCS and GUS). Monitoring results and issues encountered are also discussed in this Report for each collection system, and have been previously disclosed in project Quarterly Progress Reports. Additional post-closure monitoring required by the PCP includes semi-annual inspections of the Vault cover system, recorded in a maintenance log, for the first two years following closure and annually thereafter. Consistent with the PCP and the RCRA AOC, the next annual report covering post-closure monitoring data for the 2020 calendar year will be submitted to U.S. EPA on or before July 15, 2021.

During March 2019, GM transitioned conduct of the daily operation and maintenance activities associated with the GWTP, LCS, LDC, GUS and Wet Wells from GHD to Hamtramck Energy Services (HES).

1.1 Purpose and Organization of Report

This Report presents the requirements for current annual reporting for the Vault in compliance with the monitoring and reporting requirements set out in the PCP and the Approvals by U.S. EPA and IDEM.

This Report is organized as follows:

Section 2.0 – Summary of Record Keeping Log

This section provides a summary of the quantity of liquid collected in 2019 from the LCS, LDS, and the GUS sumps and quantity discharged from these systems to the GWTP for treatment; along with water elevations in the GUS, over the primary liner (LCS), and over the secondary liner (LDS); and the Vault inspection log.

Section 3.0 – Analytical Results

This section provides analytical results for 2019 from the monitoring of the LCS, LDS, GUS, and combined effluent from the GWTP, and groundwater monitoring wells near the Vault.

Section 4.0 – Leachate and Leak Detection Water Disposal

This section provides details related to the volume, PCB concentration, and disposal for leachate and leak detection water with a PCB concentration equal to or greater than (≥) 1 part per million (ppm), if any.

Section 5.0 – Summary and Review of Water Elevations

This section provides a summary and review of the water elevations and depth over the primary liner (LCS), the secondary liner (LDS), and in the GUS.

Section 6.0 – Issues Encountered and Rectification Actions

This section identifies issues and/or problems encountered related to the Vault (i.e., performance of monitoring systems, analytical results, physical characteristics, etc.) and actions taken to rectify them.

Section 7.0 – Spill Cleanup Reports

This section identifies any PCB spill cleanups as established in accordance with the Site Health and Safety Plan (HASP).

Section 8.0 – Financial Assurance

This section discusses financial assurance for the Vault.

Section 9.0 – References

This section presents references cited in this Report.

2. Summary of Record Keeping Log

The following information was recorded, as required by the PCP:

1. The quantity of liquid collected from the LCS
2. The quantity of liquid collected from the LDS
3. The quantity of liquid collected from the GUS

4. The elevation of liquid over the primary liner, the secondary liner and in the GUS
5. The amount of water (liquid) discharged from the LCS, LDS, and GUS to the GWTP, and the respective PCB concentration
6. The Vault inspection logs and maintenance activities

2.1 Summary of LCS, LDS, and GUS Sump Monitoring Logs

In 2019, the water level in the GUS system was recorded on a daily basis by the automated system, with values being manually recorded onto the field log form on a weekly basis. During 2019, water level in the LDS and LCS systems were manually measured and recorded on a monthly basis in accordance with the PCP. Additional readings were collected by field staff to augment the monthly readings. Summaries of the sump monitoring logs for the LCS, LDS, and GUS including the quantity of liquid pumped from each of the Vault collection systems are presented in Tables 2.1, 2.2, and 2.3, respectively. Field logs for the LCS, LDS, and GUS are presented in Appendices A.1, A.2, and A.3, respectively. In accordance with the Approvals, water pumped from the LCS, LDS, and GUS is treated and managed in compliance with the National Pollutant Discharge Elimination System (NPDES) permit (NPDES Permit No. IN0064424) for the Site. It should also be noted that Tables 2.1 through 2.3 incorporate corrections, calculations, and additional annotations over the field logs found in Appendix A.

Table 2.4 presents a summary of the water elevation in each of the sumps to allow for direct comparison between the various layers of the Vault liner system (listed in order from top to bottom: LCS, lowest point of the primary liner system, LDS, lowest point of the secondary liner system, and GUS). Table 2.5 presents a summary of the monthly maximum water elevation in each of the sumps. Note that the groundwater elevation at the GUS sump remained stable during 2019, however, the static elevation is above the operational level of 667.5 ft. AMSL, as highlighted in the table, due to failure of the original GUS pump and subsequent temporary pumps. Copies of the field logs for manual measurements for the LCS, LDS, and GUS sumps, as well as recorded values from the automated pumping system are provided in Appendix A.

2.2 Summary of Water Treated in the Groundwater Treatment Plant

Water removed from the Vault sumps is directed to the GWTP, which treats PCB-impacted water removed from the Vault Sumps and the SSC wet wells (including Wet Wells #1 through #4). There was no water removed from the vault sumps during 2019. The GWTP discharge at Outfall 004 is sampled monthly under the NPDES permit (NPDES Permit No. IN0064424). Data collected during the 2019 calendar year were reported in accordance with the NPDES permit.

The volume of water discharged from the GWTP is recorded daily. A summary of the total monthly volume and daily average of treated water in the GWTP for 2019 is provided in Table 2.6.

2.3 Summary of the Vault Inspection Log and Maintenance Activities

Maintenance and inspection activities were performed at the Vault during the 2019 calendar year.

GHD completed inspections of the Vault Cover System on a semi-annual basis during 2019, concurrent with inspection of the West Plant Area and East Plant Area Cover Systems. These inspections were completed on: April 24, 2019 and November 20, 2019. The findings of these inspections were previously reported in the 2nd Quarterly Progress Reports for 2019 and 1st Quarterly Progress Report for 2020 (submitted to U.S. EPA on July 12, 2019 and January 14, 2020, respectively). A summary of the findings related to the Vault Cover System in 2019 is as follows:

- Some weed and tree sapling growth is present at most transects in the East Plant Area, which is also typically accompanied by some bare patches. Some burrows were identified during the inspections. There were no significant findings (i.e. no issues that pose a risk to the integrity of the cover) for the Vault Cover System. Copies of the Cover System inspection forms can be found in Appendix B – Cover System Inspection.

Details of the maintenance issues encountered with the LCS, LDS and GUS pumps, are discussed in Section 6.

The magnetic flow meter (mag meter), identified as FIT-Vault (serial number F1095B16000), measured the combined volume of water being pumped from the Vault sump systems (LCS, LDS, and GUS) via the permanent forcemain to the EQ tank, before being treated in the GWTP. The mag meter calibration is conducted biennially. The next calibration is scheduled for calendar year 2020.

3. Analytical Results

Sampling methods and analytical procedures were performed in compliance with 40 CFR Part 136, as amended in 41 FR 52779 on December 1, 1976.

3.1 Groundwater Monitoring Analytical Results

In accordance with the September 18, 2014 responses to U.S. EPA March 18, 2014 comments on the PCP, sampling of the GUS sump and coreholes 9-4, and CH-20 are monitored with the bi-annual Environmental Indicator (EI) CA750 monitoring program. EI CA750 groundwater samples were collected for the Facility, including samples downgradient from the Vault (e.g., 9-4). The recharge rate of the LDS did not significantly change or approach the TSCA theoretical Leakage Action Rate and there is no evidence of a release from the Vault to the groundwater table based on changes in elevations in the LCS, LDS, and GUS sumps (Table 2.4). During the semi-annual sampling events in 2019, the GUS was not sampled. Refer to Section 3.5 and Section 6 for further discussion. Groundwater monitoring (static water levels and/or sampling) locations under the EI CA750 in the vicinity of the Vault are shown on Figure 3.1. The closest well in proximity of the vault is well 9-4.

Static groundwater levels are measured quarterly, and sampling is collected along with the groundwater levels during the second and fourth quarters. The first EI CA750 groundwater sampling event of 2019, was completed on May 13, 14, 15, and 16, 2019, and the second semi-annual sampling event of 2019 was completed on November 18, 19, 20, and 21, 2019.

Groundwater samples are collected at the perimeter of the Facility on a semi-annual basis under the EI CA750 monitoring program. EI CA750 groundwater monitoring results for the 2019 events were

previously reported under separate cover and are summarized in Tables 3.1 and 3.2. Figures 3.2 and 3.3 present databoxes, which summarize the groundwater and surface water analytical results for the PCBs sampling locations in the EI CA750 monitoring program for the first and second semi-annual sampling event of 2019, respectively.

Locations 9-4 and CH-20 are downgradient of the Vault and were non-detect for PCBs during the first EI CA750 monitoring event. Both locations have been non-detect for PCBs since sampling began in 2014 at location 9-4 and in 2015 at location CH-20. PCBs were detected at other wells within the Facility boundary related to historical sources and not hydraulically connected (drown gradient of) to the Vault (e.g.,. wells near Area of Interest [AOI 8]).

Sample Quality

The analytical data collected during both the first and second half of 2019 EI CA750 sampling events were within the acceptable qualifications, as noted in the Memorandum regarding Full Validation of the Analytical Results previously submitted with the EI CA750 results (Memos 329 and 333).

3.2 Leachate and Leak Detection Water Monitoring Analytical Results

The PCP requires water from the LCS and LDS be sampled at least on quarterly basis for PCBs. HES attempted to collected samples from both the LCS and LDS on a monthly basis during 2019. Insufficient water volume was present the LDS sumps to collect samples during 2019. One sample was collected from both the LCS and LDS system for analysis of PCB and volatile organic compounds. Analytical results are presented in Table 3.3. All constituents tested were below detection limits.

3.3 GUS Analytical Results

The GUS sump sampling has been conducted with the bi-annual EI CA750 monitoring program since 2015, pursuant to U.S. EPA request, to assess ongoing conditions. It is noted that, due to upgradient contamination still present in the groundwater, analytical detections of PCBs in the water from the GUS sump do not reflect any leachate release or changed conditions in the Vault. With respect to monitoring potential environmental impacts, continued monitoring levels of the LCS, LDS, and Gus as well as the downgradient monitoring as conducted during the EI CA750is the best way to monitor for downgradient changes to groundwater quality.

There was no sampling completed for the GUS for 2019. The temporary pump placed in the GUS has failed and attempts to remove and replace the pump have been unsuccessful and sampling with a bailer was not possible due to space restrictions within the sump and pump casings preventing a bailer from being lowered to the GUS water level. This issue is further discussed in Section 6.

3.4 Water Treatment Facility Analytical Results

Any water removed from the LCS, LDS and GUS would be directed via the permanent forcemain to the GWTP's equalization tank. The Vault water would be combined with groundwater from the Site Source Control (SSC) Wet Wells #1 through #3 and the Pilot Perimeter Groundwater Collection Trench Wet Well #4 prior to treatment and discharge under NPDES Permit No. IN0064424.

The GWTP was sampled monthly in accordance with the NPDES permit. Effluent results for PCBs were non-detect during the reporting year. Analytical results for 2019 monthly Outfall 004 and the GWTP operational samples are presented in Table 3.4.

4. Leachate and Leak Detection Water Disposal

Pursuant to U.S. EPA's Risk-Based Approval to Dispose of PCBs dated October 18, 2006; Conditions of Approval; Leachate and Leak Detection System Water Monitoring and Disposal, Section 10.b. – *"Leachate and leak detection water with PCB concentrations from 1 ppm to, but not including, 50 ppm is TSCA reportable material that must be managed in compliance with the U.S. EPA CERCLA Order or an NPDES Permit*." While a small amount of water in the LCS was pumped in order to collect a sample for analytical testing, there was insufficient water volume to pump to remove water from the sump.

5. Summary and Review of Water Elevations

The water level above the primary liner (i.e., in the LCS), the secondary liner (i.e., in the LDS) and GUS continued to be generally measured on a weekly basis throughout 2019. Maximum daily water levels recorded at the GUS and LCS sumps within the 24-hour day are automatically stored at the PLC in the WTP and retrieved by the operator once per week (the PLC stores 7 days of data).

Tables 2.1, 2.2, and 2.3 show no water was removed from the LCS, LDS and GUS during the reporting period. Pumping was last recorded during the calendar year of 2017. The last recorded amount was 1,590 gallons on October 28, 2017, for the GUS. Refer to Sections 5.1, 5.2, and 5.3 for further discussion regarding water levels in the LCS, LDS, and GUS, respectively. Table 2.4 presents a summary of the water elevations in each of the sumps. Summaries of the maximum monthly water elevations in each of the systems are presented in Table 2.5. Copies of the field logs with PLC records and manual measurements collected from the LCS, LDS, and GUS sumps are provided in Appendix A. A summary of the average monthly volume of water removed from the LCS and the LDS since initial operation of the systems is presented on Figure 5.1 (volume presented is from both the calculation method as used up to 2014 and based on flow meter readings for the LDS to allow for direct comparison between calculation methods and historical monitoring data).

5.1 Leachate Collection System

Manual water level measurements were generally collected on a weekly basis (in excess of the monthly monitoring required by the PCP) in 2019. The automated system records the maximum level and total pumped quantities on a daily basis.

The water elevation in the LCS was maintained within the operating limits set out in the PCP (based on the transducer level recordings). It is noted that the manual readings were reaching or exceeding the operational limit. However, the transducer signals to the control panel when to start the LCS pump operations, not manual readings. Through the year, there were no apparent increases in the rate of the water level rises. During 2019, the depth of water in the LCS was maintained between 2 ft

and 4 ft above floor of sump (AFOS) (bottom of sump at 671.00 ft AMSL), with the maximum depth of 674.28 ft AFOS (equivalent water surface elevation of 66.55 ft) measured on December 16, 2019.

There was no pumping in the LCS required in 2019 as there was not a sufficient amount of water accumulation throughout 2019. On December 23, 2019, pumping occurred for sampling purposes only. The operator estimated approximately 500 gallons were removed during sample collection activities.

The total amount of water removed from the LCS in 2019 was estimated to be 500 gallons, which is more than the estimated 0 gallons pumped in 2018.

5.2 Leak Detection System

Pumping at the LDS, via a portable pump discharging through overland hose that is connected to the hard piping within the LCS manhole (for direct discharge to the EQ tank via forcemain), did not occur for the duration of 2019 due to the water level being too shallow for the pump intake.

The total amount of water removed from the LDS during the 2019 calendar year was 0 gallons based on flow meter readings, these readings are the same as noted during the 2018 calendar year. Manual volume calculations were used historically prior to the use of flow meters. Figure 5.1 presents the summary of average monthly volume of water removed from the LDS as compared to the historical data.

During 2019, the depth of water in the LDS was maintained between 0 ft and 2.5 ft AFOS (bottom of sump at 668.49 ft AMSL or 72.65 ft below the top of the sump), with the maximum depth of 2.52 ft AFOS (equivalent water surface elevation of 671.01 ft) measured on December 30, 2019.

Since no pumping occurred in 2019 in the LDS, there was no average daily flow rate for 2019. The TSCA theoretical sustained Leakage Action Rate (LAR) was calculated in the PCP as 32,000 gallons/acre/day. Therefore no leaks are suspected in the primary liner or secondary liner, based on the monitoring data collected in 2019

5.3 Gravel Underdrain System

The GUS was installed as part of the overall TSCA Vault construction in order to maintain the stability of the liner system during active operations (e.g., construction and filling of the Vault) by mitigating excessive water pressure action on the bottom liner. Since active filling operations ceased over 10 years ago, the original purpose of the GUS operation is no longer necessary.

The automated system for the GUS is designed to operate between water depths of 2.5 ft and 4.33 ft AFOS (bottom of sump at 662.18 ft AMSL). At the maximum end of the range, the water level is one foot lower than the lowest point (667.5 ft AMSL) of the secondary liner.

Water level measurements were collected by the PLC on a daily basis. Since November 2016, there was a continued issue that resulted in no manual measurement of the water level for the duration of 2019. The water level tape previously used became lodged in the sump could not be retrieved. Additional water level tapes, including small diameter tapes were attempted, but could not penetrate beyond the previously lodged tapes.

Through October 2017, a temporary pump, operated manually, was used to maintain the GUS system water levels. During October 2017, the temporary pump failed and became lodged in the sump when replacement was attempted. Continued pumping of the GUS throughout 2019 could not be sustained, resulting in the water levels exceeding the operation levels of 667.5 ft AMSL, or 5.32 ft of water depth in the sump due to the continued issues at the sump since 2017. Complete details of the problems with the GUS sump systems are presented in Section 6.

Although there were periods when peak levels reached elevations consistent with the lowest point of the secondary liner level, no impacts to the LDS levels were observed.

There was no volume removed from the GUS sump in 2019.

6. Issues Encountered and Remedial Actions

The only Vault operation issues encountered in 2019 involved operation of the GUS water collection system. The following actions were taken in 2019 to assess and/or rectify the issues associated with the GUS water collection system:

- In August 2016, the original submersible pump in the GUS stopped working. Smaller submersible pumps were lowered into the HDPE sump (between the inner steel well casing and the HDPE sump) to continue to removing water, but each of these pumps subsequently failed. The GUS has not been pumped since October 2017. The GUS sump outer casing has a kink in the casing about 30 ft from the bottom of the GUS. There are 3 temporary pumps stuck in the void between the inner and outer casings. Efforts have been made to pull the pumps have been unsuccessful. The crowded void prevents additional pumps, tubing and or bailers from reaching the water level.
- During a call on November 17, 2016, the necessity of the GUS sump pumping was revisited from a technical basis. The original design purpose for the GUS sump pumping was to mitigate the potential for upward groundwater pressure on the bottom liner during active disposal operations. Since the landfill closure activities were completed, groundwater collection to mitigate this condition is no longer needed. GHD provided an engineering memorandum to U.S. EPA requesting the cessation of pumping from the GUS sump as a requirement under the Vault permit. At this time, a U.S. EPA decision on the GUS sump pumping cessation is pending verification of groundwater capture (from the GUS) by the Pilot Trench through the Pilot Trench performance data monitoring. GM continues to assess pumping groundwater from the GUS sump for PCB mass removal.
- During August 2019, attempts made to remove the GUS sump pump using a crane were unsuccessful. GM looked into alternate solutions.
- A 3-inch galvanized pipe is located within the GUS sump and was used to mount a transducer. On December 19, 2019, a camera was inserted into the pipe. The pipe extends to the base of the sump. Due to the sediment accumulation in the base of the sump, it is unclear if there is a gap between the bottom of the sump and the pipe. Field personnel estimated an approximate 14 foot water column within the 3-inch pipe. Once the COVID-19 business disruption subsides, GHD will attempt to find and then test a slim pump that could fit inside the 3-inch pipe to allow for continued groundwater removal from the GUS sump.

In 2019, there was lapse in communication among the different personnel involved with the OMM of the vault sumps which lead to a lag in correcting deficiencies. To correct this, GHD will be included on the monthly distribution of vault sump logs. Weekly touch-points will be held between GHD and HES to discuss operational issues so that issues can be relayed to the necessary parties for prompt resolution. Spill Cleanup Reports

There were no on-Facility PCB spills that occurred in 2019. There were no spills on public roads.

7. Financial Assurance

As required by the August 2014 RCRA AOC, a surety bond was obtained by GM in 2014 to provide financial assurance for the remaining Corrective Action tasks, including operation and maintenance related to the Vault, until the approval of the Corrective Measures Proposal (CMP); at which time costs to complete Corrective Action will be re-evaluated based on the requirements of the CMP. As required under the AOC, the financial assurance cost estimate is updated, at a minimum, annually. GM submitted the revised financial assurance cost estimate to both U.S. EPA and IDEM on November 11, 2019, which was approved by U.S. EPA on November 15, 2019. GM submitted the financial assurance demonstration to U.S. EPA on March 31, 2020. The surety bond in the amount of the approved financial assurance cost estimate remains in effect.

8. References

GHD, GM Bedford Site Specific Project Health and Safety Plan (HASP), May 2016.

CRA, Post-Closure Plan (PCP) Bedford Plant Vault, February 3, 2012.

CRA, Post-Closure Plan (PCP) Bedford Plant Vault – Revision 1, August 25, 2016.

CRA, Response to United States Environmental Protection Agency March 18, 2014 Comments GM Bedford 2012 Annual Compliance Report, 2012 Post-Closure Plan and 2014 Construction Certification Report East Plant Area Vault, September 18, 2014.

Figures

0 200 400ft

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL PROPERTY
- APPROXIMATE FACILITY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- WEST PLANT AREA BOUNDARY
- EAST PLANT AREA BOUNDARY
- GM LLC OWNED RESIDENTIAL PROPERTIES
- VAULT LIMIT
- LIMIT OF EAST PLANT COVER SYSTEM
- GUS — VAULT GROUNDWATER UNDERDRAIN SYSTEM SUMP
- MONITORING WELL SAMPLE LOCATION

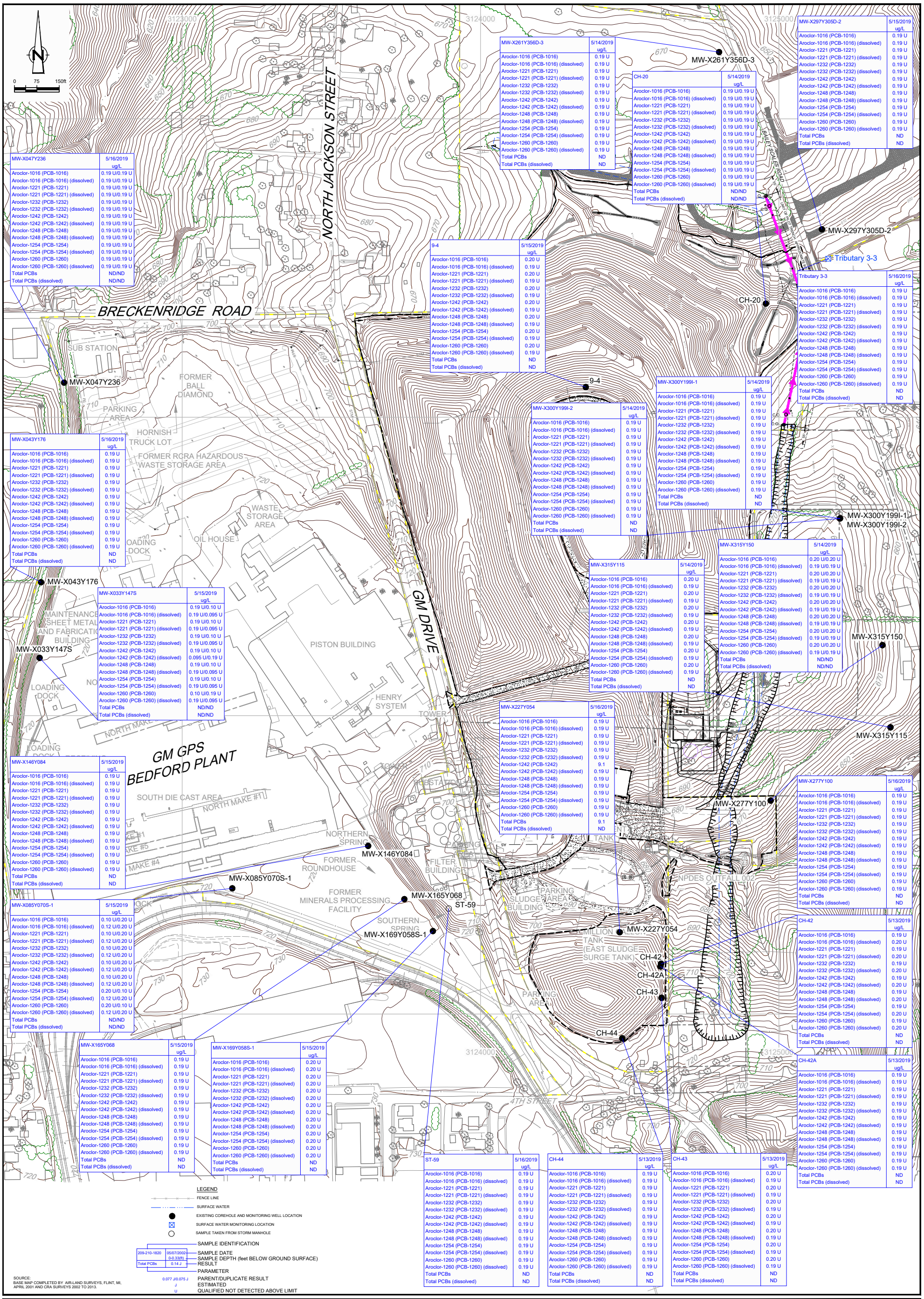
SOURCE:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001
AND GHD SURVEYS 2002 TO 2009

DRAFT FOR REVIEW
PRIVILEGED AND CONFIDENTIAL
PREPARED AT THE REQUEST OF COUNSEL

figure 3.1

GROUNDWATER SAMPLING LOCATIONS
2019 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM GPS BEDFORD FACILITY
Bedford, Indiana

N:\US\Chicago\Legacy\DRAWINGS\00,0xx,xxx\13000S\13968\13968-REPORTS\13968-00(434)\13968-00(434)GN\13968-00(434)GN-CO001.DWG Plot Date: JUN 25, 2020



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Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-20	5/14/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U/0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U/0.19 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

MW-X297Y305D-2	5/15/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X047Y236	5/16/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U/0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U/0.19 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

9-4	5/15/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X300Y199I-2	5/14/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X300Y199I-1	5/14/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X315Y150	5/14/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U/0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221)	0.20 U/0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232)	0.20 U/0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242)	0.20 U/0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248)	0.20 U/0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254)	0.20 U/0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260)	0.20 U/0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U/0.19 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

MW-X315Y115	5/14/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X227Y054	5/16/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	9.1
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	9.1
Total PCBs (dissolved)	ND

MW-X277Y100	5/16/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-42	5/13/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-42A	5/13/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X146Y084	5/15/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X085Y070S-1	5/15/2019 ug/L
Aroclor-1016 (PCB-1016)	0.10 U/0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.12 U/0.20 U
Aroclor-1221 (PCB-1221)	0.10 U/0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.12 U/0.20 U
Aroclor-1232 (PCB-1232)	0.10 U/0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.12 U/0.20 U
Aroclor-1242 (PCB-1242)	0.10 U/0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.12 U/0.20 U
Aroclor-1248 (PCB-1248)	0.10 U/0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.12 U/0.20 U
Aroclor-1254 (PCB-1254)	0.20 U/0.10 U
Aroclor-1254 (PCB-1254) (dissolved)	0.12 U/0.20 U
Aroclor-1260 (PCB-1260)	0.20 U/0.10 U
Aroclor-1260 (PCB-1260) (dissolved)	0.12 U/0.20 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

MW-X165Y068	5/15/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X169Y058S-1	5/15/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs	ND
Total PCBs (dissolved)	ND

ST-59	5/16/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-44	5/13/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-43	5/13/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

LEGEND

- FENCE LINE
- SURFACE WATER
- EXISTING COREHOLE AND MONITORING WELL LOCATION
- SURFACE WATER MONITORING LOCATION
- SAMPLE TAKEN FROM STORM MANHOLE
- SAMPLE IDENTIFICATION
- 209-210-1820 / 05/07/2002 / 0-0.33(ft) / Total PCBs / 0.14 J — SAMPLE DATE, SAMPLE DEPTH (feet BELOW GROUND SURFACE), RESULT, PARAMETER
- 0.077 J/0.075 J — PARENT/DUPLICATE RESULT
- J — ESTIMATED
- U — QUALIFIED NOT DETECTED ABOVE LIMIT

SOURCE:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.

№	Revision	Date	Initial

SCALE VERIFICATION

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

Approved

DRAFT FOR REVIEW
PRIVILEGED AND CONFIDENTIAL
PREPARED AT THE REQUEST OF COUNSEL

GM GPS BEDFORD FACILITY
BEDFORD, INDIANA

2019 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
FIRST HALF 2019 CA750 MONITORING RESULTS

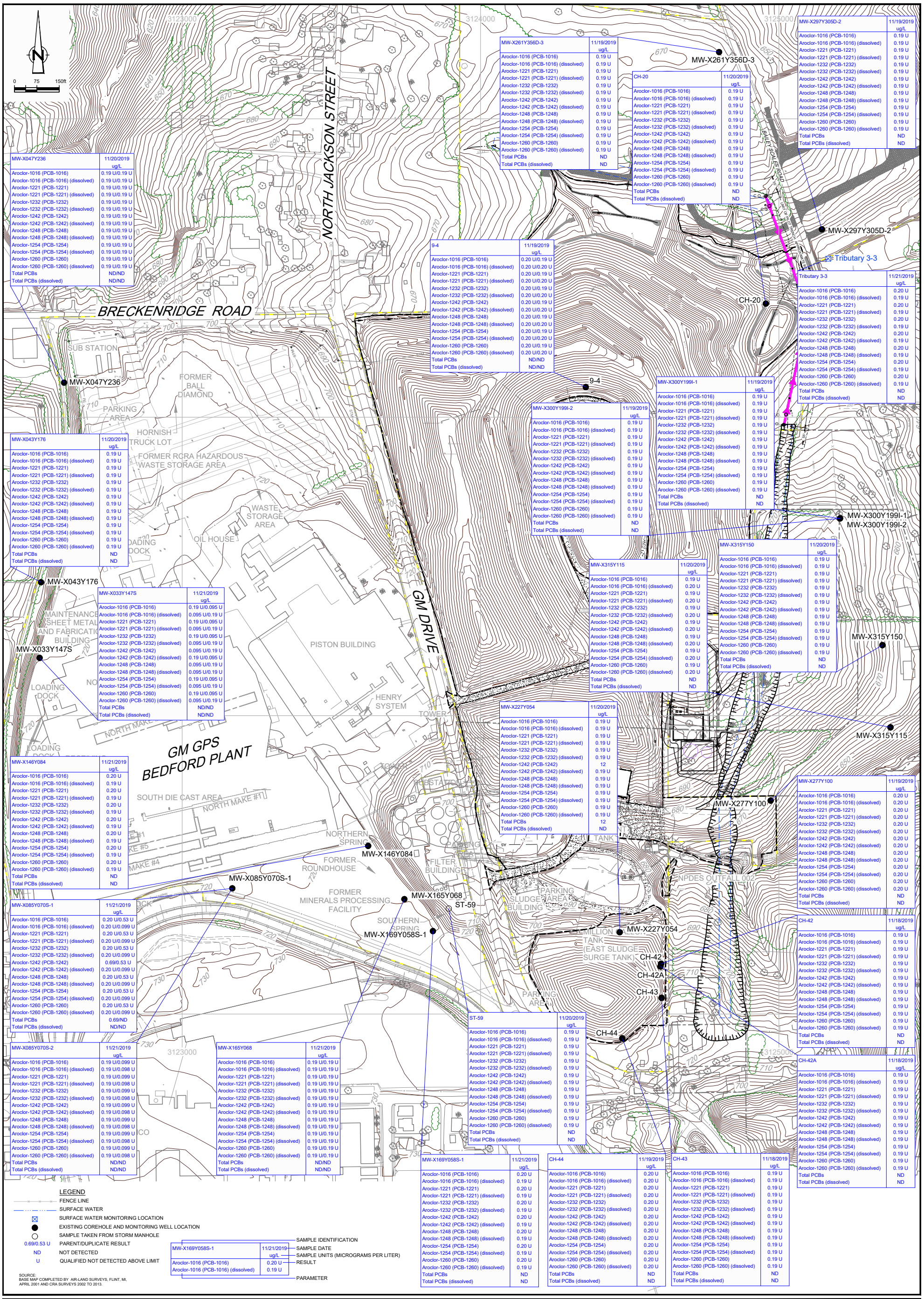
PCBS ANALYTICAL RESULT

GHD

Source Reference:

Project Manager:	Reviewed By:	Date:	
W. STEINMANN	J. LUZWICK	June 2020	
Scale: as shown	Project №: 13968-00	Report №: 434	Drawing №: figure 3.2

N:\US\Chicago\Legacy\DRAWINGS\00,0xx,xxx\13000S\13968\13968-REPORTS\13968-00(434)\13968-00(434)GN\13968-00(434)GN-CO002.DWG Plot Date: JUN 25, 2020



MW-X047Y236	11/20/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U/0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U/0.19 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

MW-X043Y176	11/20/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X033Y147S	11/21/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U/0.095 U
Aroclor-1016 (PCB-1016) (dissolved)	0.095 U/0.19 U
Aroclor-1221 (PCB-1221)	0.19 U/0.095 U
Aroclor-1221 (PCB-1221) (dissolved)	0.095 U/0.19 U
Aroclor-1232 (PCB-1232)	0.19 U/0.095 U
Aroclor-1232 (PCB-1232) (dissolved)	0.095 U/0.19 U
Aroclor-1242 (PCB-1242)	0.095 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.095 U
Aroclor-1248 (PCB-1248)	0.095 U/0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.095 U/0.19 U
Aroclor-1254 (PCB-1254)	0.19 U/0.095 U
Aroclor-1254 (PCB-1254) (dissolved)	0.095 U/0.19 U
Aroclor-1260 (PCB-1260)	0.19 U/0.095 U
Aroclor-1260 (PCB-1260) (dissolved)	0.095 U/0.19 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

MW-X146Y084	11/21/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X085Y070S-1	11/21/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U/0.53 U
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U/0.099 U
Aroclor-1221 (PCB-1221)	0.20 U/0.53 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U/0.099 U
Aroclor-1232 (PCB-1232)	0.20 U/0.53 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U/0.099 U
Aroclor-1242 (PCB-1242)	0.69/0.53 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U/0.099 U
Aroclor-1248 (PCB-1248)	0.20 U/0.53 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U/0.099 U
Aroclor-1254 (PCB-1254)	0.20 U/0.53 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U/0.099 U
Aroclor-1260 (PCB-1260)	0.20 U/0.53 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U/0.099 U
Total PCBs	0.69/ND
Total PCBs (dissolved)	ND/ND

MW-X085Y070S-2	11/21/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U/0.099 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.098 U
Aroclor-1221 (PCB-1221)	0.19 U/0.099 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.098 U
Aroclor-1232 (PCB-1232)	0.19 U/0.099 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.098 U
Aroclor-1242 (PCB-1242)	0.19 U/0.099 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.098 U
Aroclor-1248 (PCB-1248)	0.19 U/0.099 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.098 U
Aroclor-1254 (PCB-1254)	0.19 U/0.099 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U/0.098 U
Aroclor-1260 (PCB-1260)	0.19 U/0.099 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U/0.098 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

MW-X165Y068	11/21/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U/0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U/0.19 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

ST-59	11/20/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X169Y058S-1	11/21/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X261Y356D-3	11/19/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-20	11/20/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X297Y305D-2	11/19/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

Tributary 3-3	11/21/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

9-4	11/19/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U/0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U/0.20 U
Aroclor-1221 (PCB-1221)	0.20 U/0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U/0.20 U
Aroclor-1232 (PCB-1232)	0.20 U/0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U/0.20 U
Aroclor-1242 (PCB-1242)	0.20 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U/0.20 U
Aroclor-1248 (PCB-1248)	0.20 U/0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U/0.20 U
Aroclor-1254 (PCB-1254)	0.20 U/0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U/0.20 U
Aroclor-1260 (PCB-1260)	0.20 U/0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U/0.20 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

MW-X300Y199I-2	11/19/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X300Y199I-1	11/19/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X315Y150	11/20/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X315Y115	11/20/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X227Y054	11/20/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	12
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	12
Total PCBs (dissolved)	ND

MW-X277Y100	11/19/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-42	11/18/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-42A	11/18/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-44	11/19/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-43	11/18/2019 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

LEGEND

- FENCE LINE
- SURFACE WATER
- SURFACE WATER MONITORING LOCATION
- EXISTING COREHOLE AND MONITORING WELL LOCATION
- SAMPLE TAKEN FROM STORM MANHOLE
- 0.69/0.53 U — PARENT/DUPLICATE RESULT
- ND — NOT DETECTED
- U — QUALIFIED NOT DETECTED ABOVE LIMIT

MW-X169Y058S-1	11/21/2019 ug/L
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U

SAMPLE IDENTIFICATION; SAMPLE DATE; SAMPLE UNITS (MICROGRAMS PER LITER); RESULT; PARAMETER

SOURCE:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.

Nº	Revision	Date	Initial

SCALE VERIFICATION

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

Approved

DRAFT FOR REVIEW
PRIVILEGED AND CONFIDENTIAL
PREPARED AT THE REQUEST OF COUNSEL

GM GPS BEDFORD FACILITY
BEDFORD, INDIANA

2019 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
SECOND HALF 2019 CA750 MONITORING RESULTS

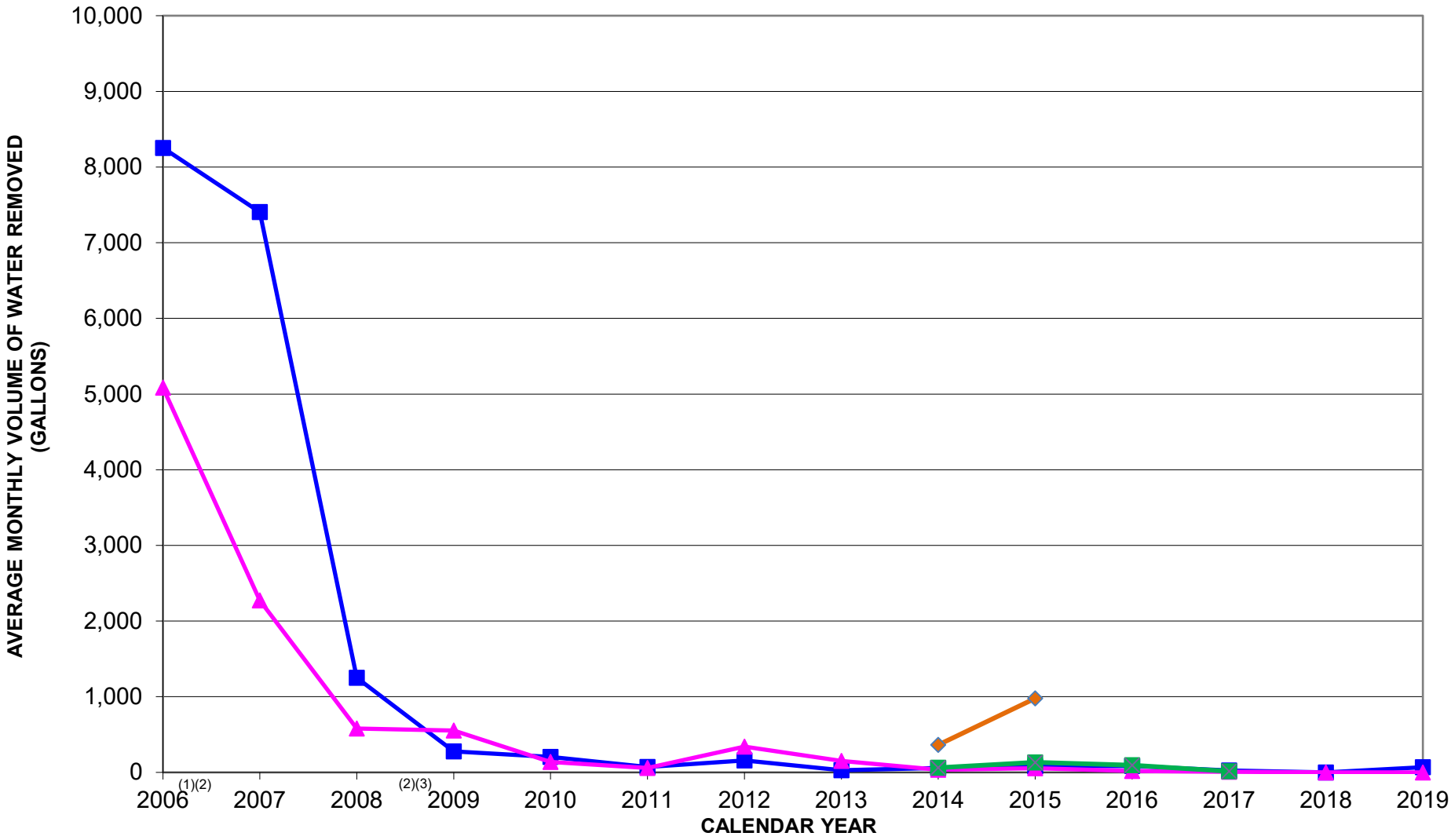
PCBS ANALYTICAL RESULT

GHD

Source Reference:

Project Manager:	Reviewed By:	Date:	
W. STEINMANN	J. LUZWICK	June 2020	
Scale: as shown	Project Nº: 13968-00	Report Nº: 434	Drawing Nº: figure 3.3

N:\US\Chicago\Legacy\DRAWINGS\00,0xx,xxx\13000S\13968\13968-REPORTS\13968-00(434)\13968-00(434)GN\13968-00(434)GN-CO003.DWG Plot Date: JUN 25, 2020



LEGEND

- LCS Calculated
- LDS Calculated
- LCS Flow Meter
- LDS Flow Meter

NOTES

(1) Operation of the LCS and LDS commenced on Aug. 30, 2006.

(2) Water from the underdrain system entered the LDS on September 8 and 13, 2006. Leachate was able to enter the LDS through leaky joints between manhole risers until January 18, 2007 when all leaks were repaired.

(3) Rehabilitation activities were conducted on the LDS (flushing) on Jan. 23 - June 5, 2007.

(4) 2016 - 2018 LCS flow meter readings have been excluded due to the flow meter being by-passed while temporary pump in place.

figure 5.1

SUMMARY OF AVERAGE MONTHLY VOLUME OF WATER REMOVED FROM LCS AND LDS
EAST PLANT AREA TSCA VAULT ANNUAL REPORT, CALENDAR YEAR 2019
GM CET BEDFORD FACILITY
Bedford, Indiana

Tables

Table 2.1

2018 Summary of Daily Leachate Collection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CETC Bedford Facility
Bedford, Indiana

LEACHATE COLLECTION SYSTEM

Date	Time of Measurement (hh:mm)	Manual Depth To Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (ft AMSL)	Water Depth Removed (feet)	Volume Removed[e] (gallons)	Water Level` @ PLC [d] (inches)	PLC Water Level Converted to Elevation (d) (ft AMSL)	Equivalent Depth of Water Over Primary Liner (inches)	Quantity Pumped @ PLC [f] (gallons removed)	Local Flow Meter Reading (c) (gallons)	Total Volume Pumped Between Flow Meter Readings (gallons)	Elapsed Time Between Flow Meter Readings (days)	Comments
1/1/19	9:00	--	--	--	--	--	671.00	0.037	0	-	0	994	
1/2/19	9:00	67.95	672.88	--	--	11.9	671.99	0.090	0	-	0	995	
1/3/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	996	
1/4/19	8:00	--	--	--	--	--	671.00	0.037	0	-	0	997	
1/5/19	8:00	--	--	--	--	--	671.00	0.037	0	-	0	998	
1/6/19	9:00	--	--	--	--	--	671.00	0.037	0	-	0	999	
1/7/19	8:05	67.90	672.93	--	--	11.9	671.99	0.090	0	-	0	1,000	
1/8/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,001	
1/9/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,002	
1/10/19	8:10	67.89	672.94	--	--	12.2	672.01	0.159	0	-	0	1,003	No flow meter readings PLC issue at SWTP
1/11/19	8:05	67.88	672.95	--	--	12.3	672.02	0.159	0	-	0	1,004	
1/12/19	8:05	67.87	672.96	--	--	12.3	672.02	0.159	0	-	0	1,005	
1/13/19	8:07	67.86	672.97	--	--	12.4	672.03	0.159	0	-	0	1,006	
1/14/19	8:02	67.85	672.98	--	--	12.4	672.03	0.159	0	-	0	1,007	
1/15/19	8:04	67.84	672.99	--	--	12.5	672.04	0.159	0	-	0	1,008	
1/16/19	8:02	67.83	673.00	--	--	12.5	672.04	0.159	0	-	0	1,009	
1/17/19	8:02	67.83	673.00	--	--	12.6	672.05	0.159	0	-	0	1,010	
1/18/19	8:02	67.83	673.00	--	--	12.6	672.05	0.159	0	-	0	1,011	
1/19/19	8:04	67.84	672.99	--	--	12.6	672.05	0.159	0	-	0	1,012	
1/20/19	8:02	67.86	672.97	--	--	12.6	672.05	0.159	0	-	0	1,013	
1/21/19	8:05	67.86	672.97	--	--	12.7	672.05	0.159	0	-	0	1,014	
1/22/19	8:05	67.86	672.97	--	--	12.8	672.06	0.159	0	-	0	1,015	
1/23/19	8:05	67.86	672.97	--	--	12.9	672.07	0.159	0	-	0	1,016	Flow meters back on line
1/24/19	8:05	67.86	672.97	--	--	13.0	672.08	0.159	0	-	0	1,017	
1/25/19	8:05	67.86	672.97	--	--	13.1	672.09	0.159	0	-	0	1,018	
1/26/19	8:05	67.85	672.98	--	--	13.2	672.10	0.159	0	-	0	1,019	
1/27/19	8:05	67.85	672.98	--	--	13.3	672.10	0.159	0	-	0	1,020	
1/28/19	8:05	67.85	672.98	--	--	13.3	672.10	0.159	0	-	0	1,021	
1/29/19	8:05	67.85	672.98	--	--	13.5	672.12	0.159	0	-	0	1,022	
1/30/19	8:05	67.85	672.98	--	--	13.5	672.12	0.159	0	-	0	1,023	
1/31/19	8:05	67.85	672.98	--	--	13.5	672.12	0.159	0	-	0	1,024	
2/1/19	8:05	--	--	--	--	--	671.00	0.159	0	-	0	1,025	
2/2/19	8:05	--	--	--	--	--	671.00	0.159	0	-	0	1,026	
2/3/19	8:05	--	--	--	--	--	671.00	0.159	0	-	0	1,027	
2/4/19	8:05	67.79	673.04	--	--	13.6	672.13	0.159	0	-	0	1,028	
2/5/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,029	
2/6/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,030	
2/7/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,031	
2/8/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,032	
2/9/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,033	
2/10/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,034	
2/11/19	8:05	67.73	673.10	--	--	14.0	672.16	0.159	0	-	0	1,035	
2/12/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,036	
2/13/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,037	
2/14/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,038	
2/15/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,039	
2/16/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,040	
2/17/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,041	
2/18/19	8:05	67.66	673.17	--	--	14.5	672.20	0.159	0	-	0	1,042	
2/19/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,043	
2/20/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,044	
2/21/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,045	
2/22/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,046	
2/23/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,047	
2/24/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,048	
2/25/19	8:05	67.59	673.24	--	--	15.1	672.25	0.159	0	-	0	1,049	
2/26/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,050	
2/27/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,051	
2/28/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,052	
3/1/19	8:15	--	--	--	--	--	671.00	0.037	0	-	0	1,053	
3/2/19	9:15	--	--	--	--	--	671.00	0.037	0	-	0	1,054	
3/3/19	9:15	--	--	--	--	--	671.00	0.037	0	-	0	1,055	
3/4/19	8:15	67.56	673.27	--	--	15.6	672.30	0.159	0	-	0	1,056	
3/5/19	8:10	--	--	--	--	--	671.00	0.037	0	-	0	1,057	
3/6/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,058	
3/7/19	8:10	--	--	--	--	--	671.00	0.037	0	-	0	1,059	
3/8/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,060	
3/9/19	8:10	--	--	--	--	--	671.00	0.037	0	-	0	1,061	
3/10/19	9:10	--	--	--	--	--	671.00	0.037	0	-	0	1,062	
3/11/19	8:02	67.54	673.29	--	--	15.9	672.32	0.159	0	-	0	1,063	
3/12/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,064	

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Date	Time of Measurement (hh:mm)	Manual Depth To Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (ft AMSL)	Water Depth Removed (feet)	Volume Removed[e] (gallons)	Water Level` @ PLC [d] (inches)	PLC Water Level Converted to Elevation (d) (ft AMSL)	Equivalent Depth of Water Over Primary Liner (inches)	Quantity Pumped @ PLC [f] (gallons removed)	Local Flow Meter Reading (c) (gallons)	Total Volume Pumped Between Flow Meter Readings (gallons)	Elapsed Time Between Flow Meter Readings (days)	Comments
3/13/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,065	
3/14/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,066	
3/15/19	8:02	--	--	--	--	--	671.00	0.037	0	-	0	1,067	
3/16/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,068	
3/17/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,069	
3/18/19	8:05	67.49	673.34	--	--	16.2	672.35	0.159	0	-	0	1,070	
3/19/19	8:02	--	--	--	--	--	671.00	0.037	0	-	0	1,071	
3/20/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,072	
3/21/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,073	
3/22/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,074	
3/23/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,075	
3/24/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,076	
3/25/19	8:05	67.46	673.37	--	--	16.8	672.40	0.159	0	-	0	1,077	
3/26/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,078	
3/27/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,079	
3/28/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,080	
3/29/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,081	
3/30/19	9:08	--	--	--	--	--	671.00	0.037	0	-	0	1,082	
3/31/19	9:08	--	--	--	--	--	671.00	0.037	0	-	0	1,083	
4/1/19	8:05	67.44	673.39	--	--	17.0	672.41	0.159	0	-	0	1,084	
4/2/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,085	
4/3/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,086	
4/4/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,087	
4/5/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,088	
4/6/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,089	
4/7/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,090	
4/8/19	8:05	67.42	673.41	--	--	17.1	672.42	0.159	0	-	0	1,091	
4/9/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,092	
4/10/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,093	
4/11/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,094	
4/12/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,095	
4/13/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,096	
4/14/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,097	
4/15/19	8:05	67.38	673.45	--	--	17.5	672.44	0.159	0	-	0	1,098	
4/16/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,099	
4/17/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,100	
4/18/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,101	
4/19/19	6:05	--	--	--	--	--	671.00	0.037	0	-	0	1,102	
4/20/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,103	
4/21/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,104	
4/22/19	8:05	67.34	673.49	--	--	17.6	672.46	0.159	0	-	0	1,105	
4/23/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,106	
4/24/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,107	
4/25/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,108	
4/26/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,109	
4/27/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,110	
4/28/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,111	
4/29/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,112	
4/30/19	8:05	67.34	673.49	--	--	18.0	672.50	0.244	0	-	0	1,113	
5/1/19	8:05	67.34	673.49	--	--	18.1	672.50	0.244	0	-	0	1,114	
5/2/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,115	
5/3/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,116	
5/4/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,117	
5/5/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,118	
5/6/19	8:00	67.28	673.55	--	--	18.2	672.51	0.244	0	-	0	1,119	
5/7/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,120	
5/8/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,121	
5/9/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,122	
5/10/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,123	
5/11/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,124	
5/12/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,125	
5/13/19	8:00	67.23	673.6	--	--	18.6	672.55	0.244	0	-	0	1,126	
5/14/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,127	
5/15/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,128	
5/16/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,129	
5/17/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,130	
5/18/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,131	
5/19/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,132	
5/20/19	8:05	67.19	673.64	--	--	18.8	672.56	0.244	0	-	0	1,133	
5/21/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,134	
5/22/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,135	

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5/23/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,136	
5/24/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,137	
5/25/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,138	
5/26/19	9:05	67.15	673.68	--	--	19.2	672.60	0.244	0	-	0	1,139	
5/27/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,140	
5/28/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,141	
5/29/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,142	
5/30/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,143	
5/31/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,144	
6/1/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,145	
6/2/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,146	
6/3/19	8:05	67.14	673.69	--	--	19.4	672.61	0.244	0	-	0	1,147	
6/4/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,148	
6/5/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,149	
6/6/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,150	
6/7/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,151	
6/8/19	7:05	--	--	--	--	--	671.00	0.037	0	-	0	1,152	
6/9/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,153	
6/10/19	7:05	67.08	673.75	--	--	19.7	672.64	0.244	0	-	0	1,154	
6/11/19	7:05	--	--	--	--	--	671.00	0.037	0	-	0	1,155	
6/12/19	7:05	--	--	--	--	--	671.00	0.037	0	-	0	1,156	
6/13/19	7:05	--	--	--	--	--	671.00	0.037	0	-	0	1,157	
6/14/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,158	
6/15/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,159	
6/16/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,160	
6/17/19	8:05	67.02	673.81	--	--	20.1	672.67	0.244	0	-	0	1,161	
6/18/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,162	
6/19/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,163	
6/20/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,164	
6/21/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,165	
6/22/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,166	
6/23/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,167	
6/24/19	8:05	66.96	673.87	--	--	20.1	672.65	0.244	0	-	0	1,168	
6/25/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,169	
6/26/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,170	
6/27/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,171	
6/28/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,172	
6/29/19	9:05	--	--	--	--	--	671.00	0.037	0	-	0	1,173	
6/30/19	8:00	--	--	--	--	--	671.00	0.037	0	-	0	1,174	
7/1/19	8:05	66.94	673.89	--	--	21.2	672.76	0.244	0	-	0	1,175	
7/2/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,176	
7/3/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,177	
7/4/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,178	
7/5/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,179	
7/6/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,180	
7/7/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,181	
7/8/19	8:05	66.9	673.93	--	--	21.7	672.80	0.244	0	-	0	1,182	
7/9/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,183	
7/10/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,184	
7/11/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,185	
7/12/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,186	
7/13/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,187	
7/14/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,188	
7/15/19	8:05	66.86	675.97	--	--	22.1	672.84	0.244	0	-	0	1,189	
7/16/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,190	
7/17/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,191	
7/18/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,192	
7/19/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,193	
7/20/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,194	
7/21/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,195	
7/22/19	8:05	66.83	674.00	--	--	22.5	672.87	0.244	0	-	0	1,196	
7/23/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,197	
7/24/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,198	
7/25/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,199	
7/26/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,200	
7/27/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,201	
7/28/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,202	
7/29/19	8:05	66.77	674.06	--	--	22.8	672.90	0.244	0	-	0	1,203	
7/30/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,204	
7/31/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,205	
8/1/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,206	

Table 2.1

2018 Summary of Daily Leachate Collection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CETC Bedford Facility
Bedford, Indiana

LEACHATE COLLECTION SYSTEM

Date	Time of Measurement (hh:mm)	Manual Depth To Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (ft AMSL)	Water Depth Removed (feet)	Volume Removed[e] (gallons)	Water Level` @ PLC [d] (inches)	PLC Water Level Converted to Elevation (d) (ft AMSL)	Equivalent Depth of Water Over Primary Liner (inches)	Quantity Pumped @ PLC [f] (gallons removed)	Local Flow Meter Reading (c) (gallons)	Total Volume Pumped Between Flow Meter Readings (gallons)	Elapsed Time Between Flow Meter Readings (days)	Comments
8/2/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,207	
8/3/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,208	
8/4/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,209	
8/5/19	8:05	66.77	674.06	--	--	23.1	672.92	0.244	0	-	0	1,210	
8/6/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,211	
8/7/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,212	
8/8/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,213	
8/9/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,214	
8/10/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,215	
8/11/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,216	
8/12/19	8:05	66.73	674.1	--	--	23.4	672.95	0.244	0	-	0	1,217	
8/13/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,218	
8/14/19	8:05	66.81	674.02	--	--	22.6	672.88	0.244	0	-	0	1,219	Testing pump
8/15/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,220	
8/16/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,221	
8/17/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,222	
8/18/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,223	
8/19/19	8:05	66.78	674.05	--	--	22.8	672.90	0.244	0	-	0	1,224	
8/20/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,225	
8/21/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,226	
8/22/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,227	
8/23/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,228	
8/24/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,229	
8/25/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,230	
8/26/19	8:05	66.75	674.08	--	--	23.1	672.92	0.244	0	-	0	1,231	
8/27/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,232	
8/28/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,233	
8/29/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,234	
8/30/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,235	
8/31/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,236	
9/1/19	9:00	--	--	--	--	--	671.00	0.037	0	-	0	1,237	
9/2/19	9:00	66.72	674.11	--	--	23.7	672.97	0.244	0	-	0	1,238	
9/3/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,239	
9/4/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,240	
9/5/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,241	
9/6/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,242	
9/7/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,243	
9/8/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,244	
9/9/19	8:05	66.93	673.9	--	--	23.9	672.99	0.244	0	-	0	1,245	
9/10/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,246	
9/11/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,247	
9/12/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,248	
9/13/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,249	
9/14/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,250	
9/15/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,251	
9/16/19	8:05	66.9	673.93	--	--	21.7	672.80	0.244	0	-	0	1,252	
9/17/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,253	
9/18/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,254	
9/19/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,255	
9/20/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,256	
9/21/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,257	
9/22/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,258	
9/23/19	8:05	66.87	673.96	--	--	22.0	672.83	0.244	0	-	0	1,259	
9/24/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,260	
9/25/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,261	
9/26/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,262	
9/27/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,263	
9/28/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,264	
9/29/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,265	
9/30/19	8:05	66.84	673.99	--	--	22.3	672.85	0.244	0	-	0	1,266	
10/1/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,267	
10/2/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,268	
10/3/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,269	
10/4/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,270	
10/5/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,271	
10/6/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,272	
10/7/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,273	
10/8/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,274	
10/9/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,275	
10/10/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,276	
10/11/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,277	

Table 2.1

2018 Summary of Daily Leachate Collection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CETC Bedford Facility
Bedford, Indiana

LEACHATE COLLECTION SYSTEM

Date	Time of Measurement (hh:mm)	Manual Depth To Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (ft AMSL)	Water Depth Removed (feet)	Volume Removed[e] (gallons)	Water Level` @ PLC [d] (inches)	PLC Water Level Converted to Elevation (d) (ft AMSL)	Equivalent Depth of Water Over Primary Liner (inches)	Quantity Pumped @ PLC [f] (gallons removed)	Local Flow Meter Reading (c) (gallons)	Total Volume Pumped Between Flow Meter Readings (gallons)	Elapsed Time Between Flow Meter Readings (days)	Comments
10/12/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,278	
10/13/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,279	
10/14/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,280	
10/15/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,281	
10/16/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,282	
10/17/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,283	
10/18/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,284	
10/19/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,285	
10/20/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,286	
10/21/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,287	
10/22/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,288	
10/23/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,289	
10/24/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,290	
10/25/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,291	
10/26/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,292	
10/27/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,293	
10/28/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,294	
10/29/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,295	
10/30/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,296	
10/31/19	8:05	--	--	--	--	--	671.00	0.037	0	-	0	1,297	
11/1/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,298	
11/2/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,299	
11/3/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,300	
11/4/19	8:05	66.68	674.15	--	--	23.9	672.99	0.244	0	1,567,410	0	1,301	
11/5/19	8:05	--	--	--	--	--	671.00	0.037	0		0	1,302	
11/6/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,303	
11/7/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,304	
11/8/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,305	
11/9/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,306	
11/10/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,307	
11/11/19	8:05	66.65	674.18	--	--	24.4	673.03	0.349	0	1,567,410	0	1,308	
11/12/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,309	
11/13/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,310	
11/14/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,311	
11/15/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,312	
11/16/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,313	
11/17/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,314	
11/18/19	8:05	66.62	674.21	--	--	24.8	673.06	0.349	0	1,567,410	0	1,315	
11/19/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,316	
11/20/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,317	
11/21/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,318	
11/22/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,319	
11/23/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,320	
11/24/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,321	
11/25/19	8:05	66.59	674.24	--	--	25.0	673.08	0.349	0	1,567,410	0	1,322	
11/26/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,323	
11/27/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,324	
11/28/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,325	
11/29/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,326	
11/30/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,327	
12/1/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,328	
12/2/19	8:05	66.58	674.25	--	--	25.4	673.11	0.349	0	1,567,410	0	1,329	
12/3/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,330	
12/4/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,331	
12/5/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,332	
12/6/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,333	
12/7/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,334	
12/8/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,335	
12/9/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,336	
12/10/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,337	
12/11/19	8:05	66.56	674.27	--	--	25.8	673.15	0.349	0	1,567,410	0	1,338	
12/12/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,339	
12/13/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,340	
12/14/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,341	
12/15/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,342	
12/16/19	8:05	66.55	674.28	--	--	26.2	673.18	0.349	0	1,567,410	0	1,343	
12/17/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,344	
12/18/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,345	
12/19/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,346	
12/20/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,347	
12/21/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,348	

Table 2.1

2018 Summary of Daily Leachate Collection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CETC Bedford Facility
Bedford, Indiana

LEACHATE COLLECTION SYSTEM

Date	Time of Measurement (hh:mm)	Manual Depth To Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (ft AMSL)	Water Depth Removed (feet)	Volume Removed[e] (gallons)	Water Level` @ PLC [d] (inches)	PLC Water Level Converted to Elevation (d) (ft AMSL)	Equivalent Depth of Water Over Primary Liner (inches)	Quantity Pumped @ PLC [f] (gallons removed)	Local Flow Meter Reading (c) (gallons)	Total Volume Pumped Between Flow Meter Readings (gallons)	Elapsed Time Between Flow Meter Readings (days)	Comments
12/22/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,349	
12/23/19	8:05	68.23	672.6	--	500	26.6	673.21	0.349	0	--	0	1,350	Sample pulled, approximately 500 gallons removed
12/24/19	8:05	--	--	--	--	--	671.00	0.037	0	1,567,410	0	1,351	
12/25/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,352	
12/26/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,353	
12/27/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,354	
12/28/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,355	
12/29/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,356	
12/30/19	8:05	68.68	672.15	--	--	8.6	671.71	0.090	0	1,567,410	0	1,357	
12/31/19	8:05	--	--	--	--	--	671.00	0.037	0	--	0	1,358	
Total					500				0		0		

Notes:

ft AMSL - feet above mean sea level

Top of sump [top of concrete manhole] (feet AMSL):	740.83
Bottom of sump (feet AMSL):	671
Total depth of sump manhole (feet):	69.83
Inside diameter of sump (feet):	6

(--) Measurements were not collected.

(1) Pump operating level between 1 ft (672.00 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(2) Temporary LCS pump manually operated, PLC systems not functional. See report text section 6 for additional details.

Indication of the water level in the LCS rising to 674.00 ft AMSL or higher.

a Water level elevation is less than the previous measurement due to human error while taking the measurement.

b Water level elevation is more than the previous measurement due to human error while taking the measurement.

c Flow meter readings (displayed on mag meter serial number F1095C16000) are cumulative unless noted otherwise.

d PLC records the maximum water level observed each day (midnight to midnight). Therefore, the manual water level/elevation will not match the water level/elevation recorded by the PLC.

e Based on sump volume calculations.

(f) Prior to November 2, 2015, the clock in the PLC at the Vault was set so that it was zeroing the data before it could get read by the main PLC across the cellular network. The fix was to set the clock at the Vault PLC so that it lags the main PLC by 30 seconds. This setting now allows the main PLC to record the total volume pumped by the automated system before it gets zeroed at the Vault PLC.

	Manual	PLC
Minimum Elevation (ft, AMSL)	672.15	671.00
Maximum Elevation (ft, AMSL)	675.97	673.21
Mean Elevation (ft, AMSL)	673.48	671.28
Number of Pumping Events (based on PLC events)	1	

(1)	**Total Volume Accumulation in LCS carried forward from 2018 (gallons) (based on local flow meter readings)**	0.0
(2)	**Total Volume Accumulation in LCS from last pumping event to end of 2019 (gallons) (based on local flow meter readings)**	
(3)	**Total Volume Pumped from the LCS in 2019 (gallons) (based on local flow meter readings)**	500.0
(4)=(3)-(1)+(2)	**Total Volume Accumulation Originating in the LCS in 2018 (gallons) (based on local flow meter readings)**	500.0

Table 2.2

2019 Summary of Daily Leak Detection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

LEAK DETECTION SYSTEM												
Date	Time of Measurement #1	Depth to Water Before Pumping	Water Level Before Pumping Converted to Elevation	Flow Meter READING [c]	Calculated Volume Removed based on sump volume calc.	Time of Measurement #2	Depth to Water After Pumping	Water Level After Pumping Converted to Elevation	Elapsed Time Between Pumping Events	Total Volume Pumped Between Pumping Events	Average Daily Flow Rate [d][e]	Comments
	(hh:mm)	(feet below top of sump)	(ft AMSL)	(gallons)	(gallons)	(hh:mm)	(feet below top of sump)	(ft AMSL)	(days)	(gallons)	(gallons/day/acre)	
1/1/19	--	--	--	--	--	--	--	--	67	0.0	0.00	
1/2/19	8:45	71.71	669.43	--	--	--	--	--	68	0.0	0.00	
1/3/19	--	--	--	--	--	--	--	--	69	0.0	0.00	
1/4/19	--	--	--	--	--	--	--	--	70	0.0	0.00	
1/5/19	--	--	--	--	--	--	--	--	71	0.0	0.00	
1/6/19	--	--	--	--	--	--	--	--	72	0.0	0.00	
1/7/19	8:32	71.70	669.44	--	--	--	--	--	73	0.0	0.00	
1/8/19	--	--	--	--	--	--	--	--	74	0.0	0.00	
1/9/19	--	--	--	--	--	--	--	--	75	0.0	0.00	
1/10/19	--	--	--	--	--	--	--	--	76	0.0	0.00	
1/11/19	--	--	--	--	--	--	--	--	77	0.0	0.00	
1/12/19	--	--	--	--	--	--	--	--	78	0.0	0.00	
1/13/19	--	--	--	--	--	--	--	--	79	0.0	0.00	
1/14/19	8:50	71.68	669.46	--	--	--	--	--	80	0.0	0.00	
1/15/19	--	--	--	--	--	--	--	--	81	0.0	0.00	
1/16/19	--	--	--	--	--	--	--	--	82	0.0	0.00	
1/17/19	--	--	--	--	--	--	--	--	83	0.0	0.00	
1/18/19	--	--	--	--	--	--	--	--	84	0.0	0.00	
1/19/19	--	--	--	--	--	--	--	--	85	0.0	0.00	
1/20/19	--	--	--	--	--	--	--	--	86	0.0	0.00	
1/21/19	8:23	71.66	669.48	--	--	--	--	--	87	0.0	0.00	
1/22/19	--	--	--	--	--	--	--	--	88	0.0	0.00	
1/23/19	--	--	--	--	--	--	--	--	89	0.0	0.00	
1/24/19	--	--	--	--	--	--	--	--	90	0.0	0.00	
1/25/19	--	--	--	--	--	--	--	--	91	0.0	0.00	
1/26/19	--	--	--	--	--	--	--	--	92	0.0	0.00	
1/27/19	--	--	--	--	--	--	--	--	93	0.0	0.00	
1/28/19	--	--	--	--	--	--	--	--	94	0.0	0.00	
1/29/19	--	--	--	--	--	--	--	--	95	0.0	0.00	
1/30/19	8:25	71.67	669.47	--	--	--	--	--	96	0.0	0.00	
1/31/19	--	--	--	--	--	--	--	--	97	0.0	0.00	
2/1/19	--	--	--	--	--	--	--	--	98	0.0	0.00	
2/2/19	--	--	--	--	--	--	--	--	99	0.0	0.00	
2/3/19	--	--	--	--	--	--	--	--	100	0.0	0.00	
2/4/19	8:25	71.61	669.53	--	--	--	--	--	101	0.0	0.00	
2/5/19	--	--	--	--	--	--	--	--	102	0.0	0.00	
2/6/19	--	--	--	--	--	--	--	--	103	0.0	0.00	
2/7/19	--	--	--	--	--	--	--	--	104	0.0	0.00	
2/8/19	--	--	--	--	--	--	--	--	105	0.0	0.00	
2/9/19	--	--	--	--	--	--	--	--	106	0.0	0.00	
2/10/19	--	--	--	--	--	--	--	--	107	0.0	0.00	
2/11/19	9:26	71.55	669.59	--	--	--	--	--	108	0.0	0.00	
2/12/19	--	--	--	--	--	--	--	--	109	0.0	0.00	
2/13/19	--	--	--	--	--	--	--	--	110	0.0	0.00	
2/14/19	--	--	--	--	--	--	--	--	111	0.0	0.00	
2/15/19	--	--	--	--	--	--	--	--	112	0.0	0.00	
2/16/19	--	--	--	--	--	--	--	--	113	0.0	0.00	
2/17/19	--	--	--	--	--	--	--	--	114	0.0	0.00	
2/18/19	8:15	71.49	669.65	--	--	--	--	--	115	0.0	0.00	
2/19/19	--	--	--	--	--	--	--	--	116	0.0	0.00	
2/20/19	--	--	--	--	--	--	--	--	117	0.0	0.00	
2/21/19	--	--	--	--	--	--	--	--	118	0.0	0.00	
2/22/19	--	--	--	--	--	--	--	--	119	0.0	0.00	
2/23/19	--	--	--	--	--	--	--	--	120	0.0	0.00	
2/24/19	--	--	--	--	--	--	--	--	121	0.0	0.00	
2/25/19	9:18	71.42	669.72	--	--	--	--	--	122	0.0	0.00	
2/26/19	--	--	--	--	--	--	--	--	123	0.0	0.00	
2/27/19	--	--	--	--	--	--	--	--	124	0.0	0.00	
2/28/19	--	--	--	--	--	--	--	--	125	0.0	0.00	
3/1/19	--	--	--	--	--	--	--	--	126	0.0	0.00	
3/2/19	--	--	--	--	--	--	--	--	127	0.0	0.00	
3/3/19	--	--	--	--	--	--	--	--	128	0.0	0.00	
3/4/19	8:25	71.37	669.77	--	--	--	--	--	129	0.0	0.00	
3/5/19	--	--	--	--	--	--	--	--	130	0.0	0.00	
3/6/19	--	--	--	--	--	--	--	--	131	0.0	0.00	
3/7/19	--	--	--	--	--	--	--	--	132	0.0	0.00	
3/8/19	--	--	--	--	--	--	--	--	133	0.0	0.00	
3/9/19	--	--	--	--	--	--	--	--	134	0.0	0.00	
3/10/19	--	--	--	--	--	--	--	--	135	0.0	0.00	
3/11/19	8:15	71.31	669.83	--	--	--	--	--	136	0.0	0.00	
3/12/19	--	--	--	--	--	--	--	--	137	0.0	0.00	
3/13/19	--	--	--	--	--	--	--	--	138	0.0	0.00	
3/14/19	--	--	--	--	--	--	--	--	139	0.0	0.00	

Table 2.2

2019 Summary of Daily Leak Detection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

LEAK DETECTION SYSTEM												
Date	Time of Measurement #1	Depth to Water Before Pumping	Water Level Before Pumping Converted to Elevation	Flow Meter READING [c]	Calculated Volume Removed based on sump volume calc.	Time of Measurement #2	Depth to Water After Pumping	Water Level After Pumping Converted to Elevation	Elapsed Time Between Pumping Events	Total Volume Pumped Between Pumping Events	Average Daily Flow Rate [d][e]	Comments
	(hh:mm)	(feet below top of sump)	(ft AMSL)	(gallons)	(gallons)	(hh:mm)	(feet below top of sump)	(ft AMSL)	(days)	(gallons)	(gallons/day/acre)	
3/15/19	--	--	--	--	--	--	--	--	140	0.0	0.00	
3/16/19	--	--	--	--	--	--	--	--	141	0.0	0.00	
3/17/19	--	--	--	--	--	--	--	--	142	0.0	0.00	
3/18/19	10:30	71.26	669.88	--	--	--	--	--	143	0.0	0.00	
3/19/19	--	--	--	--	--	--	--	--	144	0.0	0.00	
3/20/19	--	--	--	--	--	--	--	--	145	0.0	0.00	
3/21/19	--	--	--	--	--	--	--	--	146	0.0	0.00	
3/22/19	--	--	--	--	--	--	--	--	147	0.0	0.00	
3/23/19	--	--	--	--	--	--	--	--	148	0.0	0.00	
3/24/19	--	--	--	--	--	--	--	--	149	0.0	0.00	
3/25/19	10:36	71.24	669.9	--	--	--	--	--	150	0.0	0.00	
3/26/19	--	--	--	--	--	--	--	--	151	0.0	0.00	
3/27/19	--	--	--	--	--	--	--	--	152	0.0	0.00	
3/28/19	--	--	--	--	--	--	--	--	153	0.0	0.00	
3/29/19	--	--	--	--	--	--	--	--	154	0.0	0.00	
3/30/19	--	--	--	--	--	--	--	--	155	0.0	0.00	
3/31/19	--	--	--	--	--	--	--	--	156	0.0	0.00	
4/1/19	10:00	71.22	669.92	--	--	--	--	--	157	0.0	0.00	
4/2/19	--	--	--	--	--	--	--	--	158	0.0	0.00	
4/3/19	--	--	--	--	--	--	--	--	159	0.0	0.00	
4/4/19	--	--	--	--	--	--	--	--	160	0.0	0.00	
4/5/19	--	--	--	--	--	--	--	--	161	0.0	0.00	
4/6/19	--	--	--	--	--	--	--	--	162	0.0	0.00	
4/7/19	--	--	--	--	--	--	--	--	163	0.0	0.00	
4/8/19	8:32	71.12	670.02	--	--	--	--	--	164	0.0	0.00	
4/9/19	--	--	--	--	--	--	--	--	165	0.0	0.00	
4/10/19	--	--	--	--	--	--	--	--	166	0.0	0.00	
4/11/19	--	--	--	--	--	--	--	--	167	0.0	0.00	
4/12/19	--	--	--	--	--	--	--	--	168	0.0	0.00	
4/13/19	--	--	--	--	--	--	--	--	169	0.0	0.00	
4/14/19	--	--	--	--	--	--	--	--	170	0.0	0.00	
4/15/19	10:15	71.12	670.02	--	--	--	--	--	171	0.0	0.00	
4/16/19	--	--	--	--	--	--	--	--	172	0.0	0.00	
4/17/19	--	--	--	--	--	--	--	--	173	0.0	0.00	
4/18/19	--	--	--	--	--	--	--	--	174	0.0	0.00	
4/19/19	--	--	--	--	--	--	--	--	175	0.0	0.00	
4/20/19	--	--	--	--	--	--	--	--	176	0.0	0.00	
4/21/19	--	--	--	--	--	--	--	--	177	0.0	0.00	
4/22/19	9:20	71.11	670.03	--	--	--	--	--	178	0.0	0.00	
4/23/19	--	--	--	--	--	--	--	--	179	0.0	0.00	
4/24/19	--	--	--	--	--	--	--	--	180	0.0	0.00	
4/25/19	--	--	--	--	--	--	--	--	181	0.0	0.00	
4/26/19	--	--	--	--	--	--	--	--	182	0.0	0.00	
4/27/19	--	--	--	--	--	--	--	--	183	0.0	0.00	
4/28/19	--	--	--	--	--	--	--	--	184	0.0	0.00	
4/29/19	11:17	71.11	670.03	--	--	--	--	--	185	0.0	0.00	
4/30/19	--	--	--	--	--	--	--	--	186	0.0	0.00	
5/1/19	8:15	71.11	670.03	--	--	--	--	--	187	0.0	0.00	
5/2/19	--	--	--	--	--	--	--	--	188	0.0	0.00	
5/3/19	--	--	--	--	--	--	--	--	189	0.0	0.00	
5/4/19	--	--	--	--	--	--	--	--	190	0.0	0.00	
5/5/19	--	--	--	--	--	--	--	--	191	0.0	0.00	
5/6/19	9:15	71.06	670.08	--	--	--	--	--	192	0.0	0.00	
5/7/19	--	--	--	--	--	--	--	--	193	0.0	0.00	
5/8/19	--	--	--	--	--	--	--	--	194	0.0	0.00	
5/9/19	--	--	--	--	--	--	--	--	195	0.0	0.00	
5/10/19	--	--	--	--	--	--	--	--	196	0.0	0.00	
5/11/19	--	--	--	--	--	--	--	--	197	0.0	0.00	
5/12/19	--	--	--	--	--	--	--	--	198	0.0	0.00	
5/13/19	9:00	71.01	670.13	--	--	--	--	--	199	0.0	0.00	
5/14/19	--	--	--	--	--	--	--	--	200	0.0	0.00	
5/15/19	--	--	--	--	--	--	--	--	201	0.0	0.00	
5/16/19	--	--	--	--	--	--	--	--	202	0.0	0.00	
5/17/19	--	--	--	--	--	--	--	--	203	0.0	0.00	
5/18/19	--	--	--	--	--	--	--	--	204	0.0	0.00	
5/19/19	--	--	--	--	--	--	--	--	205	0.0	0.00	
5/20/19	8:30	70.99	670.15	--	--	--	--	--	206	0.0	0.00	
5/21/19	--	--	--	--	--	--	--	--	207	0.0	0.00	
5/22/19	--	--	--	--	--	--	--	--	208	0.0	0.00	
5/23/19	--	--	--	--	--	--	--	--	209	0.0	0.00	
5/24/19	--	--	--	--	--	--	--	--	210	0.0	0.00	
5/25/19	--	--	--	--	--	--	--	--	211	0.0	0.00	
5/26/19	--	--	--	--	--	--	--	--	212	0.0	0.00	

Table 2.2

2019 Summary of Daily Leak Detection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
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LEAK DETECTION SYSTEM												
Date	Time of Measurement #1	Depth to Water Before Pumping	Water Level Before Pumping Converted to Elevation	Flow Meter READING [c]	Calculated Volume Removed based on sump volume calc.	Time of Measurement #2	Depth to Water After Pumping	Water Level After Pumping Converted to Elevation	Elapsed Time Between Pumping Events	Total Volume Pumped Between Pumping Events	Average Daily Flow Rate [d][e]	Comments
	(hh:mm)	(feet below top of sump)	(ft AMSL)	(gallons)	(gallons)	(hh:mm)	(feet below top of sump)	(ft AMSL)	(days)	(gallons)	(gallons/day/acre)	
5/27/19	9:30	70.94	670.2	--	--	--	--	--	213	0.0	0.00	
5/28/19	--	--	--	--	--	--	--	--	214	0.0	0.00	
5/29/19	--	--	--	--	--	--	--	--	215	0.0	0.00	
5/30/19	--	--	--	--	--	--	--	--	216	0.0	0.00	
5/31/19	--	--	--	--	--	--	--	--	217	0.0	0.00	
6/1/19	9:00	70.95	670.19	--	--	--	--	--	218	0.0	0.00	
6/2/19	--	--	--	--	--	--	--	--	219	0.0	0.00	
6/3/19	8:05	70.94	670.2	--	--	--	--	--	220	0.0	0.00	
6/4/19				--	--	--	--	--	221	0.0	0.00	
6/5/19	--	--	--	--	--	--	--	--	222	0.0	0.00	
6/6/19	--	--	--	--	--	--	--	--	223	0.0	0.00	
6/7/19	--	--	--	--	--	--	--	--	224	0.0	0.00	
6/8/19	--	--	--	--	--	--	--	--	225	0.0	0.00	
6/9/19	--	--	--	--	--	--	--	--	226	0.0	0.00	
6/10/19	8:05	70.90	670.24	--	--	--	--	--	227	0.0	0.00	
6/11/19	--	--	--	--	--	--	--	--	228	0.0	0.00	
6/12/19	--	--	--	--	--	--	--	--	229	0.0	0.00	
6/13/19	--	--	--	--	--	--	--	--	230	0.0	0.00	
6/14/19	--	--	--	--	--	--	--	--	231	0.0	0.00	
6/15/19	--	--	--	--	--	--	--	--	232	0.0	0.00	
6/16/19	--	--	--	--	--	--	--	--	233	0.0	0.00	
6/17/19	9:10	70.87	670.27	--	--	--	--	--	234	0.0	0.00	
6/18/19	--	--	--	--	--	--	--	--	235	0.0	0.00	
6/19/19	--	--	--	--	--	--	--	--	236	0.0	0.00	
6/20/19	--	--	--	--	--	--	--	--	237	0.0	0.00	
6/21/19	--	--	--	--	--	--	--	--	238	0.0	0.00	
6/22/19	--	--	--	--	--	--	--	--	239	0.0	0.00	
6/23/19	--	--	--	--	--	--	--	--	240	0.0	0.00	
6/24/19	8:45	70.84	670.3	--	--	--	--	--	241	0.0	0.00	
6/25/19	--	--	--	--	--	--	--	--	242	0.0	0.00	
6/26/19	--	--	--	--	--	--	--	--	243	0.0	0.00	
6/27/19	--	--	--	--	--	--	--	--	244	0.0	0.00	
6/28/19	--	--	--	--	--	--	--	--	245	0.0	0.00	
6/29/19	--	--	--	--	--	--	--	--	246	0.0	0.00	
6/30/19	--	--	--	--	--	--	--	--	247	0.0	0.00	
7/1/19	8:24	70.81	670.33	--	--	--	--	--	248	0.0	0.00	
7/2/19	--	--	--	--	--	--	--	--	249	0.0	0.00	
7/3/19	--	--	--	--	--	--	--	--	250	0.0	0.00	
7/4/19	--	--	--	--	--	--	--	--	251	0.0	0.00	
7/5/19	--	--	--	--	--	--	--	--	252	0.0	0.00	
7/6/19	--	--	--	--	--	--	--	--	253	0.0	0.00	
7/7/19	--	--	--	--	--	--	--	--	254	0.0	0.00	
7/8/19	8:15	70.77	670.37	--	--	--	--	--	255	0.0	0.00	
7/9/19	--	--	--	--	--	--	--	--	256	0.0	0.00	
7/10/19	--	--	--	--	--	--	--	--	257	0.0	0.00	
7/11/19	--	--	--	--	--	--	--	--	258	0.0	0.00	
7/12/19	--	--	--	--	--	--	--	--	259	0.0	0.00	
7/13/19	--	--	--	--	--	--	--	--	260	0.0	0.00	
7/14/19	--	--	--	--	--	--	--	--	261	0.0	0.00	
7/15/19	8:22	70.75	670.39	--	--	--	--	--	262	0.0	0.00	
7/16/19	--	--	--	--	--	--	--	--	263	0.0	0.00	
7/17/19	--	--	--	--	--	--	--	--	264	0.0	0.00	
7/18/19	--	--	--	--	--	--	--	--	265	0.0	0.00	
7/19/19	--	--	--	--	--	--	--	--	266	0.0	0.00	
7/20/19	--	--	--	--	--	--	--	--	267	0.0	0.00	
7/21/19	--	--	--	--	--	--	--	--	268	0.0	0.00	
7/22/19	8:18	70.69	670.45	--	--	--	--	--	269	0.0	0.00	
7/23/19	--	--	--	--	--	--	--	--	270	0.0	0.00	
7/24/19	--	--	--	--	--	--	--	--	271	0.0	0.00	
7/25/19	--	--	--	--	--	--	--	--	272	0.0	0.00	
7/26/19	--	--	--	--	--	--	--	--	273	0.0	0.00	
7/27/19	--	--	--	--	--	--	--	--	274	0.0	0.00	
7/28/19	--	--	--	--	--	--	--	--	275	0.0	0.00	
7/29/19	9:10	70.61	670.53	--	--	--	--	--	276	0.0	0.00	
7/30/19	--	--	--	--	--	--	--	--	277	0.0	0.00	
7/31/19	--	--	--	--	--	--	--	--	278	0.0	0.00	
8/1/19	--	--	--	--	--	--	--	--	279	0.0	0.00	
8/2/19	--	--	--	--	--	--	--	--	280	0.0	0.00	
8/3/19	--	--	--	--	--	--	--	--	281	0.0	0.00	
8/4/19	--	--	--	--	--	--	--	--	282	0.0	0.00	
8/5/19	9:10	70.57	670.57	--	--	--	--	--	283	0.0	0.00	
8/6/19	--	--	--	--	--	--	--	--	284	0.0	0.00	
8/7/19	--	--	--	--	--	--	--	--	285	0.0	0.00	

Table 2.2

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GM CET Bedford Facility
Bedford, Indiana

LEAK DETECTION SYSTEM												
Date	Time of Measurement #1	Depth to Water Before Pumping	Water Level Before Pumping Converted to Elevation	Flow Meter READING [c]	Calculated Volume Removed based on sump volume calc.	Time of Measurement #2	Depth to Water After Pumping	Water Level After Pumping Converted to Elevation	Elapsed Time Between Pumping Events	Total Volume Pumped Between Pumping Events	Average Daily Flow Rate [d][e]	Comments
	(hh:mm)	(feet below top of sump)	(ft AMSL)	(gallons)	(gallons)	(hh:mm)	(feet below top of sump)	(ft AMSL)	(days)	(gallons)	(gallons/day/acre)	
8/8/19	--	--	--	--	--	--	--	--	286	0.0	0.00	
8/9/19	--	--	--	--	--	--	--	--	287	0.0	0.00	
8/10/19	--	--	--	--	--	--	--	--	288	0.0	0.00	
8/11/19	--	--	--	--	--	--	--	--	289	0.0	0.00	
8/12/19	10:20	70.50	670.64	--	--	--	--	--	290	0.0	0.00	
8/13/19	--	--	--	--	--	--	--	--	291	0.0	0.00	
8/14/19	--	--	--	--	--	--	--	--	292	0.0	0.00	
8/15/19	--	--	--	--	--	--	--	--	293	0.0	0.00	
8/16/19	--	--	--	--	--	--	--	--	294	0.0	0.00	
8/17/19	--	--	--	--	--	--	--	--	295	0.0	0.00	
8/18/19	--	--	--	--	--	--	--	--	296	0.0	0.00	
8/19/19	10:15	70.50	670.64	--	--	--	--	--	297	0.0	0.00	
8/20/19	--	--	--	--	--	--	--	--	298	0.0	0.00	
8/21/19	--	--	--	--	--	--	--	--	299	0.0	0.00	
8/22/19	--	--	--	--	--	--	--	--	300	0.0	0.00	
8/23/19	--	--	--	--	--	--	--	--	301	0.0	0.00	
8/24/19	--	--	--	--	--	--	--	--	302	0.0	0.00	
8/25/19	--	--	--	--	--	--	--	--	303	0.0	0.00	
8/26/19	9:15	70.51	670.63	--	--	--	--	--	304	0.0	0.00	
8/27/19	--	--	--	--	--	--	--	--	305	0.0	0.00	
8/28/19	--	--	--	--	--	--	--	--	306	0.0	0.00	
8/29/19	--	--	--	--	--	--	--	--	307	0.0	0.00	
8/30/19	--	--	--	--	--	--	--	--	308	0.0	0.00	
8/31/19	--	--	--	--	--	--	--	--	309	0.0	0.00	
9/1/19	--	--	--	--	--	--	--	--	310	0.0	0.00	
9/2/19	9:10	70.54	670.6	--	--	--	--	--	311	0.0	0.00	
9/3/19	--	--	--	--	--	--	--	--	312	0.0	0.00	
9/4/19	--	--	--	--	--	--	--	--	313	0.0	0.00	
9/5/19	--	--	--	--	--	--	--	--	314	0.0	0.00	
9/6/19	--	--	--	--	--	--	--	--	315	0.0	0.00	
9/7/19	--	--	--	--	--	--	--	--	316	0.0	0.00	
9/8/19	--	--	--	--	--	--	--	--	317	0.0	0.00	
9/9/19	9:05	70.48	670.66	--	--	--	--	--	318	0.0	0.00	
9/10/19	--	--	--	--	--	--	--	--	319	0.0	0.00	
9/11/19	--	--	--	--	--	--	--	--	320	0.0	0.00	
9/12/19	--	--	--	--	--	--	--	--	321	0.0	0.00	
9/13/19	--	--	--	--	--	--	--	--	322	0.0	0.00	
9/14/19	--	--	--	--	--	--	--	--	323	0.0	0.00	
9/15/19	--	--	--	--	--	--	--	--	324	0.0	0.00	
9/16/19	9:22	70.42	670.72	--	--	--	--	--	325	0.0	0.00	
9/17/19	--	--	--	--	--	--	--	--	326	0.0	0.00	
9/18/19	--	--	--	--	--	--	--	--	327	0.0	0.00	
9/19/19	--	--	--	--	--	--	--	--	328	0.0	0.00	
9/20/19	--	--	--	--	--	--	--	--	329	0.0	0.00	
9/21/19	--	--	--	--	--	--	--	--	330	0.0	0.00	
9/22/19	--	--	--	--	--	--	--	--	331	0.0	0.00	
9/23/19	9:01	70.36	670.78	--	--	--	--	--	332	0.0	0.00	
9/24/19	--	--	--	--	--	--	--	--	333	0.0	0.00	
9/25/19	--	--	--	--	--	--	--	--	334	0.0	0.00	
9/26/19	--	--	--	--	--	--	--	--	335	0.0	0.00	
9/27/19	--	--	--	--	--	--	--	--	336	0.0	0.00	
9/28/19	--	--	--	--	--	--	--	--	337	0.0	0.00	
9/29/19	--	--	--	--	--	--	--	--	338	0.0	0.00	
9/30/19	9:55	70.32	670.82	--	--	--	--	--	339	0.0	0.00	
10/1/19	--	--	--	--	--	--	--	--	340	0.0	0.00	
10/2/19	--	--	--	--	--	--	--	--	341	0.0	0.00	
10/3/19	--	--	--	--	--	--	--	--	342	0.0	0.00	
10/4/19	--	--	--	--	--	--	--	--	343	0.0	0.00	
10/5/19	--	--	--	--	--	--	--	--	344	0.0	0.00	
10/6/19	--	--	--	--	--	--	--	--	345	0.0	0.00	
10/7/19	9:15	70.34	670.8	--	--	--	--	--	346	0.0	0.00	
10/8/19	--	--	--	--	--	--	--	--	347	0.0	0.00	
10/9/19	--	--	--	--	--	--	--	--	348	0.0	0.00	
10/10/19	--	--	--	--	--	--	--	--	349	0.0	0.00	
10/11/19	--	--	--	--	--	--	--	--	350	0.0	0.00	
10/12/19	--	--	--	--	--	--	--	--	351	0.0	0.00	
10/13/19	--	--	--	--	--	--	--	--	352	0.0	0.00	
10/14/19	9:22	70.36	670.78	--	--	--	--	--	353	0.0	0.00	
10/15/19	--	--	--	--	--	--	--	--	354	0.0	0.00	
10/16/19	--	--	--	--	--	--	--	--	355	0.0	0.00	
10/17/19	--	--	--	--	--	--	--	--	356	0.0	0.00	
10/18/19	--	--	--	--	--	--	--	--	357	0.0	0.00	
10/19/19	--	--	--	--	--	--	--	--	358	0.0	0.00	

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LEAK DETECTION SYSTEM												
Date	Time of Measurement #1	Depth to Water Before Pumping	Water Level Before Pumping Converted to Elevation	Flow Meter READING [c]	Calculated Volume Removed based on sump volume calc.	Time of Measurement #2	Depth to Water After Pumping	Water Level After Pumping Converted to Elevation	Elapsed Time Between Pumping Events	Total Volume Pumped Between Pumping Events	Average Daily Flow Rate [d][e]	Comments
	(hh:mm)	(feet below top of sump)	(ft AMSL)	(gallons)	(gallons)	(hh:mm)	(feet below top of sump)	(ft AMSL)	(days)	(gallons)	(gallons/day/acre)	
10/20/19	--	--	--	--	--	--	--	--	359	0.0	0.00	
10/21/19	9:10	70.36	670.78	--	--	--	--	--	360	0.0	0.00	
10/22/19	--	--	--	--	--	--	--	--	361	0.0	0.00	
10/23/19	--	--	--	--	--	--	--	--	362	0.0	0.00	
10/24/19	--	--	--	--	--	--	--	--	363	0.0	0.00	
10/25/19	--	--	--	--	--	--	--	--	364	0.0	0.00	
10/26/19	--	--	--	--	--	--	--	--	365	0.0	0.00	
10/27/19	--	--	--	--	--	--	--	--	366	0.0	0.00	
10/28/19	9:20	70.34	670.8	--	--	--	--	--	367	0.0	0.00	
10/29/19	--	--	--	--	--	--	--	--	368	0.0	0.00	
10/30/19	--	--	--	--	--	--	--	--	369	0.0	0.00	
10/31/19	--	--	--	--	--	--	--	--	370	0.0	0.00	
11/1/19	--	--	--	--	--	--	--	--	371	0.0	0.00	
11/2/19	--	--	--	--	--	--	--	--	372	0.0	0.00	
11/3/19	--	--	--	--	--	--	--	--	373	0.0	0.00	
11/4/19	9:15	70.32	670.82	--	--	--	--	--	374	0.0	0.00	
11/5/19	--	--	--	--	--	--	--	--	375	0.0	0.00	
11/6/19	--	--	--	--	--	--	--	--	376	0.0	0.00	
11/7/19	--	--	--	--	--	--	--	--	377	0.0	0.00	
11/8/19	--	--	--	--	--	--	--	--	378	0.0	0.00	
11/9/19	--	--	--	--	--	--	--	--	379	0.0	0.00	
11/10/19	--	--	--	--	--	--	--	--	380	0.0	0.00	
11/11/19	9:02	70.31	670.83	--	--	--	--	--	381	0.0	0.00	
11/12/19	--	--	--	--	--	--	--	--	382	0.0	0.00	
11/13/19	--	--	--	--	--	--	--	--	383	0.0	0.00	
11/14/19	--	--	--	--	--	--	--	--	384	0.0	0.00	
11/15/19	--	--	--	--	--	--	--	--	385	0.0	0.00	
11/16/19	--	--	--	--	--	--	--	--	386	0.0	0.00	
11/17/19	--	--	--	--	--	--	--	--	387	0.0	0.00	
11/18/19	9:12	70.27	670.87	--	--	--	--	--	388	0.0	0.00	
11/19/19	--	--	--	--	--	--	--	--	389	0.0	0.00	
11/20/19	--	--	--	--	--	--	--	--	390	0.0	0.00	
11/21/19	--	--	--	--	--	--	--	--	391	0.0	0.00	
11/22/19	--	--	--	--	--	--	--	--	392	0.0	0.00	
11/23/19	--	--	--	--	--	--	--	--	393	0.0	0.00	
11/24/19	--	--	--	--	--	--	--	--	394	0.0	0.00	
11/25/19	9:10	70.26	670.88	--	--	--	--	--	395	0.0	0.00	
11/26/19	--	--	--	--	--	--	--	--	396	0.0	0.00	
11/27/19	--	--	--	--	--	--	--	--	397	0.0	0.00	
11/28/19	--	--	--	--	--	--	--	--	398	0.0	0.00	
11/29/19	--	--	--	--	--	--	--	--	399	0.0	0.00	
11/30/19	--	--	--	--	--	--	--	--	400	0.0	0.00	
12/1/19	--	--	--	--	--	--	--	--	401	0.0	0.00	
12/2/19	11:45	70.25	670.89	--	--	--	--	--	402	0.0	0.00	
12/3/19	--	--	--	--	--	--	--	--	403	0.0	0.00	
12/4/19	--	--	--	--	--	--	--	--	404	0.0	0.00	
12/5/19	--	--	--	--	--	--	--	--	405	0.0	0.00	
12/6/19	--	--	--	--	--	--	--	--	406	0.0	0.00	
12/7/19	--	--	--	--	--	--	--	--	407	0.0	0.00	
12/8/19	--	--	--	--	--	--	--	--	408	0.0	0.00	
12/9/19	--	--	--	--	--	--	--	--	409	0.0	0.00	
12/10/19	--	--	--	--	--	--	--	--	410	0.0	0.00	
12/11/19	9:50	70.28	670.86	--	--	--	--	--	411	0.0	0.00	
12/12/19	--	--	--	--	--	--	--	--	412	0.0	0.00	
12/13/19	--	--	--	--	--	--	--	--	413	0.0	0.00	
12/14/19	--	--	--	--	--	--	--	--	414	0.0	0.00	
12/15/19	--	--	--	--	--	--	--	--	415	0.0	0.00	
12/16/19	9:05	70.22	670.92	--	--	--	--	--	416	0.0	0.00	
12/17/19	--	--	--	--	--	--	--	--	417	0.0	0.00	
12/18/19	--	--	--	--	--	--	--	--	418	0.0	0.00	
12/19/19	--	--	--	--	--	--	--	--	419	0.0	0.00	
12/20/19	--	--	--	--	--	--	--	--	420	0.0	0.00	
12/21/19	--	--	--	--	--	--	--	--	421	0.0	0.00	
12/22/19	--	--	--	--	--	--	--	--	422	0.0	0.00	
12/23/19	9:35	70.14	671.00	--	--	--	--	--	423	0.0	0.00	
12/24/19	--	--	--	--	--	--	--	--	424	0.0	0.00	
12/25/19	--	--	--	--	--	--	--	--	425	0.0	0.00	
12/26/19	--	--	--	--	--	--	--	--	426	0.0	0.00	
12/27/19	--	--	--	--	--	--	--	--	427	0.0	0.00	
12/28/19	--	--	--	--	--	--	--	--	428	0.0	0.00	
12/29/19	--	--	--	--	--	--	--	--	429	0.0	0.00	
12/30/19	13:20	70.13	671.01	--	--	--	--	--	430	0.0	0.00	
12/31/19	--	--	--	--	--	--	--	--	431	0.0	0.00	

Table 2.2

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LEAK DETECTION SYSTEM												
Date	**Time of Measurement #1**	**Depth to Water Before Pumping**	**Water Level Before Pumping Converted to Elevation**	**Flow Meter READING [(c)]**	**Calculated Volume Removed based on sump volume calc.**	**Time of Measurement #2**	**Depth to Water After Pumping**	**Water Level After Pumping Converted to Elevation**	**Elapsed Time Between Pumping Events**	**Total Volume Pumped Between Pumping Events**	**Average Daily Flow Rate [(d)(e)]**	**Comments**
	(hh:mm)	(feet below top of sump)	(ft AMSL)	(gallons)	(gallons)	(hh:mm)	(feet below top of sump)	(ft AMSL)	(days)	(gallons)	(gallons/day/acre)	
Total					0.0					0.0		

Notes:

ft AMSL - feet above mean sea level
Top of sump [top of concrete manhole] (feet AMSL): 741.14
Bottom of sump (feet AMSL): 668.5
Total depth of sump manhole (feet): 72.64
Inside diameter of sump (feet): 6
(--) Measurements were not collected.
(---) Water was not removed from the sump.

(1) Water level in LDS not to rise above the primary liner system (670.0 ft AMSL) (or more than 18 inches of water depth or 71.14 ft from top of sump). Pumping must be initiated if water elevation is not within the appropriate limits. All corresponding information to be recorded on this form.
Indication of water level in LDS rising to 670.0 ft AMSL or higher
(a) Water level elevation is less than the previous measurement due to human error while taking the measurement.
(b) Water level elevation is more than the previous measurement due to human error while taking the measurement.
(c) Flow meter readings are cumulative unless noted otherwise.
(d) Average daily flow rate calculated by dividing removed volume pumped since the last pumping event by the eplased time from the prior pumping event in days and the area of the Vault footprint (7 acres).
€ Since no pumping occurred in 2018 in the LDS, and average daily flow rate could not be calculated for 2018.

Minimum water elevation (ft AMSL)	669.43
Maximum water elevation (ft AMSL)	671.01
Mean water elevation (ft AMSL)	670.30
Number of Pumping Events	0

(1)	**Total Volume Accumulation carried forward from 2017 (gallons) (based on flow meter readings)**	#REF!
(2)	**Total Volume Accumulation in LDS from last pumping event to end of 2018 (gallons) (based on flow meter readings)**	
(3)	**Total Volume Pumped from the LDS in 2018 (gallons) (based on flow meter readings)**	0
(4)=(3)-(1)+(2)	**Net 2018 LDS Accumulation Volume (gallons) (based on flow meter readings)**	#REF!
(5)	**Total Volume Accumulation carried forward from 2017 (gallons) (based on volume removed calculations)**	#REF!
(6)	**Total Volume Accumulation from last pumping event to end of 2018 (gallons) (based on volume removed calculations)**	
(7)	**Total Volume Pumped from the LDS in 2018 (gallons) (based on volume removed calculations)**	0.0
(8)=(7)+(6)-(5)	**Net 2018 LDS Accumulation Volume (gallons) (based on volume removed calculations)**	#REF!

Note: (2) and (6) not evaluated since pumping of 2019 has not been completed to date.

Table 2.3

2019 Summary of Daily Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

GRAVEL UNDERDRAIN SYSTEM

date	Time of Measurement (hh:mm)	Manual Depth To Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (ft AMSL)	Water Level @ PLC [(b)] (inches)	PLC Water Level Converted to Elevation [(b)] (ft AMSL)	Quantity Pumped @ PLC (gallons removed)	Quantity Pumped @ PLC (100 gallons)	Local Flow Meter (WWTP) Reading (a) (GUS + LCS Total + LDS Total) (gallons)	Total Volume Removed by Local Flow Meter (WWTP) (GUS + LCS Total + LDS Total) 1/1/18 through 12/31/18 (gallons)	Volume Removed From GUS GUS Only = WWTP - Local LCS Meter LDS Portable Meter 01/1/18 through 12/31/18 (gallons)	Elapsed Time Betweeb Flow Meter Readings (days)	Comments
1/1/19	9:00	(4)	--	85.7	669.15	0	0	1,567,410	0	0	--	
1/2/19	9:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
1/3/19	9:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
1/4/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
1/5/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
1/6/19	9:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
1/7/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
1/8/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
1/9/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
1/10/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
1/11/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
1/12/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
1/13/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
1/14/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
1/15/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
1/16/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
1/17/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
1/18/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
1/19/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
1/20/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
1/21/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
1/22/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
1/23/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
1/24/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
1/25/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
1/26/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
1/27/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
1/28/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
1/29/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
1/30/19	8:00	(4)	--	84.3	669.20	0	0	1,567,410	0	0	--	
1/31/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
2/1/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
2/2/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
2/3/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
2/4/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
2/5/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
2/6/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
2/7/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
2/8/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
2/9/19	9:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
2/10/19	9:00	(4)	--	84.2	669.19	0	0	1,567,410	0	0	--	
2/11/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
2/12/19	8:00	(4)	--	83.8	669.16	0	0	1,567,410	0	0	--	
2/13/19	8:00	(4)	--	83.8	669.16	0	0	1,567,410	0	0	--	
2/14/19	8:00	(4)	--	84.2	669.19	0	0	1,567,410	0	0	--	
2/15/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
2/16/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
2/17/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
2/18/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
2/19/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
2/20/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
2/21/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
2/22/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
2/23/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
2/24/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
2/25/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
2/26/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
2/27/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
2/28/19	8:00	(4)	--	83.8	696.16	0	0	1,567,410	0	0	--	
3/1/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
3/2/19	9:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
3/3/19	9:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
3/4/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
3/5/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
3/6/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
3/7/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
3/8/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
3/9/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
3/10/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
3/11/19	8:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
3/12/19	8:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
3/13/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
3/14/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
3/15/19	8:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	

Table 2.3

2019 Summary of Daily Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

GRAVEL UNDERDRAIN SYSTEM

date	Time of Measurement (hh:mm)	Manual Depth To Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (ft AMSL)	Water Level @ PLC [(b)] (inches)	PLC Water Level Converted to Elevation [(b)] (ft AMSL)	Quantity Pumped @ PLC (gallons removed)	Quantity Pumped @ PLC (100 gallons)	Local Flow Meter (WWTP) Reading (a) (GUS + LCS Total + LDS Total) (gallons)	Total Volume Removed by Local Flow Meter (WWTP) (GUS + LCS Total + LDS Total) 1/1/18 through 12/31/18 (gallons)	Volume Removed From GUS GUS Only = WWTP - Local LCS Meter LDS Portable Meter 01/1/18 through 12/31/18 (gallons)	Elapsed Time Betweeb Flow Meter Readings (days)	Comments
3/16/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
3/17/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
3/18/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
3/19/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
3/20/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
3/21/19	8:00	(4)	--	84.1	669.18	0	0	1,567,410	0	0	--	
3/22/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
3/23/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
3/24/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
3/25/19	8:00	(4)	--	83.9	669.14	0	0	1,567,410	0	0	--	
3/26/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
3/27/19	8:00	(4)	--	83.8	669.16	0	0	1,567,410	0	0	--	
3/28/19	8:00	(4)	--	84.0	669.18	0	0	1,567,410	0	0	--	
3/29/19	8:00	(4)	--	83.8	669.16	0	0	1,567,410	0	0	--	
3/30/19	9:00	(4)	--	83.8	669.16	0	0	1,567,410	0	0	--	
3/31/19	9:00	(4)	--	83.8	669.16	0	0	1,567,410	0	0	--	
4/1/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
4/2/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
4/3/19	8:00	(4)	--	89.0	669.18	0	0	1,567,410	0	0	--	
4/4/19	8:00	(4)	--	83.9	669.17	0	0	1,567,410	0	0	--	
4/5/19	8:00	(4)	--	83.8	669.16	0	0	1,567,410	0	0	--	
4/6/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
4/7/19	9:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
4/8/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
4/9/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
4/10/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
4/11/19	8:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
4/12/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
4/13/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
4/14/19	8:00	(4)	--	83.3	669.13	0	0	1,567,410	0	0	--	
4/15/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
4/16/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
4/17/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
4/18/19	8:00	(4)	--	83.8	669.16	0	0	1,567,410	0	0	--	
4/19/19	6:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
4/20/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
4/21/19	9:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
4/22/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
4/23/19	8:00	(4)	--	83.2	669.12	0	0	1,567,410	0	0	--	
4/24/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
4/25/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
4/26/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
4/27/19	9:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
4/28/19	9:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
4/29/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
4/30/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
5/1/19	8:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
5/2/19	8:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
5/3/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
5/4/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
5/5/19	9:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
5/6/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
5/7/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
5/8/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
5/9/19	8:00	(4)	--	93.6	669.14	0	0	1,567,410	0	0	--	
5/10/19	8:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
5/11/19	9:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
5/12/19	9:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
5/13/19	8:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
5/14/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
5/15/19	8:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
5/16/19	8:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
5/17/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
5/18/19	9:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
5/19/19	9:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
5/20/19	8:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
5/21/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
5/22/19	8:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
5/23/19	8:00	(4)	--	83.6	669.14	0	0	1,567,410	0	0	--	
5/24/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
5/25/19	9:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
5/26/19	9:00	(4)	--	83.7	669.15	0	0	1,567,410	0	0	--	
5/27/19	9:00	(4)	--	83.6	669.16	0	0	1,567,410	0	0	--	

Table 2.3

2019 Summary of Daily Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

GRAVEL UNDERDRAIN SYSTEM

date	Time of Measurement (hh:mm)	Manual Depth To Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (ft AMSL)	Water Level @ PLC [(b)] (inches)	PLC Water Level Converted to Elevation [(b)] (ft AMSL)	Quantity Pumped @ PLC (gallons removed)	Quantity Pumped @ PLC (100 gallons)	Local Flow Meter (WWTP) Reading (a) (GUS + LCS Total + LDS Total) (gallons)	Total Volume Removed by Local Flow Meter (WWTP) (GUS + LCS Total + LDS Total) 1/1/18 through 12/31/18 (gallons)	Volume Removed From GUS GUS Only = WWTP - Local LCS Meter LDS Portable Meter 01/1/18 through 12/31/18 (gallons)	Elapsed Time Betweeb Flow Meter Readings (days)	Comments
5/28/19	9:00	(4)	--	83.6	669.16	0	0	1,567,410	0	0	--	
5/29/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
5/30/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
5/31/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/1/19	9:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/2/19	9:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/3/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
6/4/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/5/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/6/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/7/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/8/19	7:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
6/9/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
6/10/19	7:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
6/11/19	7:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
6/12/19	7:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
6/13/19	7:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
6/14/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
6/15/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/16/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/17/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/18/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/19/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/20/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/21/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/22/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/23/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/24/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/25/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/26/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
6/27/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
6/28/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
6/29/19	9:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
6/30/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
7/1/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
7/2/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
7/3/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
7/4/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
7/5/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
7/6/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
7/7/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
7/8/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
7/9/19	8:00	(4)	--	83.4	669.12	0	0	1,567,410	0	0	--	
7/10/19	8:00	(4)	--	83.4	669.12	0	0	1,567,410	0	0	--	
7/11/19	8:00	(4)	--	83.4	669.12	0	0	1,567,410	0	0	--	
7/12/19	8:00	(4)	--	83.4	669.12	0	0	1,567,410	0	0	--	
7/13/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
7/14/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
7/15/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
7/16/19	8:00	(4)	--	83.4	669.13	0	0	1,567,410	0	0	--	
7/17/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
7/18/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
7/19/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
7/20/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
7/21/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
7/22/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
7/23/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
7/24/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
7/25/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
7/26/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
7/27/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
7/28/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
7/29/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
7/30/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
7/31/19	8:00	(4)	--	83.5	669.13	0	0	1,567,410	0	0	--	
8/1/19	8:00	(4)	--	83.2	669.11	0	0	1,567,410	0	0	--	
8/2/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
8/3/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
8/4/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
8/5/19	8:00	(4)	--	83.2	669.11	0	0	1,567,410	0	0	--	
8/6/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
8/7/19	8:00	(4)	--	83.2	669.11	0	0	1,567,410	0	0	--	
8/8/19	8:00	(4)	--	83.2	669.11	0	0	1,567,410	0	0	--	

Table 2.3

2019 Summary of Daily Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

GRAVEL UNDERDRAIN SYSTEM

date	Time of Measurement (hh:mm)	Manual Depth To Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (ft AMSL)	Water Level @ PLC [(b)] (inches)	PLC Water Level Converted to Elevation [(b)] (ft AMSL)	Quantity Pumped @ PLC (gallons removed)	Quantity Pumped @ PLC (100 gallons)	Local Flow Meter (WWTP) Reading (a) (GUS + LCS Total + LDS Total) (gallons)	Total Volume Removed by Local Flow Meter (WWTP) (GUS + LCS Total + LDS Total) 1/1/18 through 12/31/18 (gallons)	Volume Removed From GUS GUS Only = WWTP - Local LCS Meter LDS Portable Meter 01/1/18 through 12/31/18 (gallons)	Elapsed Time Betweeb Flow Meter Readings (days)	Comments
8/9/19	8:00	(4)	--	83.2	669.11	0	0	1,567,410	0	0	--	
8/10/19	8:00	(4)	--	83.2	669.11	0	0	1,567,410	0	0	--	
8/11/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
8/12/19	8:00	(4)	--	83.3	669.12	0	0	1,567,410	0	0	--	
8/13/19	8:00	(4)	--	83.2	669.11	0	0	1,567,410	0	0	--	
8/14/19	8:00	(4)	--	83.2	669.11	0	0	1,567,410	0	0	--	
8/15/19	8:00	(4)	--	83.2	669.11	0	0	1,567,410	0	0	--	
8/16/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/17/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/18/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/19/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/20/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/21/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/22/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/23/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/24/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/25/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/26/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/27/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/28/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/29/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/30/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
8/31/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/1/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/2/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/3/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/4/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/5/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/6/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/7/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/8/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/9/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/10/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/11/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/12/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/13/19	8:00	(4)	--	83.1	669.10	0	0	1,567,410	0	0	--	
9/14/19	8:00	(4)	--	83.1	669.10	0	0	1,567,410	0	0	--	
9/15/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/16/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/17/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/18/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/19/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/20/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/21/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/22/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/23/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/24/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/25/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/26/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/27/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/28/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/29/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
9/30/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
10/1/19	8:00	(4)	--	82.7	669.07	0	0	1,567,410	0	0	--	
10/2/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
10/3/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
10/4/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
10/5/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
10/6/19	8:00	(4)	--	82.7	669.07	0	0	1,567,410	0	0	--	
10/7/19	8:00	(4)	--	82.7	669.07	0	0	1,567,410	0	0	--	
10/8/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/9/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/10/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/11/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/12/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/13/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/14/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/15/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/16/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/17/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
10/18/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
10/19/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/20/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	

Table 2.3

2019 Summary of Daily Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

GRAVEL UNDERDRAIN SYSTEM

date	Time of Measurement (hh:mm)	Manual Depth To Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (ft AMSL)	Water Level @ PLC [(b)] (inches)	PLC Water Level Converted to Elevation [(b)] (ft AMSL)	Quantity Pumped @ PLC (gallons removed)	Quantity Pumped @ PLC (100 gallons)	Local Flow Meter (WWTP) Reading (a) (GUS + LCS Total + LDS Total) (gallons)	Total Volume Removed by Local Flow Meter (WWTP) (GUS + LCS Total + LDS Total) 1/1/18 through 12/31/18 (gallons)	Volume Removed From GUS GUS Only = WWTP - Local LCS Meter LDS Portable Meter 01/1/18 through 12/31/18 (gallons)	Elapsed Time Betweeb Flow Meter Readings (days)	Comments
10/21/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/22/19	8:00	(4)	--	82.7	669.07	0	0	1,567,410	0	0	--	
10/23/19	8:00	(4)	--	82.7	669.07	0	0	1,567,410	0	0	--	
10/24/19	8:00	(4)	--	82.7	669.07	0	0	1,567,410	0	0	--	
10/25/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/26/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/27/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
10/28/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
10/29/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
10/30/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
10/31/19	8:00	(4)	--	82.9	669.08	0	0	1,567,410	0	0	--	
11/1/19	8:00	(4)	--	81.8	668.99	0	0	1,567,410	0	0	--	
11/2/19	8:00	(4)	--	81.8	668.99	0	0	1,567,410	0	0	--	
11/3/19	8:00	(4)	--	81.8	668.99	0	0	1,567,410	0	0	--	
11/4/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/5/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/6/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/7/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/8/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/9/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/10/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
11/11/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
11/12/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
11/13/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
11/14/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/15/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/16/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/17/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
11/18/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
11/19/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/20/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/21/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/22/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/23/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/24/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/25/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/26/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/27/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/28/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
11/29/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
11/30/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
12/1/19	8:00	(4)	--	81.8	668.99	0	0	1,567,410	0	0	--	
12/2/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/3/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/4/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/5/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
12/6/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
12/7/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
12/8/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/9/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/10/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/11/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/12/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
12/13/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/14/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/15/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/16/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/17/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/18/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/19/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/20/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/21/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/22/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/23/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/24/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/25/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
12/26/19	8:00	(4)	--	82.1	669.02	0	0	1,567,410	0	0	--	
12/27/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/28/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/29/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/30/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
12/31/19	8:00	(4)	--	82.3	669.03	0	0	1,567,410	0	0	--	
Total				82.3		0				0		

Table 2.3

2019 Summary of Daily Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

GRAVEL UNDERDRAIN SYSTEM

date	Time of Measurement (hh:mm)	Manual Depth To Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (ft AMSL)	Water Level @ PLC [(b)] (inches)	PLC Water Level Converted to Elevation [(b)] (ft AMSL)	Quantity Pumped @ PLC (gallons removed)	Quantity Pumped @ PLC (100 gallons)	Local Flow Meter (WWTP) Reading (a) (GUS + LCS Total + LDS Total) (gallons)	Total Volume Removed by Local Flow Meter (WWTP) (GUS + LCS Total + LDS Total) 1/1/18 through 12/31/18 (gallons)	Volume Removed From GUS GUS Only = WWTP - Local LCS Meter LDS Portable Meter 01/1/18 through 12/31/18 (gallons)	Elapsed Time Betweeb Flow Meter Readings (days)	Comments

Notes:

ft AMSL - feet above mean sea level
NR - Not Recorded
Top of sump [top of concrete manhole] (feet AMSL): 739.49
Bottom of sump (feet AMSL): 662.18
Total depth of sump manhole (feet): 77.31
Inside diameter of sump (feet): 3

(1) Pump operating level between 2.5 ft (664.68 ft AMSL or 75.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.99 ft below the top of sump) of water in the GUS manhole.
(2) Water level in the GUS not to rise above the secondary liner system (667.50 ft AMSL) (equates to more than 63.84 inches of water depth or a water level of 71.99 ft below the top of sump).
Indication of the water level in the GUS rising to 667.50 ft AMSL or higher.
(3) False readings on the PLC. The site source water may have been pushing backwards through the flow meter.
(4) Tape malfuction - tape stuck in the sump and not retrivable
(--) Measurements were not collected.
(a) Flow meter readings (displayed on mag meter serial number F1095B16000) are cumulative unless noted otherwise.
(b) PLC records the maximum water level observed each day (midnight to midnight). Therefore, the manual water level/elevation will not match the water level/elevation recorded by the PLC.

	Manual	PLC
Minimum Elevation (ft, AMSL)	#REF!	669.0
Maximum Elevation (ft, AMSL)	#REF!	696.16
Mean Elevation (ft, AMSL)	0	669.18
Number of Pumping Events (days)	#REF!	

(1)	**Total Volume Accumulation in GUS carried forward from 2017 (gallons) (based on flow meter readings)**	0
(2)	**Total Volume Accumulation in GUS from last pumping event to end of 2018 (gallons) (based on flow meter readings)**	
(3)	**Total Volume Pumped from the GUS in 2018 (gallons) (based on flow meter readings)**	0
(3)-(1)+(2)	**Total Volume Accumulation Originating in the GUS in 2018 (gallons) (based on flow meter readings)**	0

Table 2.4

Summary of 2019 Water Elevations
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sump	LCS	LDS	GUS
Top of (concrete) sump (feet AMSL)	740.83	741.14	738.99
Bottom of sump (ft AMSL)	671.00	668.50	662.18
Bottom of sump (feet below top of sump [BTOS])	69.83	72.64	76.81
Diameter of sump (feet)	6	6	3

Date (mm/dd/yy)	LCS Water Elevation (Manual) (feet AMSL)	LCS Water Elevation (PLC) (feet AMSL)	Lowest Elevation of Primary Liner (feet AMSL)	LDS Water Elevation (feet AMSL)	Lowest Elevation of Secondary Liner (feet AMSL)	GUS Water Elevation (Manual) (feet AMSL)	GUS Water Elevation (PLC) (feet AMSL)
1/1/19	--	671.99	669.5	--	667.5	--	669.15
1/2/19	672.88	671.99	669.5	669.4	667.5	--	669.15
1/3/19	--	671.99	669.5	--	667.5	--	669.15
1/4/19	--	672.00	669.5	--	667.5	--	669.18
1/5/19	--	671.99	669.5	--	667.5	--	669.18
1/6/19	--	671.99	669.5	--	667.5	--	669.18
1/7/19	672.93	671.99	669.5	669.4	667.5	--	669.18
1/8/19	--	672.00	669.5	--	667.5	--	669.18
1/9/19	--	672.00	669.5	--	667.5	--	669.18
1/10/19	672.94	672.01	669.5	669.5	667.5	--	669.17
1/11/19	672.95	672.02	669.5	--	667.5	--	669.18
1/12/19	672.96	672.02	669.5	--	667.5	--	669.18
1/13/19	672.97	672.03	669.5	--	667.5	--	669.18
1/14/19	672.98	672.03	669.5	669.5	667.5	--	669.18
1/15/19	672.99	672.04	669.5	--	667.5	--	669.17
1/16/19	673.00	672.04	669.5	--	667.5	--	669.18
1/17/19	673.00	672.05	669.5	--	667.5	--	669.18
1/18/19	673.00	672.05	669.5	--	667.5	--	669.18
1/19/19	672.99	672.05	669.5	--	667.5	--	669.15
1/20/19	672.97	672.05	669.5	--	667.5	--	669.15
1/21/19	672.97	672.05	669.5	--	667.5	--	669.18
1/22/19	672.97	672.06	669.5	--	667.5	--	669.18
1/23/19	672.97	672.07	669.5	--	667.5	--	669.18
1/24/19	672.97	672.08	669.5	--	667.5	--	669.18
1/25/19	672.97	672.09	669.5	--	667.5	--	669.18
1/26/19	672.98	672.10	669.5	--	667.5	--	669.18
1/27/19	672.98	672.10	669.5	--	667.5	--	669.17
1/28/19	672.98	672.10	669.5	--	667.5	--	669.18
1/29/19	672.98	672.12	669.5	--	667.5	--	669.18
1/30/19	672.98	672.12	669.5	669.5	667.5	--	669.20
1/31/19	672.98	672.12	669.5	--	667.5	--	669.18
2/1/19	--	672.12	669.5	--	667.5	--	669.18
2/2/19	--	672.13	669.5	--	667.5	--	669.18
2/3/19	--	672.13	669.5	--	667.5	--	669.18
2/4/19	673.04	672.13	669.5	669.5	667.5	--	669.18
2/5/19	--	672.13	669.5	--	667.5	--	669.18
2/6/19	--	672.13	669.5	--	667.5	--	669.18
2/7/19	--	672.13	669.5	--	667.5	--	669.18

Table 2.4

Summary of 2019 Water Elevations
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sump	LCS	LDS	GUS
Top of (concrete) sump (feet AMSL)	740.83	741.14	738.99
Bottom of sump (ft AMSL)	671.00	668.50	662.18
Bottom of sump (feet below top of sump [BTOS])	69.83	72.64	76.81
Diameter of sump (feet)	6	6	3

Date (mm/dd/yy)	LCS Water Elevation (Manual) (feet AMSL)	LCS Water Elevation (PLC) (feet AMSL)	Lowest Elevation of Primary Liner (feet AMSL)	LDS Water Elevation (feet AMSL)	Lowest Elevation of Secondary Liner (feet AMSL)	GUS Water Elevation (Manual) (feet AMSL)	GUS Water Elevation (PLC) (feet AMSL)
2/8/19	--	672.14	669.5	--	667.5	--	669.18
2/9/19	--	672.15	669.5	--	667.5	--	669.18
2/10/19	--	672.15	669.5	--	667.5	--	669.19
2/11/19	673.1	672.16	669.5	669.6	667.5	--	669.18
2/12/19	--	672.16	669.5	--	667.5	--	669.16
2/13/19	--	672.17	669.5	--	667.5	--	669.16
2/14/19	--	672.18	669.5	--	667.5	--	669.19
2/15/19	--	672.18	669.5	--	667.5	--	669.18
2/16/19	--	672.19	669.5	--	667.5	--	669.18
2/17/19	--	672.20	669.5	--	667.5	--	669.18
2/18/19	673.17	672.20	669.5	669.7	667.5	--	669.17
2/19/19	--	672.20	669.5	--	667.5	--	669.18
2/20/19	--	672.21	669.5	--	667.5	--	669.18
2/21/19	--	672.22	669.5	--	667.5	--	669.18
2/22/19	--	672.23	669.5	--	667.5	--	669.18
2/23/19	--	672.24	669.5	--	667.5	--	669.18
2/24/19	--	672.25	669.5	--	667.5	--	669.18
2/25/19	673.24	672.25	669.5	669.7	667.5	--	669.17
2/26/19	--	672.25	669.5	--	667.5	--	669.15
2/27/19	--	672.26	669.5	--	667.5	--	669.17
2/28/19	--	672.27	669.5	--	667.5	--	669.16
3/1/19	--	672.28	669.5	--	667.5	--	669.18
3/2/19	--	672.29	669.5	--	667.5	--	669.18
3/3/19	--	672.29	669.5	--	667.5	--	669.18
3/4/19	673.27	672.30	669.5	669.8	667.5	--	669.18
3/5/19	--	672.30	669.5	--	667.5	--	669.18
3/6/19	--	672.31	669.5	--	667.5	--	669.18
3/7/19	--	672.32	669.5	--	667.5	--	669.18
3/8/19	--	672.33	669.5	--	667.5	--	669.18
3/9/19	--	672.33	669.5	--	667.5	--	669.18
3/10/19	--	672.33	669.5	--	667.5	--	669.17
3/11/19	673.29	672.32	669.5	669.8	667.5	--	669.18
3/12/19	--	672.33	669.5	--	667.5	--	669.18
3/13/19	--	672.33	669.5	--	667.5	--	669.17
3/14/19	--	672.34	669.5	--	667.5	--	669.14
3/15/19	--	672.34	669.5	--	667.5	--	669.14
3/16/19	--	672.35	669.5	--	667.5	--	669.17
3/17/19	--	672.35	669.5	--	667.5	--	669.17

Table 2.4

Summary of 2019 Water Elevations
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sump	LCS	LDS	GUS
Top of (concrete) sump (feet AMSL)	740.83	741.14	738.99
Bottom of sump (ft AMSL)	671.00	668.50	662.18
Bottom of sump (feet below top of sump [BTOS])	69.83	72.64	76.81
Diameter of sump (feet)	6	6	3

Date (mm/dd/yy)	LCS Water Elevation (Manual) (feet AMSL)	LCS Water Elevation (PLC) (feet AMSL)	Lowest Elevation of Primary Liner (feet AMSL)	LDS Water Elevation (feet AMSL)	Lowest Elevation of Secondary Liner (feet AMSL)	GUS Water Elevation (Manual) (feet AMSL)	GUS Water Elevation (PLC) (feet AMSL)
3/18/19	673.34	672.35	669.5	669.9	667.5	--	669.17
3/19/19	--	672.35	669.5	--	667.5	--	669.17
3/20/19	--	672.36	669.5	--	667.5	--	669.18
3/21/19	--	672.36	669.5	--	667.5	--	669.18
3/22/19	--	672.37	669.5	--	667.5	--	669.17
3/23/19	--	672.38	669.5	--	667.5	--	669.17
3/24/19	--	672.39	669.5	--	667.5	--	669.17
3/25/19	673.37	672.40	669.5	669.9	667.5	--	669.14
3/26/19	--	672.39	669.5	--	667.5	--	669.17
3/27/19	--	672.39	669.5	--	667.5	--	669.16
3/28/19	--	672.40	669.5	--	667.5	--	669.18
3/29/19	--	672.40	669.5	--	667.5	--	669.16
3/30/19	--	672.40	669.5	--	667.5	--	669.16
3/31/19	--	672.40	669.5	--	667.5	--	669.16
4/1/19	673.39	672.41	669.5	669.9	667.5	--	669.17
4/2/19	--	672.41	669.5	--	667.5	--	669.17
4/3/19	--	672.41	669.5	--	667.5	--	669.18
4/4/19	--	672.41	669.5	--	667.5	--	669.17
4/5/19	--	672.41	669.5	--	667.5	--	669.16
4/6/19	--	672.41	669.5	--	667.5	--	669.15
4/7/19	--	672.42	669.5	--	667.5	--	669.13
4/8/19	673.41	672.42	669.5	670.0	667.5	--	669.12
4/9/19	--	672.42	669.5	--	667.5	--	669.15
4/10/19	--	672.42	669.5	--	667.5	--	669.13
4/11/19	--	672.43	669.5	--	667.5	--	669.14
4/12/19	--	672.44	669.5	--	667.5	--	669.12
4/13/19	--	672.44	669.5	--	667.5	--	669.12
4/14/19	--	672.44	669.5	--	667.5	--	669.13
4/15/19	673.45	672.44	669.5	670.0	667.5	--	669.12
4/16/19	--	672.45	669.5	--	667.5	--	669.12
4/17/19	--	672.45	669.5	--	667.5	--	669.13
4/18/19	--	672.45	669.5	--	667.5	--	669.16
4/19/19	--	672.46	669.5	--	667.5	--	669.14
4/20/19	--	672.47	669.5	--	667.5	--	669.13
4/21/19	--	672.46	669.5	--	667.5	--	669.12
4/22/19	673.49	672.46	669.5	670.0	667.5	--	669.12
4/23/19	--	672.47	669.5	--	667.5	--	669.12
4/24/19	--	672.48	669.5	--	667.5	--	669.13

Table 2.4

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Bedford, Indiana

Sump	LCS	LDS	GUS
Top of (concrete) sump (feet AMSL)	740.83	741.14	738.99
Bottom of sump (ft AMSL)	671.00	668.50	662.18
Bottom of sump (feet below top of sump [BTOS])	69.83	72.64	76.81
Diameter of sump (feet)	6	6	3

Date (mm/dd/yy)	LCS Water Elevation (Manual) (feet AMSL)	LCS Water Elevation (PLC) (feet AMSL)	Lowest Elevation of Primary Liner (feet AMSL)	LDS Water Elevation (feet AMSL)	Lowest Elevation of Secondary Liner (feet AMSL)	GUS Water Elevation (Manual) (feet AMSL)	GUS Water Elevation (PLC) (feet AMSL)
4/25/19	--	672.49	669.5	--	667.5	--	669.12
4/26/19	--	672.50	669.5	--	667.5	--	669.15
4/27/19	--	672.49	669.5	--	667.5	--	669.14
4/28/19	--	672.49	669.5	--	667.5	--	669.14
4/29/19	--	672.50	669.5	--	667.5	--	669.15
4/30/19	673.49	672.50	669.5	670.0	667.5	--	669.12
5/1/19	673.49	672.50	669.5	670.0	667.5	--	669.14
5/2/19	--	672.50	669.5	--	667.5	--	669.14
5/3/19	--	672.51	669.5	--	667.5	--	669.15
5/4/19	--	672.51	669.5	--	667.5	--	669.15
5/5/19	--	672.52	669.5	--	667.5	--	669.15
5/6/19	673.55	672.51	669.5	670.1	667.5	--	669.13
5/7/19	--	672.51	669.5	--	667.5	--	669.13
5/8/19	--	672.52	669.5	--	667.5	--	669.13
5/9/19	--	672.52	669.5	--	667.5	--	669.14
5/10/19	--	672.53	669.5	--	667.5	--	669.14
5/11/19	--	672.54	669.5	--	667.5	--	669.14
5/12/19	--	672.54	669.5	--	667.5	--	669.15
5/13/19	673.6	672.55	669.5	670.1	667.5	--	669.14
5/14/19	--	672.55	669.5	--	667.5	--	669.15
5/15/19	--	672.55	669.5	--	667.5	--	669.14
5/16/19	--	672.55	669.5	--	667.5	--	669.14
5/17/19	--	672.55	669.5	--	667.5	--	669.15
5/18/19	--	672.55	669.5	--	667.5	--	669.14
5/19/19	--	672.56	669.5	--	667.5	--	669.14
5/20/19	673.64	672.56	669.5	670.2	667.5	--	669.14
5/21/19	--	672.57	669.5	--	667.5	--	669.15
5/22/19	--	672.57	669.5	--	667.5	--	669.15
5/23/19	--	672.58	669.5	--	667.5	--	669.14
5/24/19	--	672.58	669.5	--	667.5	--	669.13
5/25/19	--	672.59	669.5	--	667.5	--	669.13
5/26/19	--	672.59	669.5	--	667.5	--	669.15
5/27/19	673.68	672.60	669.5	670.2	667.5	--	669.16
5/28/19	--	672.60	669.5	--	667.5	--	669.16
5/29/19	--	672.60	669.5	--	667.5	--	669.13
5/30/19	--	672.61	669.5	--	667.5	--	669.13
5/31/19	--	672.61	669.5	--	667.5	--	669.13
6/1/19	--	672.61	669.5	670.2	667.5	--	669.13

Table 2.4

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Sump	LCS	LDS	GUS
Top of (concrete) sump (feet AMSL)	740.83	741.14	738.99
Bottom of sump (ft AMSL)	671.00	668.50	662.18
Bottom of sump (feet below top of sump [BTOS])	69.83	72.64	76.81
Diameter of sump (feet)	6	6	3

Date (mm/dd/yy)	LCS Water Elevation (Manual) (feet AMSL)	LCS Water Elevation (PLC) (feet AMSL)	Lowest Elevation of Primary Liner (feet AMSL)	LDS Water Elevation (feet AMSL)	Lowest Elevation of Secondary Liner (feet AMSL)	GUS Water Elevation (Manual) (feet AMSL)	GUS Water Elevation (PLC) (feet AMSL)
6/2/19	--	672.61	669.5	--	667.5	--	669.13
6/3/19	673.69	672.61	669.5	670.2	667.5	--	669.12
6/4/19	--	672.62	669.5	--	667.5	--	669.13
6/5/19	--	672.63	669.5	--	667.5	--	669.13
6/6/19	--	672.64	669.5	--	667.5	--	669.13
6/7/19	--	672.64	669.5	--	667.5	--	669.13
6/8/19	--	672.64	669.5	--	667.5	--	669.13
6/9/19	--	672.64	669.5	--	667.5	--	669.13
6/10/19	673.75	672.64	669.5	670.2	667.5	--	669.13
6/11/19	--	672.64	669.5	--	667.5	--	669.13
6/12/19	--	672.64	669.5	--	667.5	--	669.13
6/13/19	--	672.64	669.5	--	667.5	--	669.13
6/14/19	--	672.64	669.5	--	667.5	--	669.13
6/15/19	--	672.64	669.5	--	667.5	--	669.13
6/16/19	--	672.67	669.5	--	667.5	--	669.13
6/17/19	673.81	672.67	669.5	670.3	667.5	--	669.13
6/18/19	--	672.67	669.5	--	667.5	--	669.13
6/19/19	--	672.67	669.5	--	667.5	--	669.13
6/20/19	--	672.67	669.5	--	667.5	--	669.13
6/21/19	--	672.67	669.5	--	667.5	--	669.13
6/22/19	--	672.67	669.5	--	667.5	--	669.13
6/23/19	--	672.67	669.5	--	667.5	--	669.13
6/24/19	673.87	672.67	669.5	670.3	667.5	--	669.13
6/25/19	--	672.74	669.5	--	667.5	--	669.13
6/26/19	--	672.75	669.5	--	667.5	--	669.13
6/27/19	--	672.75	669.5	--	667.5	--	669.13
6/28/19	--	672.75	669.5	--	667.5	--	669.13
6/29/19	--	672.75	669.5	--	667.5	--	669.13
6/30/19	--	672.76	669.5	--	667.5	--	669.13
7/1/19	673.89	672.76	669.5	670.3	667.5	--	669.13
7/2/19	--	672.77	669.5		667.5	--	669.13
7/3/19	--	672.77	669.5	--	667.5	--	669.13
7/4/19	--	672.78	669.5	--	667.5	--	669.12
7/5/19	--	672.78	669.5	--	667.5	--	669.12
7/6/19	--	672.79	669.5	--	667.5	--	669.12
7/7/19	--	672.80	669.5	--	667.5	--	669.12
7/8/19	673.93	672.80	669.5	670.4	667.5	--	669.12
7/9/19	--	672.81	669.5	--	667.5	--	669.13

Table 2.4

Summary of 2019 Water Elevations
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sump	LCS	LDS	GUS
Top of (concrete) sump (feet AMSL)	740.83	741.14	738.99
Bottom of sump (ft AMSL)	671.00	668.50	662.18
Bottom of sump (feet below top of sump [BTOS])	69.83	72.64	76.81
Diameter of sump (feet)	6	6	3

Date (mm/dd/yy)	LCS Water Elevation (Manual) (feet AMSL)	LCS Water Elevation (PLC) (feet AMSL)	Lowest Elevation of Primary Liner (feet AMSL)	LDS Water Elevation (feet AMSL)	Lowest Elevation of Secondary Liner (feet AMSL)	GUS Water Elevation (Manual) (feet AMSL)	GUS Water Elevation (PLC) (feet AMSL)
7/10/19	--	672.81	669.5	--	667.5	--	669.13
7/11/19	--	672.83	669.5	--	667.5	--	669.13
7/12/19	--	672.83	669.5	--	667.5	--	669.13
7/13/19	--	672.84	669.5	--	667.5	--	669.13
7/14/19	--	672.84	669.5	--	667.5	--	669.13
7/15/19	675.97	672.84	669.5	670.4	667.5	--	669.13
7/16/19	--	672.85	669.5	--	667.5	--	669.13
7/17/19	--	672.85	669.5	--	667.5	--	669.13
7/18/19	--	672.85	669.5	--	667.5	--	669.12
7/19/19	--	672.85	669.5	--	667.5	--	669.12
7/20/19	--	672.86	669.5	--	667.5	--	669.12
7/21/19	--	672.87	669.5	--	667.5	--	669.13
7/22/19	674.00	672.87	669.5	670.5	667.5	--	669.13
7/23/19	--	672.88	669.5	--	667.5	--	669.13
7/24/19	--	672.88	669.5	--	667.5	--	669.13
7/25/19	--	672.88	669.5	--	667.5	--	669.13
7/26/19	--	672.88	669.5	--	667.5	--	669.13
7/27/19	--	672.89	669.5	--	667.5	--	669.13
7/28/19	--	672.89	669.5	--	667.5	--	669.13
7/29/19	674.06	672.90	669.5	670.5	667.5	--	669.13
7/30/19	--	672.90	669.5		667.5	--	669.13
7/31/19	--	672.90	669.5	--	667.5	--	669.13
8/1/19	--	672.91	669.5	--	667.5	--	669.11
8/2/19	--	672.91	669.5	--	667.5	--	669.12
8/3/19	--	672.92	669.5	--	667.5	--	669.12
8/4/19	--	672.92	669.5	--	667.5	--	669.12
8/5/19	66.77	672.92	669.5	--	667.5	--	669.11
8/6/19	--	672.93	669.5	--	667.5	--	669.12
8/7/19	--	672.93	669.5	--	667.5	--	669.11
8/8/19	--	672.93	669.5	--	667.5	--	669.11
8/9/19	--	672.94	669.5	--	667.5	--	669.11
8/10/19	--	672.94	669.5	--	667.5	--	669.11
8/11/19	--	672.94	669.5	--	667.5	--	669.12
8/12/19	66.73	672.95	669.5	670.6	667.5	--	669.12
8/13/19	--	672.95	669.5	--	667.5	--	669.11
8/14/19	66.81	672.88	669.5	--	667.5	--	669.11
8/15/19	--	672.88	669.5	--	667.5	--	669.11
8/16/19	--	672.88	669.5	--	667.5	--	669.08

Table 2.4

Summary of 2019 Water Elevations
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sump	LCS	LDS	GUS
Top of (concrete) sump (feet AMSL)	740.83	741.14	738.99
Bottom of sump (ft AMSL)	671.00	668.50	662.18
Bottom of sump (feet below top of sump [BTOS])	69.83	72.64	76.81
Diameter of sump (feet)	6	6	3

Date (mm/dd/yy)	LCS Water Elevation (Manual) (feet AMSL)	LCS Water Elevation (PLC) (feet AMSL)	Lowest Elevation of Primary Liner (feet AMSL)	LDS Water Elevation (feet AMSL)	Lowest Elevation of Secondary Liner (feet AMSL)	GUS Water Elevation (Manual) (feet AMSL)	GUS Water Elevation (PLC) (feet AMSL)
8/17/19	--	672.89	669.5	--	667.5	--	669.08
8/18/19	--	672.90	669.5	--	667.5	--	669.08
8/19/19	66.78	672.90	669.5	670.6	667.5	--	669.08
8/20/19	--	672.90	669.5	--	667.5	--	669.08
8/21/19	--	672.90	669.5	--	667.5	--	669.08
8/22/19	--	672.90	669.5	--	667.5	--	669.08
8/23/19	--	672.91	669.5	--	667.5	--	669.08
8/24/19	--	672.91	669.5	--	667.5	--	669.08
8/25/19	--	672.92	669.5	--	667.5	--	669.08
8/26/19	66.75	672.92	669.5	670.6	667.5	--	669.08
8/27/19	--	672.94	669.5	--	667.5	--	669.08
8/28/19	--	672.95	669.5	--	667.5	--	669.08
8/29/19	--	672.95	669.5	--	667.5	--	669.08
8/30/19	--	672.95	669.5	--	667.5	--	669.08
8/31/19	--	672.96	669.5	--	667.5	--	669.08
9/1/19	--	672.97	669.5	--	667.5	--	669.08
9/2/19	66.72	672.97	669.5	670.6	667.5	--	669.08
9/3/19	--	672.97	669.5		667.5	--	669.08
9/4/19	--	672.97	669.5	--	667.5	--	669.08
9/5/19	--	672.98	669.5	--	667.5	--	669.08
9/6/19	--	672.98	669.5	--	667.5	--	669.08
9/7/19	--	672.98	669.5	--	667.5	--	669.08
9/8/19	--	672.99	669.5	--	667.5	--	669.08
9/9/19	66.93	672.99	669.5	670.7	667.5	--	669.08
9/10/19	--	672.99	669.5		667.5	--	669.08
9/11/19	--	673.00	669.5	--	667.5	--	669.08
9/12/19	--	673.00	669.5	--	667.5	--	669.08
9/13/19	--	673.00	669.5	--	667.5	--	669.10
9/14/19	--	672.79	669.5	--	667.5	--	669.10
9/15/19	--	672.80	669.5	--	667.5	--	669.08
9/16/19	66.9	672.80	669.5	670.7	667.5	--	669.08
9/17/19	--	672.81	669.5		667.5	--	669.08
9/18/19	--	672.80	669.5	--	667.5	--	669.08
9/19/19	--	672.82	669.5	--	667.5	--	669.08
9/20/19	--	672.81	669.5	--	667.5	--	669.08
9/21/19	--	672.82	669.5	--	667.5	--	669.08
9/22/19	--	672.83	669.5	--	667.5	--	669.08
9/23/19	66.87	672.83	669.5	670.8	667.5	--	669.08

Table 2.4

Summary of 2019 Water Elevations
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sump	LCS	LDS	GUS
Top of (concrete) sump (feet AMSL)	740.83	741.14	738.99
Bottom of sump (ft AMSL)	671.00	668.50	662.18
Bottom of sump (feet below top of sump [BTOS])	69.83	72.64	76.81
Diameter of sump (feet)	6	6	3

Date (mm/dd/yy)	LCS Water Elevation (Manual) (feet AMSL)	LCS Water Elevation (PLC) (feet AMSL)	Lowest Elevation of Primary Liner (feet AMSL)	LDS Water Elevation (feet AMSL)	Lowest Elevation of Secondary Liner (feet AMSL)	GUS Water Elevation (Manual) (feet AMSL)	GUS Water Elevation (PLC) (feet AMSL)
9/24/19	--	672.84	669.5		667.5	--	669.08
9/25/19	--	672.84	669.5	--	667.5	--	669.08
9/26/19	--	672.84	669.5	--	667.5	--	669.08
9/27/19	--	672.85	669.5	--	667.5	--	669.08
9/28/19	--	672.85	669.5	--	667.5	--	669.08
9/29/19	--	672.85	669.5	--	667.5	--	669.08
9/30/19	66.84	672.85	669.5	670.8	667.5	--	669.08
10/1/19	--	672.85	669.5	--	667.5	--	669.07
10/2/19	--	672.85	669.5	--	667.5	--	669.08
10/3/19	--	672.86	669.5	--	667.5	--	669.08
10/4/19	--	672.86	669.5	--	667.5	--	669.08
10/5/19	--	672.87	669.5	--	667.5	--	669.08
10/6/19	--	672.88	669.5	--	667.5	--	669.07
10/7/19	--	672.88	669.5	670.8	667.5	--	669.07
10/8/19	--	672.88	669.5	--	667.5	--	669.03
10/9/19	--	672.89	669.5	--	667.5	--	669.03
10/10/19	--	672.89	669.5	--	667.5	--	669.03
10/11/19	--	672.90	669.5	--	667.5	--	669.03
10/12/19	--	672.90	669.5	--	667.5	--	669.03
10/13/19	--	672.90	669.5	--	667.5	--	669.03
10/14/19	--	672.90	669.5	670.8	667.5	--	669.03
10/15/19	--	672.91	669.5	--	667.5	--	669.03
10/16/19	--	672.91	669.5	--	667.5	--	669.03
10/17/19	--	672.92	669.5	--	667.5	--	669.02
10/18/19	--	672.92	669.5	--	667.5	--	669.02
10/19/19	--	672.92	669.5	--	667.5	--	669.03
10/20/19	--	672.93	669.5	--	667.5	--	669.03
10/21/19	--	672.93	669.5	670.8	667.5	--	669.03
10/22/19	--	672.94	669.5	--	667.5	--	669.07
10/23/19	--	672.94	669.5	--	667.5	--	669.07
10/24/19	--	672.95	669.5	--	667.5	--	669.07
10/25/19	--	672.95	669.5	--	667.5	--	669.03
10/26/19	--	672.95	669.5	--	667.5	--	669.03
10/27/19	--	672.95	669.5	--	667.5	--	669.03
10/28/19	--	672.96	669.5	670.8	667.5	--	669.08
10/29/19	--	672.98	669.5	--	667.5	--	669.08
10/30/19	--	672.98	669.5	--	667.5	--	669.08
10/31/19	--	672.99	669.5	--	667.5	--	669.08

Table 2.4

Summary of 2019 Water Elevations
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sump	LCS	LDS	GUS
Top of (concrete) sump (feet AMSL)	740.83	741.14	738.99
Bottom of sump (ft AMSL)	671.00	668.50	662.18
Bottom of sump (feet below top of sump [BTOS])	69.83	72.64	76.81
Diameter of sump (feet)	6	6	3

Date (mm/dd/yy)	LCS Water Elevation (Manual) (feet AMSL)	LCS Water Elevation (PLC) (feet AMSL)	Lowest Elevation of Primary Liner (feet AMSL)	LDS Water Elevation (feet AMSL)	Lowest Elevation of Secondary Liner (feet AMSL)	GUS Water Elevation (Manual) (feet AMSL)	GUS Water Elevation (PLC) (feet AMSL)
11/1/19	--	672.99	669.5	--	667.5	--	668.99
11/2/19	--	672.99	669.5	--	667.5	--	668.99
11/3/19	--	672.99	669.5	--	667.5	--	668.99
11/4/19	66.68	672.99	669.5	670.8	667.5	--	669.02
11/5/19	--	673.00	669.5	--	667.5	--	669.02
11/6/19	--	673.00	669.5	--	667.5	--	669.02
11/7/19	--	673.00	669.5	--	667.5	--	669.02
11/8/19	--	673.01	669.5	--	667.5	--	669.02
11/9/19	--	673.01	669.5	--	667.5	--	669.02
11/10/19	--	673.03	669.5	--	667.5	--	669.03
11/11/19	66.65	673.03	669.5	670.8	667.5	--	669.03
11/12/19	--	673.04	669.5	--	667.5	--	669.03
11/13/19	--	673.04	669.5	--	667.5	--	669.03
11/14/19	--	673.05	669.5	--	667.5	--	669.02
11/15/19	--	673.05	669.5	--	667.5	--	669.02
11/16/19	--	673.05	669.5	--	667.5	--	669.02
11/17/19	--	673.05	669.5	--	667.5	--	669.03
11/18/19	66.62	673.06	669.5	670.9	667.5	--	669.03
11/19/19	--	673.06	669.5	--	667.5	--	669.02
11/20/19	--	673.07	669.5	--	667.5	--	669.02
11/21/19	--	673.07	669.5	--	667.5	--	669.02
11/22/19	--	673.06	669.5	--	667.5	--	669.02
11/23/19	--	673.07	669.5	--	667.5	--	669.02
11/24/19	--	673.08	669.5	--	667.5	--	669.02
11/25/19	66.59	673.08	669.5	670.9	667.5	--	669.02
11/26/19	--	673.08	669.5	--	667.5	--	669.02
11/27/19	--	673.09	669.5	--	667.5	--	669.02
11/28/19	--	673.09	669.5	--	667.5	--	669.03
11/29/19	--	673.10	669.5	--	667.5	--	669.02
11/30/19	--	673.10	669.5	--	667.5	--	669.02
12/1/19	--	673.11	669.5	--	667.5	--	668.99
12/2/19	66.58	673.11	669.5	670.9	667.5	--	669.03
12/3/19	--	673.11	669.5		667.5	--	669.03
12/4/19	--	673.12	669.5	--	667.5	--	669.03
12/5/19	--	673.13	669.5	--	667.5	--	669.02
12/6/19	--	673.13	669.5	--	667.5	--	669.02
12/7/19	--	673.14	669.5	--	667.5	--	669.02
12/8/19	--	673.14	669.5	--	667.5	--	669.03

Table 2.4

Summary of 2019 Water Elevations
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sump	LCS	LDS	GUS
Top of (concrete) sump (feet AMSL)	740.83	741.14	738.99
Bottom of sump (ft AMSL)	671.00	668.50	662.18
Bottom of sump (feet below top of sump [BTOS])	69.83	72.64	76.81
Diameter of sump (feet)	6	6	3

Date (mm/dd/yy)	LCS Water Elevation (Manual) (feet AMSL)	LCS Water Elevation (PLC) (feet AMSL)	Lowest Elevation of Primary Liner (feet AMSL)	LDS Water Elevation (feet AMSL)	Lowest Elevation of Secondary Liner (feet AMSL)	GUS Water Elevation (Manual) (feet AMSL)	GUS Water Elevation (PLC) (feet AMSL)
12/9/19	--	673.15	669.5	--	667.5	--	669.03
12/10/19	--	673.15	669.5		667.5	--	669.03
12/11/19	66.56	673.15	669.5	670.9	667.5	--	669.03
12/12/19	--	673.15	669.5	--	667.5	--	669.02
12/13/19	--	673.16	669.5	--	667.5	--	669.03
12/14/19	--	673.17	669.5	--	667.5	--	669.03
12/15/19	--	673.17	669.5	--	667.5	--	669.03
12/16/19	66.55	673.18	669.5	670.9	667.5	--	669.03
12/17/19	--	673.19	669.5		667.5	--	669.03
12/18/19	--	673.2	669.5	--	667.5	--	669.03
12/19/19	--	673.20	669.5	--	667.5	--	669.03
12/20/19	--	673.20	669.5	--	667.5	--	669.03
12/21/19	--	673.20	669.5	--	667.5	--	669.03
12/22/19	--	673.21	669.5	--	667.5	--	669.03
12/23/19	68.23	673.21	669.5	671.0	667.5	--	669.03
12/24/19	--	671.65	669.5		667.5	--	669.03
12/25/19	--	671.67	669.5	--	667.5	--	669.03
12/26/19	--	671.68	669.5	--	667.5	--	669.02
12/27/19	--	671.69	669.5	--	667.5	--	669.03
12/28/19	--	671.7	669.5	--	667.5	--	669.03
12/29/19	--	671.7	669.5	--	667.5	--	669.03
12/30/19	68.68	671.71	669.5	671.0	667.5	--	669.03
12/31/19	--	671.72	669.5		667.5	--	669.03

Table 2.5

2019 LCS, LDS, and GUS Maximum Water Elevation Summary
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Maximum Water Level (based on manual measurements), measured in feet

Date	LCS[1]	LCS[1]	LCS[1]	LCS[1]	LDS[2]	LDS[2]	GUS[3]	GUS[3]	GUS[3]	GUS[3]	Remarks
	Manual Measurement Water Depth (ft)	Manual Measurement Water Surface Elev. (ft AMSL)	PLC Water Depth (ft)	PLC Water Surface Elev. (ft AMSL)	Manual Measurement Water Depth (ft)	Manual Measurement Water Surface Elev. (ft AMSL)	Manual Measurement Water Depth (ft)	Manual Measurement Water Surface Elev. (ft AMSL)	PLC Water Depth (ft)	PLC Water Surface Elev. (ft AMSL)	
Jan-19	2.0	673.0	1.1	672.1	1.0	669.5	--	--	7.0	669.2	
Feb-19	2.2	673.2	1.3	672.3	1.2	669.7	--	--	7.0	669.2	
Mar-19	2.4	673.4	1.4	672.4	1.4	669.9	--	--	7.0	669.2	
Apr-19	2.5	673.5	1.5	672.5	1.5	670.0	--	--	7.0	669.2	
May-19	2.7	673.7	1.6	672.6	1.7	670.2	--	--	7.0	669.2	
Jun-19	2.9	673.9	1.7	672.7	1.8	670.3	--	--	7.0	669.1	
Jul-19	3.1	674.1	1.9	672.9	2.0	670.5	--	--	7.0	669.1	
Aug-19	3.1	674.1	2.0	673.0	2.1	670.6	--	--	6.9	669.1	
Sep-19	3.1	674.1	2.0	673.0	2.3	670.8	--	--	6.9	669.1	
Oct-19	--	--	--	--	2.3	670.8	--	--	6.9	669.1	
Nov-19	3.2	674.2	2.1	673.1	2.4	670.9	--	--	6.9	669.0	
Dec-19	3.3	674.3	2.2	673.2	2.5	671.0	--	--	6.9	669.0	

Notes:

AMSL - Above mean sea level
ft - feet
Diameter of LCS and LDS sumps = 6 feet
Diameter of Underdrain sump = 3 feet

[1] LCS: Top of sump [top of concrete manhole] (feet AMSL): 740.83, Bottom of sump (feet AMSL): 671.00, Total depth of sump manhole (feet): 69.83. Automated pump turns on at 674 ft AMSL and off at 672 ft AMSL.

[2] LDS: Top of sump [top of concrete manhole] (feet AMSL): 741.14, Bottom of sump (feet AMSL): 668.5, Total depth of sump manhole (feet): 72.64

[3] GUS: Top of sump [top of concrete] (feet AMSL): 738.99, Bottom of sump (feet AMSL): 662.18, Total depth of sump manhole (feet): 76.81. Automated pump turns on at 666.5 ft AMSL and off at 664.68 ft AMSL.

Indication of water level reaching or exceeding the operational limit.

Table 2.6

2019 Summary of Monthly Total Volume of Water Treated
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Month	Groundwater Treatment Plant (GWTP) Number of Operational Days	Volume of Water Treated/Discharged at the GWTP (gallons x 106)	Daily Average Water Treated/Discharged at the GWTP (gpm)
Jan-19	31	5.467	122
Feb-19	28	5.393	134
Mar-19	31	4.916	110
Apr-19	30	5.547	128
May-19	31	6.67	149
Jun-19	30	5.542	128
Jul-19	31	1.743	39
Aug-19	31	0.930	21
Sep-19	30	0.753	17
Oct-19	31	0.977	22
Nov-19	30	2.104	49
Dec-19	31	3.099	69
Total	**365**	**43.141**	
Month Average	**-**	**3.595**	
Daily Average	**-**	**0.118**	

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**A001**	**A001**	**A001**	**A001MonitoringWell_WestPlantArea**
Sample Location:		**MW-X146Y084**	**MW-X165Y068**	**ST-59**	**MW-X085Y070S-1**
Sample Identification:		**GW-051519-KH-13**	**GW-051519-KH-11**	**GW-051619-KH-21**	**GW-051519-EM-18**
Sample Date		**5/15/2019**	**5/15/2019**	**5/16/2019**	**5/15/2019**
Sample Type:					
	Units				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Total PCBs	ug/L	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	ug/L	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-
1,1,2-Trichloroethane	ug/L	-	-	-	-
1,1-Dichloroethane	ug/L	-	-	-	-
1,1-Dichloroethene	ug/L	-	-	-	-
1,2,4-Trichlorobenzene	ug/L	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	ug/L	-	-	-	-
1,2-Dichlorobenzene	ug/L	-	-	-	-
1,2-Dichloroethane	ug/L	-	-	-	-
1,2-Dichloropropane	ug/L	-	-	-	-
1,3-Dichlorobenzene	ug/L	-	-	-	-
1,4-Dichlorobenzene	ug/L	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	-	-	-	-
2-Chloroethyl vinyl ether	ug/L	-	-	-	-
2-Hexanone	ug/L	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	-	-	-	-
Acetone	ug/L	-	-	-	-
Benzene	ug/L	-	-	-	-
Bromodichloromethane	ug/L	-	-	-	-
Bromoform	ug/L	-	-	-	-
Bromomethane (Methyl bromide)	ug/L	-	-	-	-
Carbon disulfide	ug/L	-	-	-	-
Carbon tetrachloride	ug/L	-	-	-	-
Chlorobenzene	ug/L	-	-	-	-
Chloroethane	ug/L	-	-	-	-
Chloroform (Trichloromethane)	ug/L	-	-	-	-
Chloromethane (Methyl chloride)	ug/L	-	-	-	-
cis-1,2-Dichloroethene	ug/L	-	-	-	-
cis-1,3-Dichloropropene	ug/L	-	-	-	-
Cyclohexane	ug/L	-	-	-	-
Dibromochloromethane	ug/L	-	-	-	-
Dichlorodifluoromethane (CFC-12)	ug/L	-	-	-	-
Ethylbenzene	ug/L	-	-	-	-
Isopropyl benzene	ug/L	-	-	-	-
Methyl acetate	ug/L	-	-	-	-
Methyl cyclohexane	ug/L	-	-	-	-

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**A001**	**A001**	**A001**	**A001MonitoringWell_WestPlantArea**
Sample Location:		**MW-X146Y084**	**MW-X165Y068**	**ST-59**	**MW-X085Y070S-1**
Sample Identification:		**GW-051519-KH-13**	**GW-051519-KH-11**	**GW-051619-KH-21**	**GW-051519-EM-18**
Sample Date		**5/15/2019**	**5/15/2019**	**5/16/2019**	**5/15/2019**
Sample Type:					
	Units				
Methyl tert butyl ether (MTBE)	ug/L	-	-	-	-
Methylene chloride	ug/L	-	-	-	-
Styrene	ug/L	-	-	-	-
Tetrachloroethene	ug/L	-	-	-	-
Toluene	ug/L	-	-	-	-
trans-1,2-Dichloroethene	ug/L	-	-	-	-
trans-1,3-Dichloropropene	ug/L	-	-	-	-
Trichloroethene	ug/L	-	-	-	-
Trichlorofluoromethane (CFC-11)	ug/L	-	-	-	-
Trifluorotrichloroethane (CFC-113)	ug/L	-	-	-	-
Vinyl chloride	ug/L	1.0 U	1.0 U	-	-
Xylenes (total)	ug/L	-	-	-	-
Semi-Volatile Organic Compounds (SVOCs)					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	-	-	-	-
2,4,5-Trichlorophenol	ug/L	-	-	-	-
2,4,6-Trichlorophenol	ug/L	-	-	-	-
2,4-Dichlorophenol	ug/L	-	-	-	-
2,4-Dimethylphenol	ug/L	-	-	-	-
2,4-Dinitrophenol	ug/L	-	-	-	-
2,4-Dinitrotoluene	ug/L	-	-	-	-
2,6-Dinitrotoluene	ug/L	-	-	-	-
2-Chloronaphthalene	ug/L	-	-	-	-
2-Chlorophenol	ug/L	-	-	-	-
2-Methylnaphthalene	ug/L	-	-	-	-
2-Methylphenol	ug/L	-	-	-	-
2-Nitroaniline	ug/L	-	-	-	-
2-Nitrophenol	ug/L	-	-	-	-
3&4-Methylphenol	ug/L	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	-	-	-	-
3-Nitroaniline	ug/L	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	-	-	-	-
4-Bromophenyl phenyl ether	ug/L	-	-	-	-
4-Chloro-3-methylphenol	ug/L	-	-	-	-
4-Chloroaniline	ug/L	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-
4-Nitroaniline	ug/L	-	-	-	-
4-Nitrophenol	ug/L	-	-	-	-
Acenaphthene	ug/L	-	-	-	-
Acenaphthylene	ug/L	-	-	-	-
Acetophenone	ug/L	-	-	-	-

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**A001**	**A001**	**A001**	**A001MonitoringWell_WestPlantArea**
Sample Location:		**MW-X146Y084**	**MW-X165Y068**	**ST-59**	**MW-X085Y070S-1**
Sample Identification:		**GW-051519-KH-13**	**GW-051519-KH-11**	**GW-051619-KH-21**	**GW-051519-EM-18**
Sample Date		**5/15/2019**	**5/15/2019**	**5/16/2019**	**5/15/2019**
Sample Type:					
	Units				
Anthracene	ug/L	-	-	-	-
Atrazine	ug/L	-	-	-	-
Benzaldehyde	ug/L	-	-	-	-
Benzo(a)anthracene	ug/L	-	-	-	-
Benzo(a)pyrene	ug/L	-	-	-	-
Benzo(b)fluoranthene	ug/L	-	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	-	-
Biphenyl (1,1-Biphenyl)	ug/L	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L	-	-	-	-
bis(2-Chloroethyl)ether	ug/L	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	-	-	-	-
Butyl benzylphthalate (BBP)	ug/L	-	-	-	-
Caprolactam	ug/L	-	-	-	-
Carbazole	ug/L	-	-	-	-
Chrysene	ug/L	-	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-
Dibenzofuran	ug/L	-	-	-	-
Diethyl phthalate	ug/L	-	-	-	-
Dimethyl phthalate	ug/L	-	-	-	-
Di-n-butylphthalate (DBP)	ug/L	-	-	-	-
Di-n-octyl phthalate (DnOP)	ug/L	-	-	-	-
Fluoranthene	ug/L	-	-	-	-
Fluorene	ug/L	-	-	-	-
Hexachlorobenzene	ug/L	-	-	-	-
Hexachlorobutadiene	ug/L	-	-	-	-
Hexachlorocyclopentadiene	ug/L	-	-	-	-
Hexachloroethane	ug/L	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-
Isophorone	ug/L	-	-	-	-
Naphthalene	ug/L	-	-	-	-
Nitrobenzene	ug/L	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-
N-Nitrosodiphenylamine	ug/L	-	-	-	-
Pentachlorophenol	ug/L	-	-	-	-
Phenanthrene	ug/L	-	-	-	-
Phenol	ug/L	-	-	-	-
Pyrene	ug/L	-	-	-	-
General Chemistry					
Chloride	ug/L	2300000	370000	18000	-
Field Parameters					
Conductivity, field	mS/cm	7.354	3.163	0.629	1.225
Dissolved oxygen (DO), field	ug/L	2240	2450	6140	910
Oxidation reduction potential (ORP), field	millivolts	-215.2	-224.3	58.6	-167.2
pH, field	s.u.	7.97	8.5	8.26	6.74
Temperature, sample	Deg C	16.09	14.89	13.21	16.32
Turbidity, field	NTU	11.8	12.91	2.29	1.72

Notes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**A001MonitoringWell_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**A007_EastPlantArea**	**A007_EastPlantArea**
Sample Location:		**MW-X085Y070S-1**	**MW-X169Y058S-1**	**CH-20**	**CH-20**
Sample Identification:		**GW-051519-EM-18~Split**	**GW-051519-EM-16**	**GW-051419-EM-12**	**GW-051419-EM-14**
Sample Date		**5/15/2019**	**5/15/2019**	**5/14/2019**	**5/14/2019**
Sample Type:		**Replicate**			**Duplicate**
	Units				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	0.10 U	0.20 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.10 U	0.20 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.10 U	0.20 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.10 U	0.20 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.10 U	0.20 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.10 U	0.20 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.10 U	0.20 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.12 U	0.20 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.12 U	0.20 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.12 U	0.20 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.12 U	0.20 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.12 U	0.20 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.12 U	0.20 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.12 U	0.20 U	0.19 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	ug/L	-	-	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	-	-	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	-	-	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	-	-	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	-	-	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	ug/L	-	-	-	-
1,2-Dichlorobenzene	ug/L	-	-	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	-	-	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	-	-	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	-	-	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	-	-	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	-	-	-	-
2-Chloroethyl vinyl ether	ug/L	-	-	10 U	10 U
2-Hexanone	ug/L	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	-	-	-	-
Acetone	ug/L	-	-	-	-
Benzene	ug/L	-	-	1.0 U	1.0 U
Bromodichloromethane	ug/L	-	-	1.0 U	1.0 U
Bromoform	ug/L	-	-	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	-	-	1.0 U	1.0 U
Carbon disulfide	ug/L	-	-	-	-
Carbon tetrachloride	ug/L	-	-	1.0 U	1.0 U
Chlorobenzene	ug/L	-	-	0.37 J	0.37 J
Chloroethane	ug/L	-	-	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	-	-	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	-	-	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	-	-	-	-
cis-1,3-Dichloropropene	ug/L	-	-	1.0 U	1.0 U
Cyclohexane	ug/L	-	-	-	-
Dibromochloromethane	ug/L	-	-	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	-	-	1.0 U	1.0 U
Ethylbenzene	ug/L	-	-	0.15 J	0.16 J
Isopropyl benzene	ug/L	-	-	-	-
Methyl acetate	ug/L	-	-	-	-
Methyl cyclohexane	ug/L	-	-	-	-

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**A001MonitoringWell_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**A007_EastPlantArea**	**A007_EastPlantArea**
Sample Location:		**MW-X085Y070S-1**	**MW-X169Y058S-1**	**CH-20**	**CH-20**
Sample Identification:		**GW-051519-EM-18~Split**	**GW-051519-EM-16**	**GW-051419-EM-12**	**GW-051419-EM-14**
Sample Date		**5/15/2019**	**5/15/2019**	**5/14/2019**	**5/14/2019**
Sample Type:		**Replicate**			**Duplicate**
	Units				
Methyl tert butyl ether (MTBE)	ug/L	-	-	-	-
Methylene chloride	ug/L	-	-	5.0 U	5.0 U
Styrene	ug/L	-	-	-	-
Tetrachloroethene	ug/L	-	-	1.0 U	1.0 U
Toluene	ug/L	-	-	0.23 J	0.23 J
trans-1,2-Dichloroethene	ug/L	-	-	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	-	-	1.0 U	1.0 U
Trichloroethene	ug/L	-	-	-	-
Trichlorofluoromethane (CFC-11)	ug/L	-	-	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	-	-	-	-
Vinyl chloride	ug/L	-	1.5	1.0 U	1.0 U
Xylenes (total)	ug/L	-	-	-	-
Semi-Volatile Organic Compounds (SVOCs)					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	-	-	-	-
2,4,5-Trichlorophenol	ug/L	-	-	-	-
2,4,6-Trichlorophenol	ug/L	-	-	-	-
2,4-Dichlorophenol	ug/L	-	-	-	-
2,4-Dimethylphenol	ug/L	-	-	-	-
2,4-Dinitrophenol	ug/L	-	-	-	-
2,4-Dinitrotoluene	ug/L	-	-	-	-
2,6-Dinitrotoluene	ug/L	-	-	-	-
2-Chloronaphthalene	ug/L	-	-	-	-
2-Chlorophenol	ug/L	-	-	-	-
2-Methylnaphthalene	ug/L	-	-	-	-
2-Methylphenol	ug/L	-	-	-	-
2-Nitroaniline	ug/L	-	-	-	-
2-Nitrophenol	ug/L	-	-	-	-
3&4-Methylphenol	ug/L	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	-	-	-	-
3-Nitroaniline	ug/L	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	-	-	-	-
4-Bromophenyl phenyl ether	ug/L	-	-	-	-
4-Chloro-3-methylphenol	ug/L	-	-	-	-
4-Chloroaniline	ug/L	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-
4-Nitroaniline	ug/L	-	-	-	-
4-Nitrophenol	ug/L	-	-	-	-
Acenaphthene	ug/L	-	-	-	-
Acenaphthylene	ug/L	-	-	-	-
Acetophenone	ug/L	-	-	-	-

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**A001MonitoringWell_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**A007_EastPlantArea**	**A007_EastPlantArea**
Sample Location:		**MW-X085Y070S-1**	**MW-X169Y058S-1**	**CH-20**	**CH-20**
Sample Identification:		**GW-051519-EM-18~Split**	**GW-051519-EM-16**	**GW-051419-EM-12**	**GW-051419-EM-14**
Sample Date		**5/15/2019**	**5/15/2019**	**5/14/2019**	**5/14/2019**
Sample Type:		**Replicate**			**Duplicate**
	Units				
Anthracene	ug/L	-	-	-	-
Atrazine	ug/L	-	-	-	-
Benzaldehyde	ug/L	-	-	-	-
Benzo(a)anthracene	ug/L	-	-	-	-
Benzo(a)pyrene	ug/L	-	-	-	-
Benzo(b)fluoranthene	ug/L	-	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	-	-
Biphenyl (1,1-Biphenyl)	ug/L	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L	-	-	-	-
bis(2-Chloroethyl)ether	ug/L	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	-	-	-	-
Butyl benzylphthalate (BBP)	ug/L	-	-	-	-
Caprolactam	ug/L	-	-	-	-
Carbazole	ug/L	-	-	-	-
Chrysene	ug/L	-	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-
Dibenzofuran	ug/L	-	-	-	-
Diethyl phthalate	ug/L	-	-	-	-
Dimethyl phthalate	ug/L	-	-	-	-
Di-n-butylphthalate (DBP)	ug/L	-	-	-	-
Di-n-octyl phthalate (DnOP)	ug/L	-	-	-	-
Fluoranthene	ug/L	-	-	-	-
Fluorene	ug/L	-	-	-	-
Hexachlorobenzene	ug/L	-	-	-	-
Hexachlorobutadiene	ug/L	-	-	-	-
Hexachlorocyclopentadiene	ug/L	-	-	-	-
Hexachloroethane	ug/L	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-
Isophorone	ug/L	-	-	-	-
Naphthalene	ug/L	-	-	-	-
Nitrobenzene	ug/L	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-
N-Nitrosodiphenylamine	ug/L	-	-	-	-
Pentachlorophenol	ug/L	-	-	-	-
Phenanthrene	ug/L	-	-	-	-
Phenol	ug/L	-	-	-	-
Pyrene	ug/L	-	-	-	-
General Chemistry					
Chloride	ug/L	-	-	-	-
Field Parameters					
Conductivity, field	mS/cm	-	2.85	1.094	-
Dissolved oxygen (DO), field	ug/L	-	1360	350	-
Oxidation reduction potential (ORP), field	millivolts	-	5	-119.3	-
pH, field	s.u.	-	7.56	11.47	-
Temperature, sample	Deg C	-	14.6	14.83	-
Turbidity, field	NTU	-	11.4	5.75	-

Notes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**EastPlantArea**	**EastPlantArea**	**EastPlantArea**	**EastPlantArea**	**EastPlantArea**
Sample Location:		**9-4**	**CH-42**	**CH-42A**	**CH-43**	**CH-44**
Sample Identification:		**GW-051519-EM-20**	**GW-051319-EM-02**	**GW-051319-EM-04**	**GW-051319-KH-01**	**GW-051319-KH-03**
Sample Date		**5/15/2019**	**5/13/2019**	**5/13/2019**	**5/13/2019**	**5/13/2019**
Sample Type:						
	Units					
PCBs						
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U
Total PCBs	ug/L	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	ug/L	1.0 U	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	-	-	-	-
1,1,2-Trichloroethane	ug/L	1.0 U	-	-	-	-
1,1-Dichloroethane	ug/L	1.0 U	-	-	-	-
1,1-Dichloroethene	ug/L	1.0 U	-	-	-	-
1,2,4-Trichlorobenzene	ug/L	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	ug/L	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	1.0 U	-	-	-	-
1,2-Dichloroethane	ug/L	1.0 U	-	-	-	-
1,2-Dichloropropane	ug/L	1.0 U	-	-	-	-
1,3-Dichlorobenzene	ug/L	1.0 U	-	-	-	-
1,4-Dichlorobenzene	ug/L	1.0 U	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	-	-	-	-	-
2-Chloroethyl vinyl ether	ug/L	10 UJ	-	-	-	-
2-Hexanone	ug/L	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	-	-	-	-	-
Acetone	ug/L	-	-	-	-	-
Benzene	ug/L	1.0 U	-	-	-	-
Bromodichloromethane	ug/L	1.0 U	-	-	-	-
Bromoform	ug/L	1.0 U	-	-	-	-
Bromomethane (Methyl bromide)	ug/L	1.0 U	-	-	-	-
Carbon disulfide	ug/L	-	-	-	-	-
Carbon tetrachloride	ug/L	1.0 UJ	-	-	-	-
Chlorobenzene	ug/L	1.0 U	-	-	-	-
Chloroethane	ug/L	1.0 UJ	-	-	-	-
Chloroform (Trichloromethane)	ug/L	1.0 U	-	-	-	-
Chloromethane (Methyl chloride)	ug/L	1.0 U	-	-	-	-
cis-1,2-Dichloroethene	ug/L	-	-	-	-	-
cis-1,3-Dichloropropene	ug/L	1.0 U	-	-	-	-
Cyclohexane	ug/L	-	-	-	-	-
Dibromochloromethane	ug/L	1.0 U	-	-	-	-
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 UJ	-	-	-	-
Ethylbenzene	ug/L	1.0 U	-	-	-	-
Isopropyl benzene	ug/L	-	-	-	-	-
Methyl acetate	ug/L	-	-	-	-	-
Methyl cyclohexane	ug/L	-	-	-	-	-

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**EastPlantArea**	**EastPlantArea**	**EastPlantArea**	**EastPlantArea**	**EastPlantArea**
Sample Location:		**9-4**	**CH-42**	**CH-42A**	**CH-43**	**CH-44**
Sample Identification:		**GW-051519-EM-20**	**GW-051319-EM-02**	**GW-051319-EM-04**	**GW-051319-KH-01**	**GW-051319-KH-03**
Sample Date		**5/15/2019**	**5/13/2019**	**5/13/2019**	**5/13/2019**	**5/13/2019**
Sample Type:						
	Units					
Methyl tert butyl ether (MTBE)	ug/L	-	-	-	-	-
Methylene chloride	ug/L	5.0 U	-	-	-	-
Styrene	ug/L	-	-	-	-	-
Tetrachloroethene	ug/L	1.0 U	-	-	-	-
Toluene	ug/L	1.0 U	-	-	-	-
trans-1,2-Dichloroethene	ug/L	1.0 U	-	-	-	-
trans-1,3-Dichloropropene	ug/L	1.0 U	-	-	-	-
Trichloroethene	ug/L	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	ug/L	1.0 UJ	-	-	-	-
Trifluorotrichloroethane (CFC-113)	ug/L	-	-	-	-	-
Vinyl chloride	ug/L	1.0 U	-	-	-	-
Xylenes (total)	ug/L	-	-	-	-	-
Semi-Volatile Organic Compounds (SVOCs)						
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	-	-	-	-	-
2,4,6-Trichlorophenol	ug/L	-	-	-	-	-
2,4-Dichlorophenol	ug/L	-	-	-	-	-
2,4-Dimethylphenol	ug/L	-	-	-	-	-
2,4-Dinitrophenol	ug/L	-	-	-	-	-
2,4-Dinitrotoluene	ug/L	-	-	-	-	-
2,6-Dinitrotoluene	ug/L	-	-	-	-	-
2-Chloronaphthalene	ug/L	-	-	-	-	-
2-Chlorophenol	ug/L	-	-	-	-	-
2-Methylnaphthalene	ug/L	-	-	-	-	-
2-Methylphenol	ug/L	-	-	-	-	-
2-Nitroaniline	ug/L	-	-	-	-	-
2-Nitrophenol	ug/L	-	-	-	-	-
3&4-Methylphenol	ug/L	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	-	-	-	-	-
3-Nitroaniline	ug/L	-	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	-	-	-	-	-
4-Bromophenyl phenyl ether	ug/L	-	-	-	-	-
4-Chloro-3-methylphenol	ug/L	-	-	-	-	-
4-Chloroaniline	ug/L	-	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-	-
4-Nitroaniline	ug/L	-	-	-	-	-
4-Nitrophenol	ug/L	-	-	-	-	-
Acenaphthene	ug/L	-	-	-	-	-
Acenaphthylene	ug/L	-	-	-	-	-
Acetophenone	ug/L	-	-	-	-	-

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**EastPlantArea**	**EastPlantArea**	**EastPlantArea**	**EastPlantArea**	**EastPlantArea**
Sample Location:		**9-4**	**CH-42**	**CH-42A**	**CH-43**	**CH-44**
Sample Identification:		**GW-051519-EM-20**	**GW-051319-EM-02**	**GW-051319-EM-04**	**GW-051319-KH-01**	**GW-051319-KH-03**
Sample Date		**5/15/2019**	**5/13/2019**	**5/13/2019**	**5/13/2019**	**5/13/2019**
Sample Type:						
	Units					
Anthracene	ug/L	-	-	-	-	-
Atrazine	ug/L	-	-	-	-	-
Benzaldehyde	ug/L	-	-	-	-	-
Benzo(a)anthracene	ug/L	-	-	-	-	-
Benzo(a)pyrene	ug/L	-	-	-	-	-
Benzo(b)fluoranthene	ug/L	-	-	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	ug/L	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L	-	-	-	-	-
bis(2-Chloroethyl)ether	ug/L	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	-	-	-	-	-
Butyl benzylphthalate (BBP)	ug/L	-	-	-	-	-
Caprolactam	ug/L	-	-	-	-	-
Carbazole	ug/L	-	-	-	-	-
Chrysene	ug/L	-	-	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-	-
Dibenzofuran	ug/L	-	-	-	-	-
Diethyl phthalate	ug/L	-	-	-	-	-
Dimethyl phthalate	ug/L	-	-	-	-	-
Di-n-butylphthalate (DBP)	ug/L	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	ug/L	-	-	-	-	-
Fluoranthene	ug/L	-	-	-	-	-
Fluorene	ug/L	-	-	-	-	-
Hexachlorobenzene	ug/L	-	-	-	-	-
Hexachlorobutadiene	ug/L	-	-	-	-	-
Hexachlorocyclopentadiene	ug/L	-	-	-	-	-
Hexachloroethane	ug/L	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	-
Isophorone	ug/L	-	-	-	-	-
Naphthalene	ug/L	-	-	-	-	-
Nitrobenzene	ug/L	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	-	-	-	-	-
Pentachlorophenol	ug/L	-	-	-	-	-
Phenanthrene	ug/L	-	-	-	-	-
Phenol	ug/L	-	-	-	-	-
Pyrene	ug/L	-	-	-	-	-
General Chemistry						
Chloride	ug/L	-	-	-	-	-
Field Parameters						
Conductivity, field	mS/cm	0.795	0.91	0.683	0.992	1.03
Dissolved oxygen (DO), field	ug/L	2900	450	1530	3700	3630
Oxidation reduction potential (ORP), field	millivolts	-18.8	13.7	54.1	14.7	61.3
pH, field	s.u.	7.02	7.25	7.57	7.17	7.04
Temperature, sample	Deg C	15.7	13.89	13.86	14	13.82
Turbidity, field	NTU	2.13	5.28	1.07	2.64	1.25

Notes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**EastPlantArea**	**MonitoringWell_RFIBoundary_WestPlantArea**	**MonitoringWell_RFIBoundary_WestPlantArea**	**P006**
Sample Location:		**MW-X227Y054**	**MW-X033Y147S**	**MW-X033Y147S**	**MW-X315Y115**
Sample Identification:		**GW-051619-EM-24**	**GW-051519-KH-15**	**GW-051519-KH-15~Split**	**GW-051419-EM-10**
Sample Date		**5/16/2019**	**5/15/2019**	**5/15/2019**	**5/14/2019**
Sample Type:				**Replicate**	
	Units				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.10 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.10 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.10 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	9.1	0.19 U	0.10 U	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.10 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.10 U	0.20 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.10 U	0.20 U
Total PCBs	ug/L	9.1	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.19 U	0.095 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.19 U	0.095 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.19 U	0.095 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.19 U	0.095 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.19 U	0.095 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	0.19 U	0.095 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.19 U	0.095 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	ug/L	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-
1,1,2-Trichloroethane	ug/L	-	-	-	-
1,1-Dichloroethane	ug/L	-	-	-	-
1,1-Dichloroethene	ug/L	-	-	-	-
1,2,4-Trichlorobenzene	ug/L	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	ug/L	-	-	-	-
1,2-Dichlorobenzene	ug/L	-	-	-	-
1,2-Dichloroethane	ug/L	-	-	-	-
1,2-Dichloropropane	ug/L	-	-	-	-
1,3-Dichlorobenzene	ug/L	-	-	-	-
1,4-Dichlorobenzene	ug/L	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	-	-	-	-
2-Chloroethyl vinyl ether	ug/L	-	-	-	-
2-Hexanone	ug/L	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	-	-	-	-
Acetone	ug/L	-	-	-	-
Benzene	ug/L	-	-	-	-
Bromodichloromethane	ug/L	-	-	-	-
Bromoform	ug/L	-	-	-	-
Bromomethane (Methyl bromide)	ug/L	-	-	-	-
Carbon disulfide	ug/L	-	-	-	-
Carbon tetrachloride	ug/L	-	-	-	-
Chlorobenzene	ug/L	-	-	-	-
Chloroethane	ug/L	-	-	-	-
Chloroform (Trichloromethane)	ug/L	-	-	-	-
Chloromethane (Methyl chloride)	ug/L	-	-	-	-
cis-1,2-Dichloroethene	ug/L	-	-	-	-
cis-1,3-Dichloropropene	ug/L	-	-	-	-
Cyclohexane	ug/L	-	-	-	-
Dibromochloromethane	ug/L	-	-	-	-
Dichlorodifluoromethane (CFC-12)	ug/L	-	-	-	-
Ethylbenzene	ug/L	-	-	-	-
Isopropyl benzene	ug/L	-	-	-	-
Methyl acetate	ug/L	-	-	-	-
Methyl cyclohexane	ug/L	-	-	-	-

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**EastPlantArea**	**MonitoringWell_RFIBoundary_WestPlantArea**	**MonitoringWell_RFIBoundary_WestPlantArea**	**P006**
Sample Location:		**MW-X227Y054**	**MW-X033Y147S**	**MW-X033Y147S**	**MW-X315Y115**
Sample Identification:		**GW-051619-EM-24**	**GW-051519-KH-15**	**GW-051519-KH-15~Split**	**GW-051419-EM-10**
Sample Date		**5/16/2019**	**5/15/2019**	**5/15/2019**	**5/14/2019**
Sample Type:				**Replicate**	
	Units				
Methyl tert butyl ether (MTBE)	ug/L	-	-	-	-
Methylene chloride	ug/L	-	-	-	-
Styrene	ug/L	-	-	-	-
Tetrachloroethene	ug/L	-	-	-	-
Toluene	ug/L	-	-	-	-
trans-1,2-Dichloroethene	ug/L	-	-	-	-
trans-1,3-Dichloropropene	ug/L	-	-	-	-
Trichloroethene	ug/L	-	-	-	-
Trichlorofluoromethane (CFC-11)	ug/L	-	-	-	-
Trifluorotrichloroethane (CFC-113)	ug/L	-	-	-	-
Vinyl chloride	ug/L	-	-	-	-
Xylenes (total)	ug/L	-	-	-	-
Semi-Volatile Organic Compounds (SVOCs)					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	-	-	-	-
2,4,5-Trichlorophenol	ug/L	-	-	-	-
2,4,6-Trichlorophenol	ug/L	-	-	-	-
2,4-Dichlorophenol	ug/L	-	-	-	-
2,4-Dimethylphenol	ug/L	-	-	-	-
2,4-Dinitrophenol	ug/L	-	-	-	-
2,4-Dinitrotoluene	ug/L	-	-	-	-
2,6-Dinitrotoluene	ug/L	-	-	-	-
2-Chloronaphthalene	ug/L	-	-	-	-
2-Chlorophenol	ug/L	-	-	-	-
2-Methylnaphthalene	ug/L	-	-	-	-
2-Methylphenol	ug/L	-	-	-	-
2-Nitroaniline	ug/L	-	-	-	-
2-Nitrophenol	ug/L	-	-	-	-
3&4-Methylphenol	ug/L	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	-	-	-	-
3-Nitroaniline	ug/L	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	-	-	-	-
4-Bromophenyl phenyl ether	ug/L	-	-	-	-
4-Chloro-3-methylphenol	ug/L	-	-	-	-
4-Chloroaniline	ug/L	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-
4-Nitroaniline	ug/L	-	-	-	-
4-Nitrophenol	ug/L	-	-	-	-
Acenaphthene	ug/L	-	-	-	-
Acenaphthylene	ug/L	-	-	-	-
Acetophenone	ug/L	-	-	-	-

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**EastPlantArea**	**MonitoringWell_RFIBoundary_WestPlantArea**	**MonitoringWell_RFIBoundary_WestPlantArea**	**P006**
Sample Location:		**MW-X227Y054**	**MW-X033Y147S**	**MW-X033Y147S**	**MW-X315Y115**
Sample Identification:		**GW-051619-EM-24**	**GW-051519-KH-15**	**GW-051519-KH-15~Split**	**GW-051419-EM-10**
Sample Date		**5/16/2019**	**5/15/2019**	**5/15/2019**	**5/14/2019**
Sample Type:				**Replicate**	
	Units				
Anthracene	ug/L	-	-	-	-
Atrazine	ug/L	-	-	-	-
Benzaldehyde	ug/L	-	-	-	-
Benzo(a)anthracene	ug/L	-	-	-	-
Benzo(a)pyrene	ug/L	-	-	-	-
Benzo(b)fluoranthene	ug/L	-	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	-	-
Biphenyl (1,1-Biphenyl)	ug/L	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L	-	-	-	-
bis(2-Chloroethyl)ether	ug/L	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	-	-	-	-
Butyl benzylphthalate (BBP)	ug/L	-	-	-	-
Caprolactam	ug/L	-	-	-	-
Carbazole	ug/L	-	-	-	-
Chrysene	ug/L	-	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-
Dibenzofuran	ug/L	-	-	-	-
Diethyl phthalate	ug/L	-	-	-	-
Dimethyl phthalate	ug/L	-	-	-	-
Di-n-butylphthalate (DBP)	ug/L	-	-	-	-
Di-n-octyl phthalate (DnOP)	ug/L	-	-	-	-
Fluoranthene	ug/L	-	-	-	-
Fluorene	ug/L	-	-	-	-
Hexachlorobenzene	ug/L	-	-	-	-
Hexachlorobutadiene	ug/L	-	-	-	-
Hexachlorocyclopentadiene	ug/L	-	-	-	-
Hexachloroethane	ug/L	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-
Isophorone	ug/L	-	-	-	-
Naphthalene	ug/L	-	-	-	-
Nitrobenzene	ug/L	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-
N-Nitrosodiphenylamine	ug/L	-	-	-	-
Pentachlorophenol	ug/L	-	-	-	-
Phenanthrene	ug/L	-	-	-	-
Phenol	ug/L	-	-	-	-
Pyrene	ug/L	-	-	-	-
General Chemistry					
Chloride	ug/L	-	-	-	-
Field Parameters					
Conductivity, field	mS/cm	2.155	2.212	-	0.571
Dissolved oxygen (DO), field	ug/L	1500	2640	-	3280
Oxidation reduction potential (ORP), field	millivolts	-121.5	-7.3	-	56.4
pH, field	s.u.	7.14	6.91	-	7.23
Temperature, sample	Deg C	15.11	15.64	-	14.03
Turbidity, field	NTU	6.41	6.94	-	9.99

Notes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**P006**	**P006**	**P015**	**P205**	**P209**
Sample Location:		**MW-X315Y150**	**MW-X315Y150**	**Tributary 3-3**	**MW-X277Y100**	**MW-X300Y199I-1**
Sample Identification:		**GW-051419-EM-06**	**GW-051419-EM-08**	**GW-051619-KH-19**	**GW-051619-EM-22**	**GW-051419-KH-05**
Sample Date		**5/14/2019**	**5/14/2019**	**5/16/2019**	**5/16/2019**	**5/14/2019**
Sample Type:			**Duplicate**			
	Units					
PCBs						
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	ug/L	-	-	-	1.0 UJ	-
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	1.0 U	-
1,1,2-Trichloroethane	ug/L	-	-	-	1.0 U	-
1,1-Dichloroethane	ug/L	-	-	-	1.0 U	-
1,1-Dichloroethene	ug/L	-	-	-	1.0 U	-
1,2,4-Trichlorobenzene	ug/L	-	-	-	1.0 U	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	-	-	2.0 U	-
1,2-Dibromoethane (Ethylene dibromide)	ug/L	-	-	-	1.0 U	-
1,2-Dichlorobenzene	ug/L	-	-	-	1.0 U	-
1,2-Dichloroethane	ug/L	-	-	-	1.0 U	-
1,2-Dichloropropane	ug/L	-	-	-	1.0 U	-
1,3-Dichlorobenzene	ug/L	-	-	-	1.0 U	-
1,4-Dichlorobenzene	ug/L	-	-	-	1.0 U	-
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	-	-	-	10 U	-
2-Chloroethyl vinyl ether	ug/L	-	-	-	-	-
2-Hexanone	ug/L	-	-	-	10 U	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	-	-	-	10 U	-
Acetone	ug/L	-	-	-	10 U	-
Benzene	ug/L	-	-	-	1.0 U	-
Bromodichloromethane	ug/L	-	-	-	1.0 U	-
Bromoform	ug/L	-	-	-	1.0 U	-
Bromomethane (Methyl bromide)	ug/L	-	-	-	1.0 U	-
Carbon disulfide	ug/L	-	-	-	1.0 U	-
Carbon tetrachloride	ug/L	-	-	-	1.0 UJ	-
Chlorobenzene	ug/L	-	-	-	1.0 U	-
Chloroethane	ug/L	-	-	-	1.0 U	-
Chloroform (Trichloromethane)	ug/L	-	-	-	1.0 U	-
Chloromethane (Methyl chloride)	ug/L	-	-	-	1.0 U	-
cis-1,2-Dichloroethene	ug/L	-	-	-	1.0 U	-
cis-1,3-Dichloropropene	ug/L	-	-	-	1.0 U	-
Cyclohexane	ug/L	-	-	-	1.0 U	-
Dibromochloromethane	ug/L	-	-	-	1.0 U	-
Dichlorodifluoromethane (CFC-12)	ug/L	-	-	-	1.0 UJ	-
Ethylbenzene	ug/L	-	-	-	1.0 U	-
Isopropyl benzene	ug/L	-	-	-	1.0 U	-
Methyl acetate	ug/L	-	-	-	10 U	-
Methyl cyclohexane	ug/L	-	-	-	1.0 U	-

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**P006**	**P006**	**P015**	**P205**	**P209**
Sample Location:		**MW-X315Y150**	**MW-X315Y150**	**Tributary 3-3**	**MW-X277Y100**	**MW-X300Y199I-1**
Sample Identification:		**GW-051419-EM-06**	**GW-051419-EM-08**	**GW-051619-KH-19**	**GW-051619-EM-22**	**GW-051419-KH-05**
Sample Date		**5/14/2019**	**5/14/2019**	**5/16/2019**	**5/16/2019**	**5/14/2019**
Sample Type:			**Duplicate**			
	Units					
Methyl tert butyl ether (MTBE)	ug/L	-	-	-	1.0 U	-
Methylene chloride	ug/L	-	-	-	5.0 U	-
Styrene	ug/L	-	-	-	1.0 U	-
Tetrachloroethene	ug/L	-	-	-	1.0 U	-
Toluene	ug/L	-	-	-	1.0 U	-
trans-1,2-Dichloroethene	ug/L	-	-	-	1.0 U	-
trans-1,3-Dichloropropene	ug/L	-	-	-	1.0 U	-
Trichloroethene	ug/L	-	-	-	1.0 U	-
Trichlorofluoromethane (CFC-11)	ug/L	-	-	-	1.0 UJ	-
Trifluorotrichloroethane (CFC-113)	ug/L	-	-	-	1.0 UJ	-
Vinyl chloride	ug/L	-	-	-	1.0 U	-
Xylenes (total)	ug/L	-	-	-	2.0 U	-
Semi-Volatile Organic Compounds (SVOCs)						
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	-	-	-	9.5 U	-
2,4,5-Trichlorophenol	ug/L	-	-	-	9.5 U	-
2,4,6-Trichlorophenol	ug/L	-	-	-	9.5 U	-
2,4-Dichlorophenol	ug/L	-	-	-	9.5 U	-
2,4-Dimethylphenol	ug/L	-	-	-	9.5 U	-
2,4-Dinitrophenol	ug/L	-	-	-	R	-
2,4-Dinitrotoluene	ug/L	-	-	-	9.5 U	-
2,6-Dinitrotoluene	ug/L	-	-	-	9.5 U	-
2-Chloronaphthalene	ug/L	-	-	-	9.5 U	-
2-Chlorophenol	ug/L	-	-	-	9.5 U	-
2-Methylnaphthalene	ug/L	-	-	-	9.5 U	-
2-Methylphenol	ug/L	-	-	-	9.5 U	-
2-Nitroaniline	ug/L	-	-	-	48 U	-
2-Nitrophenol	ug/L	-	-	-	9.5 U	-
3&4-Methylphenol	ug/L	-	-	-	9.5 U	-
3,3'-Dichlorobenzidine	ug/L	-	-	-	48 U	-
3-Nitroaniline	ug/L	-	-	-	48 U	-
4,6-Dinitro-2-methylphenol	ug/L	-	-	-	48 U	-
4-Bromophenyl phenyl ether	ug/L	-	-	-	9.5 U	-
4-Chloro-3-methylphenol	ug/L	-	-	-	9.5 U	-
4-Chloroaniline	ug/L	-	-	-	9.5 U	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	9.5 U	-
4-Nitroaniline	ug/L	-	-	-	48 U	-
4-Nitrophenol	ug/L	-	-	-	48 U	-
Acenaphthene	ug/L	-	-	-	9.5 U	-
Acenaphthylene	ug/L	-	-	-	9.5 U	-
Acetophenone	ug/L	-	-	-	9.5 U	-

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**P006**	**P006**	**P015**	**P205**	**P209**
Sample Location:		**MW-X315Y150**	**MW-X315Y150**	**Tributary 3-3**	**MW-X277Y100**	**MW-X300Y199I-1**
Sample Identification:		**GW-051419-EM-06**	**GW-051419-EM-08**	**GW-051619-KH-19**	**GW-051619-EM-22**	**GW-051419-KH-05**
Sample Date		**5/14/2019**	**5/14/2019**	**5/16/2019**	**5/16/2019**	**5/14/2019**
Sample Type:			**Duplicate**			
	Units					
Anthracene	ug/L	-	-	-	9.5 U	-
Atrazine	ug/L	-	-	-	9.5 U	-
Benzaldehyde	ug/L	-	-	-	9.5 U	-
Benzo(a)anthracene	ug/L	-	-	-	9.5 U	-
Benzo(a)pyrene	ug/L	-	-	-	9.5 U	-
Benzo(b)fluoranthene	ug/L	-	-	-	9.5 U	-
Benzo(g,h,i)perylene	ug/L	-	-	-	9.5 U	-
Benzo(k)fluoranthene	ug/L	-	-	-	9.5 U	-
Biphenyl (1,1-Biphenyl)	ug/L	-	-	-	9.5 U	-
bis(2-Chloroethoxy)methane	ug/L	-	-	-	9.5 U	-
bis(2-Chloroethyl)ether	ug/L	-	-	-	9.5 U	-
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	-	-	-	9.5 U	-
Butyl benzylphthalate (BBP)	ug/L	-	-	-	9.5 U	-
Caprolactam	ug/L	-	-	-	R	-
Carbazole	ug/L	-	-	-	9.5 U	-
Chrysene	ug/L	-	-	-	9.5 U	-
Dibenz(a,h)anthracene	ug/L	-	-	-	9.5 U	-
Dibenzofuran	ug/L	-	-	-	9.5 U	-
Diethyl phthalate	ug/L	-	-	-	9.5 U	-
Dimethyl phthalate	ug/L	-	-	-	9.5 U	-
Di-n-butylphthalate (DBP)	ug/L	-	-	-	9.5 U	-
Di-n-octyl phthalate (DnOP)	ug/L	-	-	-	9.5 U	-
Fluoranthene	ug/L	-	-	-	9.5 U	-
Fluorene	ug/L	-	-	-	9.5 U	-
Hexachlorobenzene	ug/L	-	-	-	9.5 U	-
Hexachlorobutadiene	ug/L	-	-	-	9.5 U	-
Hexachlorocyclopentadiene	ug/L	-	-	-	48 U	-
Hexachloroethane	ug/L	-	-	-	9.5 U	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	9.5 U	-
Isophorone	ug/L	-	-	-	9.5 U	-
Naphthalene	ug/L	-	-	-	9.5 U	-
Nitrobenzene	ug/L	-	-	-	9.5 U	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	9.5 U	-
N-Nitrosodiphenylamine	ug/L	-	-	-	9.5 U	-
Pentachlorophenol	ug/L	-	-	-	9.5 U	-
Phenanthrene	ug/L	-	-	-	9.5 U	-
Phenol	ug/L	-	-	-	9.5 U	-
Pyrene	ug/L	-	-	-	9.5 U	-
General Chemistry						
Chloride	ug/L	-	-	-	-	-
Field Parameters						
Conductivity, field	mS/cm	0.412	-	0.517	1.454	0.63
Dissolved oxygen (DO), field	ug/L	1560	-	4990	1840	3200
Oxidation reduction potential (ORP), field	millivolts	5.2	-	106.9	67.3	-14.5
pH, field	s.u.	7.16	-	8.05	6.77	7.48
Temperature, sample	Deg C	15.2	-	17.54	14.37	14.58
Turbidity, field	NTU	34.7	-	1.7	11.04	1.41

Notes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**P209**	**P216GM_P216_east**	**Plant_property**	**Plant_property**	**Plant_property**	**RFIBoundary_P216West**
Sample Location:		**MW-X300Y199I-2**	**MW-X297Y305D-2**	**MW-X043Y176**	**MW-X047Y236**	**MW-X047Y236**	**MW-X261Y356D-3**
Sample Identification:		**GW-051419-KH-07**	**GW-051519-KH-17**	**GW-051619-KH-23**	**GW-051619-KH-25**	**GW-051619-KH-27**	**GW-051419-KH-09**
Sample Date		**5/14/2019**	**5/15/2019**	**5/16/2019**	**5/16/2019**	**5/16/2019**	**5/14/2019**
Sample Type:						**Duplicate**	
	Units						
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
Aroclor-1221 (PCB-1221)	ug/L	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
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	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
Aroclor-1254 (PCB-1254)	ug/L	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
Total PCBs	ug/L	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)							
1,1,1-Trichloroethane	ug/L	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	-	-	-	-	-	-
1,1-Dichloroethene	ug/L	-	-	-	-	-	-
1,2,4-Trichlorobenzene	ug/L	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	ug/L	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	-	-	-	-	-	-
1,2-Dichloroethane	ug/L	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	-	-	-	-	-	-
2-Chloroethyl vinyl ether	ug/L	-	-	-	-	-	-
2-Hexanone	ug/L	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	-	-	-	-	-	-
Acetone	ug/L	-	-	-	-	-	-
Benzene	ug/L	-	-	-	-	-	-
Bromodichloromethane	ug/L	-	-	-	-	-	-
Bromoform	ug/L	-	-	-	-	-	-
Bromomethane (Methyl bromide)	ug/L	-	-	-	-	-	-
Carbon disulfide	ug/L	-	-	-	-	-	-
Carbon tetrachloride	ug/L	-	-	-	-	-	-
Chlorobenzene	ug/L	-	-	-	-	-	-
Chloroethane	ug/L	-	-	-	-	-	-
Chloroform (Trichloromethane)	ug/L	-	-	-	-	-	-
Chloromethane (Methyl chloride)	ug/L	-	-	-	-	-	-
cis-1,2-Dichloroethene	ug/L	-	-	-	-	-	-
cis-1,3-Dichloropropene	ug/L	-	-	-	-	-	-
Cyclohexane	ug/L	-	-	-	-	-	-
Dibromochloromethane	ug/L	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	ug/L	-	-	-	-	-	-
Ethylbenzene	ug/L	-	-	-	-	-	-
Isopropyl benzene	ug/L	-	-	-	-	-	-
Methyl acetate	ug/L	-	-	-	-	-	-
Methyl cyclohexane	ug/L	-	-	-	-	-	-

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**P209**	**P216GM_P216_east**	**Plant_property**	**Plant_property**	**Plant_property**	**RFIBoundary_P216West**
Sample Location:		**MW-X300Y199I-2**	**MW-X297Y305D-2**	**MW-X043Y176**	**MW-X047Y236**	**MW-X047Y236**	**MW-X261Y356D-3**
Sample Identification:		**GW-051419-KH-07**	**GW-051519-KH-17**	**GW-051619-KH-23**	**GW-051619-KH-25**	**GW-051619-KH-27**	**GW-051419-KH-09**
Sample Date		**5/14/2019**	**5/15/2019**	**5/16/2019**	**5/16/2019**	**5/16/2019**	**5/14/2019**
Sample Type:						**Duplicate**	
	Units						
Methyl tert butyl ether (MTBE)	ug/L	-	-	-	-	-	-
Methylene chloride	ug/L	-	-	-	-	-	-
Styrene	ug/L	-	-	-	-	-	-
Tetrachloroethene	ug/L	-	-	-	-	-	-
Toluene	ug/L	-	-	-	-	-	-
trans-1,2-Dichloroethene	ug/L	-	-	-	-	-	-
trans-1,3-Dichloropropene	ug/L	-	-	-	-	-	-
Trichloroethene	ug/L	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	ug/L	-	-	-	-	-	-
Trifluorotrichloroethane (CFC-113)	ug/L	-	-	-	-	-	-
Vinyl chloride	ug/L	-	-	-	-	-	-
Xylenes (total)	ug/L	-	-	-	-	-	-
Semi-Volatile Organic Compounds (SVOCs)							
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	-	-	-	-	-	-
2,4,6-Trichlorophenol	ug/L	-	-	-	-	-	-
2,4-Dichlorophenol	ug/L	-	-	-	-	-	-
2,4-Dimethylphenol	ug/L	-	-	-	-	-	-
2,4-Dinitrophenol	ug/L	-	-	-	-	-	-
2,4-Dinitrotoluene	ug/L	-	-	-	-	-	-
2,6-Dinitrotoluene	ug/L	-	-	-	-	-	-
2-Chloronaphthalene	ug/L	-	-	-	-	-	-
2-Chlorophenol	ug/L	-	-	-	-	-	-
2-Methylnaphthalene	ug/L	-	-	-	-	-	-
2-Methylphenol	ug/L	-	-	-	-	-	-
2-Nitroaniline	ug/L	-	-	-	-	-	-
2-Nitrophenol	ug/L	-	-	-	-	-	-
3&4-Methylphenol	ug/L	-	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	-	-	-	-	-	-
3-Nitroaniline	ug/L	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	ug/L	-	-	-	-	-	-
4-Bromophenyl phenyl ether	ug/L	-	-	-	-	-	-
4-Chloro-3-methylphenol	ug/L	-	-	-	-	-	-
4-Chloroaniline	ug/L	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	ug/L	-	-	-	-	-	-
4-Nitroaniline	ug/L	-	-	-	-	-	-
4-Nitrophenol	ug/L	-	-	-	-	-	-
Acenaphthene	ug/L	-	-	-	-	-	-
Acenaphthylene	ug/L	-	-	-	-	-	-
Acetophenone	ug/L	-	-	-	-	-	-

Table 3.1

Summary of Total PCBs Analytical Results for EI CA750 2019 1st Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Sample Area:		**P209**	**P216GM_P216_east**	**Plant_property**	**Plant_property**	**Plant_property**	**RFIBoundary_P216West**
Sample Location:		**MW-X300Y199I-2**	**MW-X297Y305D-2**	**MW-X043Y176**	**MW-X047Y236**	**MW-X047Y236**	**MW-X261Y356D-3**
Sample Identification:		**GW-051419-KH-07**	**GW-051519-KH-17**	**GW-051619-KH-23**	**GW-051619-KH-25**	**GW-051619-KH-27**	**GW-051419-KH-09**
Sample Date		**5/14/2019**	**5/15/2019**	**5/16/2019**	**5/16/2019**	**5/16/2019**	**5/14/2019**
Sample Type:						**Duplicate**	
	Units						
Anthracene	ug/L	-	-	-	-	-	-
Atrazine	ug/L	-	-	-	-	-	-
Benzaldehyde	ug/L	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	-	-	-	-	-	-
Benzo(a)pyrene	ug/L	-	-	-	-	-	-
Benzo(b)fluoranthene	ug/L	-	-	-	-	-	-
Benzo(g,h,i)perylene	ug/L	-	-	-	-	-	-
Benzo(k)fluoranthene	ug/L	-	-	-	-	-	-
Biphenyl (1,1-Biphenyl)	ug/L	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	ug/L	-	-	-	-	-	-
bis(2-Chloroethyl)ether	ug/L	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	-	-	-	-	-	-
Butyl benzylphthalate (BBP)	ug/L	-	-	-	-	-	-
Caprolactam	ug/L	-	-	-	-	-	-
Carbazole	ug/L	-	-	-	-	-	-
Chrysene	ug/L	-	-	-	-	-	-
Dibenz(a,h)anthracene	ug/L	-	-	-	-	-	-
Dibenzofuran	ug/L	-	-	-	-	-	-
Diethyl phthalate	ug/L	-	-	-	-	-	-
Dimethyl phthalate	ug/L	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	ug/L	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	ug/L	-	-	-	-	-	-
Fluoranthene	ug/L	-	-	-	-	-	-
Fluorene	ug/L	-	-	-	-	-	-
Hexachlorobenzene	ug/L	-	-	-	-	-	-
Hexachlorobutadiene	ug/L	-	-	-	-	-	-
Hexachlorocyclopentadiene	ug/L	-	-	-	-	-	-
Hexachloroethane	ug/L	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	-	-
Isophorone	ug/L	-	-	-	-	-	-
Naphthalene	ug/L	-	-	-	-	-	-
Nitrobenzene	ug/L	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	ug/L	-	-	-	-	-	-
N-Nitrosodiphenylamine	ug/L	-	-	-	-	-	-
Pentachlorophenol	ug/L	-	-	-	-	-	-
Phenanthrene	ug/L	-	-	-	-	-	-
Phenol	ug/L	-	-	-	-	-	-
Pyrene	ug/L	-	-	-	-	-	-
General Chemistry							
Chloride	ug/L	-	-	-	-	-	-
Field Parameters							
Conductivity, field	mS/cm	0.677	0.886	1.885	0.824	-	0.72
Dissolved oxygen (DO), field	ug/L	2650	1980	1920	1470	-	1860
Oxidation reduction potential (ORP), field	millivolts	-22.8	-4.7	-162.5	23.2	-	-3.2
pH, field	s.u.	7.46	7.13	7.74	7.51	-	7.26
Temperature, sample	Deg C	15.3	14.55	13.84	15.37	-	15.13
Turbidity, field	NTU	6.77	1.65	12.2	2.96	-	0.69

Notes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table 3.2

Summary of Total PCBs Analytical Results for EI CA750 2019 2nd Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Area		EastPlantArea	EastPlantArea	A007_EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	MonitoringWell_RFIBoundary_WestPlantArea	MonitoringWell_RFIBoundary_WestPlantArea	Plant_property	Plant_property	Plant_property
Sample Location:		**9-4**	**9-4**	**CH-20**	**CH-42**	**CH-42A**	**CH-43**	**CH-44**	**MW-X033Y147S**	**MW-X033Y147S**	**MW-X043Y176**	**MW-X047Y236**	**MW-X047Y236**
Sample Identification:		**GW-111919-EM-04**	**GW-111919-EM-06**	**GW-112019-DS-14**	**GW-111819-KH-01**	**GW-111819-KH-03**	**GW-111819-EM-02**	**GW-111919-EM-08**	**GW-112119-KH-25**	**GW-112119-KH-25~Split**	**GW-112019-DS-16**	**GW-112019-KH-17**	**GW-112019-KH-19**
Sample Date:		**11/19/2019**	**11/19/2019**	**11/20/2019**	**11/18/2019**	**11/18/2019**	**11/18/2019**	**11/19/2019**	**11/21/2019**	**11/21/2019**	**11/20/2019**	**11/20/2019**	**11/20/2019**
Sample Type:			**Duplicate**							**Replicate**			**Duplicate**
	Units												
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	0.20 U	0.19 U	0.095 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	0.20 U	0.19 U	0.095 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	0.20 U	0.19 U	0.095 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	0.20 U	0.19 U	0.095 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	0.20 U	0.19 U	0.095 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	0.20 U	0.19 U	0.095 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	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.095 U	0.19 U	0.19 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	ug/L	10 U	10 U	10 U	--	--	--	--	--	--	--	--	--
2-Hexanone	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	ug/L	1.0 U	1.0 U	0.13 J	--	--	--	--	--	--	--	--	--
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Carbon disulfide	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Chlorobenzene	ug/L	1.0 U	1.0 U	0.35 J	--	--	--	--	--	--	--	--	--
Chloroethane	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Cyclohexane	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Isopropyl benzene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Methyl cyclohexane	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	ug/L	5.0 U	5.0 U	5.0 U	--	--	--	--	--	--	--	--	--
Styrene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Toluene	ug/L	1.0 U	1.0 U	0.19 J	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Trichloroethene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Trifluorotrichloroethane (CFC-113)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--
Xylenes (total)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--

Table 3.2

Summary of Total PCBs Analytical Results for EI CA750 2019 2nd Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Area		EastPlantArea	EastPlantArea	A007_EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	MonitoringWell_RFIBoundary_WestPlantArea	MonitoringWell_RFIBoundary_WestPlantArea	Plant_property	Plant_property	Plant_property
Sample Location:		**9-4**	**9-4**	**CH-20**	**CH-42**	**CH-42A**	**CH-43**	**CH-44**	**MW-X033Y147S**	**MW-X033Y147S**	**MW-X043Y176**	**MW-X047Y236**	**MW-X047Y236**
Sample Identification:		**GW-111919-EM-04**	**GW-111919-EM-06**	**GW-112019-DS-14**	**GW-111819-KH-01**	**GW-111819-KH-03**	**GW-111819-EM-02**	**GW-111919-EM-08**	**GW-112119-KH-25**	**GW-112119-KH-25~Split**	**GW-112019-DS-16**	**GW-112019-KH-17**	**GW-112019-KH-19**
Sample Date:		**11/19/2019**	**11/19/2019**	**11/20/2019**	**11/18/2019**	**11/18/2019**	**11/18/2019**	**11/19/2019**	**11/21/2019**	**11/21/2019**	**11/20/2019**	**11/20/2019**	**11/20/2019**
Sample Type:			**Duplicate**							**Replicate**			**Duplicate**
	Units												
2-Chloronaphthalene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
3&4-Methylphenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Atrazine	ug/L	--	--	--	--	--	--	--	--	--	--	--	--

Table 3.2

Summary of Total PCBs Analytical Results for EI CA750 2019 2nd Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Area		EastPlantArea	EastPlantArea	A007_EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	MonitoringWell_RFIBoundary_WestPlantArea	MonitoringWell_RFIBoundary_WestPlantArea	Plant_property	Plant_property	Plant_property
Sample Location:		**9-4**	**9-4**	**CH-20**	**CH-42**	**CH-42A**	**CH-43**	**CH-44**	**MW-X033Y147S**	**MW-X033Y147S**	**MW-X043Y176**	**MW-X047Y236**	**MW-X047Y236**
Sample Identification:		**GW-111919-EM-04**	**GW-111919-EM-06**	**GW-112019-DS-14**	**GW-111819-KH-01**	**GW-111819-KH-03**	**GW-111819-EM-02**	**GW-111919-EM-08**	**GW-112119-KH-25**	**GW-112119-KH-25~Split**	**GW-112019-DS-16**	**GW-112019-KH-17**	**GW-112019-KH-19**
Sample Date:		**11/19/2019**	**11/19/2019**	**11/20/2019**	**11/18/2019**	**11/18/2019**	**11/18/2019**	**11/19/2019**	**11/21/2019**	**11/21/2019**	**11/20/2019**	**11/20/2019**	**11/20/2019**
Sample Type:			**Duplicate**							**Replicate**			**Duplicate**
	Units												
Benzaldehyde	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
General Chemistry													
Chloride	ug/L	--	--	--	--	--	--	--	--	--	--	--	--
Field Parameters													
Conductivity, field	mS/cm	790	790	1144	0.699	0.496	906	1083	1.906	--	1796	0.626	0.626
Dissolved oxygen (DO), field	ug/L	2360	2360	840	--	--	4510	3800	560	--	2960	1600	1600
Flow rate	gal/min	0.427	0.427	0.493	0.684	0.712	0.691	0.497	0.67	--	0.108	0.585	0.585
Oxidation reduction potential (ORP), field	millivolts	133.6	133.6	-187.4	31.2	22	-42	-66.5	157.6	--	-75.5	157	157
pH, field	s.u.	7.38	7.38	13.73	8.94	9.12	6.99	7.03	6.8	--	6.97	7.27	7.27
Temperature, sample	Deg C	13.33	13.33	13.72	12.78	12.66	12.27	11.41	14.95	--	12.87	11.43	11.43
Turbidity, field	NTU	1.09	1.09	2.58	0.87	1.72	5.81	1.72	3.2	--	5	4.3	4.3

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
R - Rejected.

Table 3.2

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East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Area		A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001	A001	A001	A001MonitoringWell_WestPlantArea	EastPlantArea	RFIBoundary_P216West	P205
Sample Location:		**MW-X085Y070S-1**	**MW-X085Y070S-1**	**MW-X085Y070S-2**	**MW-X085Y070S-2**	**MW-X146Y084**	**MW-X165Y068**	**MW-X165Y068**	**MW-X169Y058S-1**	**MW-X227Y054**	**MW-X261Y356D-3**	**MW-X277Y100**
Sample Identification:		**GW-112119-KH-18**	**GW-112119-KH-18~Split**	**GW-112119-KH-20**	**GW-112119-KH-20~Split**	**GW-112119-KH-23**	**GW-112119-DS-22**	**GW-112119-DS-26**	**GW-112119-KH-24**	**GW-112019-KH-15**	**GW-111919-KH-05**	**GW-111919-EM-10**
Sample Date:		**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/20/2019**	**11/19/2019**	**11/19/2019**
Sample Type:			**Replicate**		**Replicate**			**Duplicate**				
	Units											
PCBs												
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.53 U	0.19 U	0.099 U	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.53 U	0.19 U	0.099 U	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.53 U	0.19 U	0.099 U	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	0.69	0.53 U	0.19 U	0.099 U	0.20 U	0.19 U	0.19 U	0.20 U	12	0.19 U	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.53 U	0.19 U	0.099 U	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.53 U	0.19 U	0.099 U	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.53 U	0.19 U	0.099 U	0.20 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.20 U
Total PCBs	ug/L	0.69	ND	ND	ND	ND	ND	ND	ND	12	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.20 U	0.099 U	0.19 U	0.098 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.20 U	0.099 U	0.19 U	0.098 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.20 U	0.099 U	0.19 U	0.098 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.20 U	0.099 U	0.19 U	0.098 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.20 U	0.099 U	0.19 U	0.098 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.20 U	0.099 U	0.19 U	0.098 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.20 U	0.099 U	0.19 U	0.098 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
1,1,2-Trichloroethane	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
1,1-Dichloroethane	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
1,1-Dichloroethene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
1,2,4-Trichlorobenzene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	--	--	--	--	--	--	--	--	--	--	2.0 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
1,2-Dichlorobenzene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
1,2-Dichloroethane	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
1,2-Dichloropropane	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
1,3-Dichlorobenzene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
1,4-Dichlorobenzene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	--	--	--	--	--	--	--	--	--	--	10 U
2-Chloroethyl vinyl ether	ug/L	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	ug/L	--	--	--	--	--	--	--	--	--	--	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	--	--	--	--	--	--	--	--	--	--	10 U
Acetone	ug/L	--	--	--	--	--	--	--	--	--	--	10 U
Benzene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Bromodichloromethane	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Bromoform	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Bromomethane (Methyl bromide)	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Carbon disulfide	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Carbon tetrachloride	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Chlorobenzene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Chloroethane	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Chloroform (Trichloromethane)	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Chloromethane (Methyl chloride)	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
cis-1,2-Dichloroethene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
cis-1,3-Dichloropropene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Cyclohexane	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Dibromochloromethane	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Ethylbenzene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Isopropyl benzene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Methyl acetate	ug/L	--	--	--	--	--	--	--	--	--	--	10 U
Methyl cyclohexane	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Methyl tert butyl ether (MTBE)	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Methylene chloride	ug/L	--	--	--	--	--	--	--	--	--	--	5.0 U
Styrene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Tetrachloroethene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Toluene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
trans-1,2-Dichloroethene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
trans-1,3-Dichloropropene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Trichloroethene	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	--	--	--	--	--	--	--	--	--	--	1.0 U
Vinyl chloride	ug/L	--	--	--	--	1.0 U	1.0 U	1.0 U	2.0	--	--	1.0 U
Xylenes (total)	ug/L	--	--	--	--	--	--	--	--	--	--	2.0 U
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
2,4,5-Trichlorophenol	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
2,4,6-Trichlorophenol	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
2,4-Dichlorophenol	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
2,4-Dimethylphenol	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
2,4-Dinitrophenol	ug/L	--	--	--	--	--	--	--	--	--	--	48 U
2,4-Dinitrotoluene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
2,6-Dinitrotoluene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U

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Area		A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001	A001	A001	A001MonitoringWell_WestPlantArea	EastPlantArea	RFIBoundary_P216West	P205
Sample Location:		**MW-X085Y070S-1**	**MW-X085Y070S-1**	**MW-X085Y070S-2**	**MW-X085Y070S-2**	**MW-X146Y084**	**MW-X165Y068**	**MW-X165Y068**	**MW-X169Y058S-1**	**MW-X227Y054**	**MW-X261Y356D-3**	**MW-X277Y100**
Sample Identification:		**GW-112119-KH-18**	**GW-112119-KH-18~Split**	**GW-112119-KH-20**	**GW-112119-KH-20~Split**	**GW-112119-KH-23**	**GW-112119-DS-22**	**GW-112119-DS-26**	**GW-112119-KH-24**	**GW-112019-KH-15**	**GW-111919-KH-05**	**GW-111919-EM-10**
Sample Date:		**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/20/2019**	**11/19/2019**	**11/19/2019**
Sample Type:			**Replicate**		**Replicate**			**Duplicate**				
	Units											
2-Chloronaphthalene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
2-Chlorophenol	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
2-Methylnaphthalene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
2-Methylphenol	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
2-Nitroaniline	ug/L	--	--	--	--	--	--	--	--	--	--	48 U
2-Nitrophenol	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
3&4-Methylphenol	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
3,3'-Dichlorobenzidine	ug/L	--	--	--	--	--	--	--	--	--	--	48 U
3-Nitroaniline	ug/L	--	--	--	--	--	--	--	--	--	--	48 U
4,6-Dinitro-2-methylphenol	ug/L	--	--	--	--	--	--	--	--	--	--	48 U
4-Bromophenyl phenyl ether	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
4-Chloro-3-methylphenol	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
4-Chloroaniline	ug/L	--	--	--	--	--	--	--	--	--	--	R
4-Chlorophenyl phenyl ether	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
4-Nitroaniline	ug/L	--	--	--	--	--	--	--	--	--	--	48 U
4-Nitrophenol	ug/L	--	--	--	--	--	--	--	--	--	--	48 U
Acenaphthene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Acenaphthylene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Acetophenone	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Anthracene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Atrazine	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U

Table 3.2

Summary of Total PCBs Analytical Results for EI CA750 2019 2nd Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Area		A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001	A001	A001	A001MonitoringWell_WestPlantArea	EastPlantArea	RFIBoundary_P216West	P205
Sample Location:		**MW-X085Y070S-1**	**MW-X085Y070S-1**	**MW-X085Y070S-2**	**MW-X085Y070S-2**	**MW-X146Y084**	**MW-X165Y068**	**MW-X165Y068**	**MW-X169Y058S-1**	**MW-X227Y054**	**MW-X261Y356D-3**	**MW-X277Y100**
Sample Identification:		**GW-112119-KH-18**	**GW-112119-KH-18~Split**	**GW-112119-KH-20**	**GW-112119-KH-20~Split**	**GW-112119-KH-23**	**GW-112119-DS-22**	**GW-112119-DS-26**	**GW-112119-KH-24**	**GW-112019-KH-15**	**GW-111919-KH-05**	**GW-111919-EM-10**
Sample Date:		**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/21/2019**	**11/20/2019**	**11/19/2019**	**11/19/2019**
Sample Type:			**Replicate**		**Replicate**			**Duplicate**				
	Units											
Benzaldehyde	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Benzo(a)anthracene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Benzo(a)pyrene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Benzo(b)fluoranthene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Benzo(g,h,i)perylene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Benzo(k)fluoranthene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Biphenyl (1,1-Biphenyl)	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
bis(2-Chloroethoxy)methane	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
bis(2-Chloroethyl)ether	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Butyl benzylphthalate (BBP)	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Caprolactam	ug/L	--	--	--	--	--	--	--	--	--	--	R
Carbazole	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Chrysene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Dibenz(a,h)anthracene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Dibenzofuran	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Diethyl phthalate	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Dimethyl phthalate	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Di-n-butylphthalate (DBP)	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Di-n-octyl phthalate (DnOP)	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Fluoranthene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Fluorene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Hexachlorobenzene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Hexachlorobutadiene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Hexachlorocyclopentadiene	ug/L	--	--	--	--	--	--	--	--	--	--	48 U
Hexachloroethane	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Indeno(1,2,3-cd)pyrene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Isophorone	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Naphthalene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Nitrobenzene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
N-Nitrosodi-n-propylamine	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
N-Nitrosodiphenylamine	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Pentachlorophenol	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Phenanthrene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Phenol	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
Pyrene	ug/L	--	--	--	--	--	--	--	--	--	--	9.6 U
General Chemistry												
Chloride	ug/L	--	--	--	--	2200000	370000	360000	--	--	--	--
Field Parameters												
Conductivity, field	mS/cm	7.432	--	12.23	--	5.339	2.669	2.669	2.132	1.14	0.686	1.235
Dissolved oxygen (DO), field	ug/L	1490	--	480	--	1060	3310	3310	7750	580	3890	3340
Flow rate	gal/min	0.427	--	0.465	--	0.497	0.658	0.658	0.625	0.497	0.431	0.649
Oxidation reduction potential (ORP), field	millivolts	-226.2	--	-112.4	--	154.2	-184.1	-184.1	156	140.5	137	-48.5
pH, field	s.u.	7.84	--	6.94	--	7.47	8.06	8.06	7.66	7.5	7.21	7.08
Temperature, sample	Deg C	16.07	--	16.44	--	13.59	13.49	13.49	13.8	13.3	12.29	13.11
Turbidity, field	NTU	18.42	--	2.84	--	35.9	11.77	11.77	1.7	10.1	0.8	7.11

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
R - Rejected.

Table 3.2

Summary of Total PCBs Analytical Results for EI CA750 2019 2nd Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Area		P216GM_P216_east	P209	P209	P006	P006	A001	P015
Sample Location:		MW-X297Y305D-2	MW-X300Y199I-1	MW-X300Y199I-2	MW-X315Y115	MW-X315Y150	ST-59	Tributary 3-3
Sample Identification:		GW-111919-KH-07	GW-111919-KH-09	GW-111919-KH-11	GW-112019-DS-12	GW-112019-KH-13	GW-112019-KH-21	SW-112119-EM-27
Sample Date:		11/19/2019	11/19/2019	11/19/2019	11/20/2019	11/20/2019	11/20/2019	11/21/2019
Sample Type:								
	Units							
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	0.20 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	0.20 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	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 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	0.20 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	0.20 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	0.20 U
Total PCBs	ug/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	ug/L	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	ug/L	--	--	--	--	--	--	--
1,1,2-Trichloroethane	ug/L	--	--	--	--	--	--	--
1,1-Dichloroethane	ug/L	--	--	--	--	--	--	--
1,1-Dichloroethene	ug/L	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	ug/L	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	--	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	ug/L	--	--	--	--	--	--	--
1,2-Dichlorobenzene	ug/L	--	--	--	--	--	--	--
1,2-Dichloroethane	ug/L	--	--	--	--	--	--	--
1,2-Dichloropropane	ug/L	--	--	--	--	--	--	--
1,3-Dichlorobenzene	ug/L	--	--	--	--	--	--	--
1,4-Dichlorobenzene	ug/L	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	ug/L	--	--	--	--	--	--	--
2-Hexanone	ug/L	--	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	--	--	--	--	--	--	--
Acetone	ug/L	--	--	--	--	--	--	--
Benzene	ug/L	--	--	--	--	--	--	--
Bromodichloromethane	ug/L	--	--	--	--	--	--	--
Bromoform	ug/L	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	ug/L	--	--	--	--	--	--	--
Carbon disulfide	ug/L	--	--	--	--	--	--	--
Carbon tetrachloride	ug/L	--	--	--	--	--	--	--
Chlorobenzene	ug/L	--	--	--	--	--	--	--
Chloroethane	ug/L	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	ug/L	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	ug/L	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	ug/L	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	ug/L	--	--	--	--	--	--	--
Cyclohexane	ug/L	--	--	--	--	--	--	--
Dibromochloromethane	ug/L	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	ug/L	--	--	--	--	--	--	--
Ethylbenzene	ug/L	--	--	--	--	--	--	--
Isopropyl benzene	ug/L	--	--	--	--	--	--	--
Methyl acetate	ug/L	--	--	--	--	--	--	--
Methyl cyclohexane	ug/L	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	ug/L	--	--	--	--	--	--	--
Methylene chloride	ug/L	--	--	--	--	--	--	--
Styrene	ug/L	--	--	--	--	--	--	--
Tetrachloroethene	ug/L	--	--	--	--	--	--	--
Toluene	ug/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	ug/L	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	ug/L	--	--	--	--	--	--	--
Trichloroethene	ug/L	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	ug/L	--	--	--	--	--	--	--
Trifluorotrichloroethane (CFC-113)	ug/L	--	--	--	--	--	--	--
Vinyl chloride	ug/L	--	--	--	--	--	--	--
Xylenes (total)	ug/L	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs)								
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	--	--	--	--	--	--	--
2,4-Dichlorophenol	ug/L	--	--	--	--	--	--	--
2,4-Dimethylphenol	ug/L	--	--	--	--	--	--	--
2,4-Dinitrophenol	ug/L	--	--	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	--	--	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	--	--	--	--	--	--	--

Table 3.2

Summary of Total PCBs Analytical Results for EI CA750 2019 2nd Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Area		P216GM_P216_east	P209	P209	P006	P006	A001	P015
Sample Location:		MW-X297Y305D-2	MW-X300Y199I-1	MW-X300Y199I-2	MW-X315Y115	MW-X315Y150	ST-59	Tributary 3-3
Sample Identification:		GW-111919-KH-07	GW-111919-KH-09	GW-111919-KH-11	GW-112019-DS-12	GW-112019-KH-13	GW-112019-KH-21	SW-112119-EM-27
Sample Date:		11/19/2019	11/19/2019	11/19/2019	11/20/2019	11/20/2019	11/20/2019	11/21/2019
Sample Type:								
	Units							
2-Chloronaphthalene	ug/L	--	--	--	--	--	--	--
2-Chlorophenol	ug/L	--	--	--	--	--	--	--
2-Methylnaphthalene	ug/L	--	--	--	--	--	--	--
2-Methylphenol	ug/L	--	--	--	--	--	--	--
2-Nitroaniline	ug/L	--	--	--	--	--	--	--
2-Nitrophenol	ug/L	--	--	--	--	--	--	--
3&4-Methylphenol	ug/L	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	--	--	--	--	--	--	--
3-Nitroaniline	ug/L	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	--	--	--	--	--	--	--
4-Chloroaniline	ug/L	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	--	--	--	--	--	--	--
4-Nitroaniline	ug/L	--	--	--	--	--	--	--
4-Nitrophenol	ug/L	--	--	--	--	--	--	--
Acenaphthene	ug/L	--	--	--	--	--	--	--
Acenaphthylene	ug/L	--	--	--	--	--	--	--
Acetophenone	ug/L	--	--	--	--	--	--	--
Anthracene	ug/L	--	--	--	--	--	--	--
Atrazine	ug/L	--	--	--	--	--	--	--

Table 3.2

Summary of Total PCBs Analytical Results for EI CA750 2019 2nd Semi-Annual GW Samples
East Plant Area TSCA Vault Annual Report, Calendar Year 2019
GM CET Bedford Facility
Bedford, Indiana

Area		P216GM_P216_east	P209	P209	P006	P006	A001	P015
Sample Location:		MW-X297Y305D-2	MW-X300Y199I-1	MW-X300Y199I-2	MW-X315Y115	MW-X315Y150	ST-59	Tributary 3-3
Sample Identification:		GW-111919-KH-07	GW-111919-KH-09	GW-111919-KH-11	GW-112019-DS-12	GW-112019-KH-13	GW-112019-KH-21	SW-112119-EM-27
Sample Date:		11/19/2019	11/19/2019	11/19/2019	11/20/2019	11/20/2019	11/20/2019	11/21/2019
Sample Type:								
	Units							
Benzaldehyde	ug/L	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/L	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/L	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/L	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/L	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/L	--	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	ug/L	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	ug/L	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	ug/L	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	ug/L	--	--	--	--	--	--	--
Caprolactam	ug/L	--	--	--	--	--	--	--
Carbazole	ug/L	--	--	--	--	--	--	--
Chrysene	ug/L	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L	--	--	--	--	--	--	--
Dibenzofuran	ug/L	--	--	--	--	--	--	--
Diethyl phthalate	ug/L	--	--	--	--	--	--	--
Dimethyl phthalate	ug/L	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	ug/L	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	ug/L	--	--	--	--	--	--	--
Fluoranthene	ug/L	--	--	--	--	--	--	--
Fluorene	ug/L	--	--	--	--	--	--	--
Hexachlorobenzene	ug/L	--	--	--	--	--	--	--
Hexachlorobutadiene	ug/L	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	--	--	--	--	--	--	--
Hexachloroethane	ug/L	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	--	--	--	--	--	--	--
Isophorone	ug/L	--	--	--	--	--	--	--
Naphthalene	ug/L	--	--	--	--	--	--	--
Nitrobenzene	ug/L	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	ug/L	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	--	--	--	--	--	--	--
Pentachlorophenol	ug/L	--	--	--	--	--	--	--
Phenanthrene	ug/L	--	--	--	--	--	--	--
Phenol	ug/L	--	--	--	--	--	--	--
Pyrene	ug/L	--	--	--	--	--	--	--
General Chemistry								
Chloride	ug/L	--	--	--	--	--	11000	--
Field Parameters								
Conductivity, field	mS/cm	0.859	0.602	0.637	538	0.419	0.428	0.252
Dissolved oxygen (DO), field	ug/L	5880	1280	760	1200	1050	9590	19250
Flow rate	gal/min	0.472	0.601	0.663	0.41	0.403	0.712	0.665
Oxidation reduction potential (ORP), field	millivolts	96.6	127.2	98.4	-70.9	143.1	161	-14.2
pH, field	s.u.	6.97	7.35	7.42	7.31	7.36	8.23	8.41
Temperature, sample	Deg C	13.13	13.14	13.39	12.58	13.84	12.79	8.12
Turbidity, field	NTU	1	3	2.7	9.86	59.7	2.2	34.1

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
R - Rejected.

Table 3.3

2019 LCS and LDS Analytical Results
East Plant Area TSCA Vault Annual Report, Calender Year 209
GM CET Bedford Facility
Bedford, Indiana

Area		**A007**	**A007**
Sample Location:		**EPA LCS**	**EPA LDS**
Sample Identification:		**WW-A007-122319-MC-41072**	**WW-A007-122319-MC-41073**
Sample Date:		**12/23/2019**	**12/23/2019**
Sample Type:			
SSOW		**E117029**	**E117029**
	Units		
Field Parameters			
Conductivity, field	mS/cm	--	--
pH, field	s.u.	--	--
PCBs			
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND
Volatile Organic Compounds (VOCs)			
1,1,1-Trichloroethane	ug/L	1.0 U	--
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	--
1,1,2-Trichloroethane	ug/L	1.0 U	--
1,1-Dichloroethane	ug/L	1.0 U	--
1,1-Dichloroethene	ug/L	1.0 U	--
1,2-Dichlorobenzene	ug/L	1.0 U	--
1,2-Dichloroethane	ug/L	1.0 U	--
1,2-Dichloropropane	ug/L	1.0 U	--
1,3-Dichlorobenzene	ug/L	1.0 U	--
1,4-Dichlorobenzene	ug/L	1.0 U	--
2-Chloroethyl vinyl ether	ug/L	10 U	--
Benzene	ug/L	1.0 U	--
Bromodichloromethane	ug/L	1.0 U	--
Bromoform	ug/L	1.0 U	--
Bromomethane (Methyl bromide)	ug/L	1.0 U	--
Carbon tetrachloride	ug/L	1.0 U	--
Chlorobenzene	ug/L	1.0 U	--
Chloroethane	ug/L	1.0 U	--
Chloroform (Trichloromethane)	ug/L	1.0 U	--
Chloromethane (Methyl chloride)	ug/L	1.0 U	--
cis-1,3-Dichloropropene	ug/L	1.0 U	--
Dibromochloromethane	ug/L	1.0 U	--
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 U	--
Ethylbenzene	ug/L	1.0 U	--
Methylene chloride	ug/L	5.0 U	--
Styrene	ug/L	--	--
Tetrachloroethene	ug/L	1.0 U	--
Toluene	ug/L	1.0 U	--
trans-1,2-Dichloroethene	ug/L	1.0 U	--
trans-1,3-Dichloropropene	ug/L	1.0 U	--
Trichloroethene	ug/L	--	--
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	--
Vinyl chloride	ug/L	1.0 U	--

Notes:
B - Laboratory Flag- Result detected in associated method blank.
ND( ) - Not detected at the associated reporting limit.
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.

Table 3.4

2019 Groundwater Treatment Plant Monitoring Analytical Resutls
East Plant Area TSCA Vault Annual Report, Calener Yera 2019
GM CET Bedford Faciltiy
Bedford, Indiana

Area		P412	P412	P412	P412	P412	P412	P412
Sample Location:		HV-6021A	HV-6021A	HV-6021A	HV-6021A	HV-6021A	HV-6021A	HV-6021A
Sample Identification:		WW-412-011519-MC-40937	WW-412-020619-MC-40946	WW-412-031319-MC-40948	WW-412-040919-MC-40966	WW-412-051419-MC-40972	WW-412-060519-MC-40990	WW-412-060519-MC-40991
Sample Date:		1/15/2019	2/6/2019	3/13/2019	4/9/2019	5/14/2019	6/5/2019	6/5/2019
Sample Type:								Duplicate
	Units							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U
Aroclor-1221 (PCB-1221)	ug/L	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U
Aroclor-1232 (PCB-1232)	ug/L	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U
Aroclor-1242 (PCB-1242)	ug/L	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U
Aroclor-1248 (PCB-1248)	ug/L	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U
Aroclor-1254 (PCB-1254)	ug/L	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U
Aroclor-1260 (PCB-1260)	ug/L	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U	0.094 U
Total PCBs	ug/L	ND	ND	ND	ND	ND	ND	ND
Field Parameters								
pH, field	s.u.	--	--	--	--	--	--	--

Notes:
U - Not detected at the associated reporting limit.

Table 3.4

2019 Groundwater Treatment Plant Monitoring Analytical Resutls
East Plant Area TSCA Vault Annual Report, Calener Yera 2019
GM CET Bedford Faciltiy
Bedford, Indiana

Area		P412	P412	P412	P412	P412	P412	P412
Sample Location:		HV-6021A	HV-6021A	HV-6021A	HV-6021A	HV-6021A	HV-6021A	HV-6021A
Sample Identification:		WW-412-070919-MC-40996	WW-412-080619-MC-41008	WW-412-090919-MC-41022	WW-412-100919-MC-41040	WW-412-100919-MC-41041	WW-412-111819-MC-41046	WW-412-121019-MC-41066
Sample Date:		7/9/2019	8/6/2019	9/9/2019	10/9/2019	10/9/2019	11/18/2019	12/10/2019
Sample Type:						Duplicate		
	Units							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.095 U	0.094 U	0.095 U	0.094 U	0.094 U	0.094 U	0.094 U
Aroclor-1221 (PCB-1221)	ug/L	0.095 U	0.094 U	0.095 U	0.094 U	0.094 U	0.094 U	0.094 U
Aroclor-1232 (PCB-1232)	ug/L	0.095 U	0.094 U	0.095 U	0.094 U	0.094 U	0.094 U	0.094 U
Aroclor-1242 (PCB-1242)	ug/L	0.095 U	0.094 U	0.095 U	0.094 U	0.094 U	0.094 U	0.094 U
Aroclor-1248 (PCB-1248)	ug/L	0.095 U	0.094 U	0.095 U	0.094 U	0.094 U	0.094 U	0.094 U
Aroclor-1254 (PCB-1254)	ug/L	0.095 U	0.094 U	0.095 U	0.094 U	0.094 U	0.094 U	0.094 U
Aroclor-1260 (PCB-1260)	ug/L	0.095 U	0.094 U	0.095 U	0.094 U	0.094 U	0.094 U	0.094 U
Total PCBs	ug/L	ND	ND	ND	ND	ND	ND	ND
Field Parameters								
pH, field	s.u.	--	--	--	--	--	7.2	7.2

Notes:
U - Not detected at the associated l

Appendices

Appendix A
LCS Sump Field Logs, LDS Sump Field Logs, and Automated Pumping System Logs

YEAR: 2019 MONTH: JANUARY

GRAVEL UNDERDRAIN SYSTEM

Notes: *Top of sump [top of concrete] (feet AMSL): 738.99* *Bottom of sump (feet AMSL): 662.18* *Inside diameter of sump (feet): 3* *Total depth of sump manhole (feet): 76.81*
Pump operating level between 2.5 ft (664.68 ft AMSL or 74.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.49 ft below the top of sump) of water in the GUS manhole.

(a) **Water level not to rise above 52 inches deep** (equates to a water level of 666.5 ft AMSL or 72.49 ft below top of the sump). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(b) **Depth to water level should not be less than 72.49 ft below the top of sump** (equates to a water level of 666.5 ft AMSL or water depth of 52 inches). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(c) Readout from display on magnetic flow meter (serial number F1095B16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0900	83.7	669.15				156740	
2	0900	83.7	669.15				156740	
3	0900	83.7	669.15				156740	
4	0800	84.0	669.18				156740	
5	0800	84.0	669.18				156740	
6	0900	84.0	669.18				156740	
7	0800	84.0	669.18				156740	
8	0800	84.1	669.18				156740	
9	0800	84.0	669.18				156740	
10	0800	83.9	669.17				156740	
11	0800	84.1	669.18				156740	
12	0800	84.1	669.18				156740	
13	0800	84.1	669.18				156740	
14	0800	84.1	669.18				156740	
15	0800	83.9	669.17				156740	
16	0800	84.0	669.18				156740	
17	0800	84.1	669.18				156740	
18	0800	84.0	669.18				156740	
19	0800	83.7	669.15				156740	
20	0800	83.7	669.15				156740	
21	0800	84.1	669.18				156740	
22	0800	84.1	669.18				156740	
23	0800	84.1	669.18				156740	
24	0800	84.0	669.18				156740	
25	0800	84.0	669.18				156740	
26	0800	84.1	669.18				156740	
27	0800	83.9	669.17				156740	
28	0800	84.0	669.18				156740	
29	0800	84.0	669.18				156740	
30	0800	84.3	669.20				156740	
31	0800	84.1	669.18				156740	

YEAR: 2017 MONTH: JANUARY

LEACHATE COLLECTION SYSTEM

REV. 4
January 13, 2016
Page 1 of 1

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 740.83* *Bottom of sump (feet AMSL): 671.00* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 69.83*
Pump operating level between 1.5 ft (672.50 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(a) **Water level not to rise above 36 inches deep (equates to a** water level of 674.00 ft AMSL or 66.83 ft below top of the sump). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (674.00 ft AMSL).
(b) **Depth to water level should not be less than 66.83 ft below the top of sump** (equates to a water level of 674.00 ft AMSL or water depth of 36 inches). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (674.00 ft AMSL), initiate pumping.
(c) Readout from display on magnetic flow meter (serial number F1095C16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0900	11.9	671.99					
2	0900	11.9	671.99		67.95	672.88	1567410	
3	0905	11.9	671.99					
4	0800	12.0	672.0					
5	0800	11.9	671.99					
6	0900	11.9	671.99					
7	0805	11.9	671.99		67.90	672.93	1567410	
8	0805	12.1	672.0					
9	0805	12.1	672.0					
10	0810	12.2	672.01		67.89	672.94	1567410	- NO flow meter readings
11	0807	12.3	672.02		67.88	672.95	1567410	PLC issue @ SWTP
12	0805	12.3	672.02		67.87	672.96	1567410	
13	0807	12.4	672.03		67.86	672.97	1567410	
14	0802	12.4	672.03		67.85	672.98	1567410	
15	0804	12.5	672.04		67.84	672.99	1567410	
16	0802	12.5	672.04		67.83	673.0	1567410	
17	0802	12.6	672.05		67.83	673.0	1567410	
18	0802	12.6	672.05		67.83	673.0	1567410	
19	0804	12.6	672.05		67.84	672.99	1567410	
20	0802	12.6	672.05		67.86	672.97	1567410	
21	0805	12.7	672.05		67.86	672.97	1567410	
22	0805	12.8	672.06		67.86	672.97	1567410	
23	0805	12.9	672.07		67.86	672.97	1567410	- flow meters back on-line *
24	0805	13.0	672.08		67.86	672.97	1567410	
25	0805	13.1	672.09		67.86	672.97	1567410	
26	0805	13.2	672.1		67.85	672.98	1567410	
27	0805	13.3	672.1		67.85	672.98	1567410	
28	0805	13.3	672.1		67.85	672.98	1567410	
29	0805	13.5	672.12		67.85	672.98	1567410	
30	0805	13.5	672.12		67.85	672.98	1567410	
31	0805	13.5	672.12		67.85	672.98	1567410	

YEAR: 2019 MONTH: JANUARY

LEAK DETECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 741.14* *Bottom of sump (feet AMSL): 668.50* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 72.64*

(a) **Water level not to rise above 18 inches deep** (equates to a water level of 670.0 ft AMSL or 71.14 ft below top of the sump). Pumping must be initiated if the water level is above 670.00 ft AMSL.

(b) **If water level is equal to or exceeds one foot over the primary liner (equates to a water level of 671.5 ft AMSL or 69.99 ft below the top of the sump), initiate pumping and notify the PM immediately.**

(c) Compare the collection rate/average daily flow rate to the Action Leakage Rate (ALR) of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicate a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate and if the collection rate exceeds the Action Leakage Rate of 32,000 gallons/acre/day.

(d) Example average daily flow rate calculation: Vault footprint = 7 acres (this value is constant). Local flow meter reading on September 1 (X_1) = 22,000 gallons. Local flow meter reading on October 3 (X_2) = 58,000 gallons. Elapsed time between pumping events (Y) = 33 days. Volume pumped ($X_2 - X_1$) = (Z) = 58,000 - 22,000 = 36,000 gallons. Average daily flow rate (Z / Y) / 7 = (36,000 / 33) / 7 acres = 155 gallons/day/acre. Therefore, the average daily flow rate < ALR.

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) $= X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) $= (Z / Y) / 7$	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2	0845	71.71							
3									
4									
5									
6									
7	0832	71.70							
8									
9									
10									
11									
12									
13									
14	0850	71.68							
15									
16									
17									
18									
19									
20									
21	0823	71.66							
22									
23									
24									
25									
26									
27									
28									
29									
30	0825	71.67							
31									

YEAR: 2019 MONTH: February

GRAVEL UNDERDRAIN SYSTEM

Notes: *Top of sump [top of concrete] (feet AMSL): 738.99* *Bottom of sump (feet AMSL): 662.18* *Inside diameter of sump (feet): 3* *Total depth of sump manhole (feet): 76.81*
Pump operating level between 2.5 ft (664.68 ft AMSL or 74.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.49 ft below the top of sump) of water in the GUS manhole.

(a) **Water level not to rise above 52 inches deep** (equates to a water level of 666.5 ft AMSL or 72.49 ft below top of the sump). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(b) **Depth to water level should not be less than 72.49 ft below the top of sump** (equates to a water level of 666.5 ft AMSL or water depth of 52 inches). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(c) Readout from display on magnetic flow meter (serial number F1095B16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	84.1	669.18				1567410	
2	0800	84.1	669.18				1567410	
3	0800	84.0	669.18				1567410	
4	0800	84.0	669.18				1567410	
5	0800	84.0	669.18				1567410	
6	0800	84.0	669.18				1567410	
7	0800	84.1	669.18				1567410	
8	0800	84.0	669.18				1567410	
9	0900	84.1	669.18				1567410	
10	0900	84.2	669.19				1567410	
11	0800	84.0	669.18				1567410	
12	0800	83.8	669.16				1567410	
13	0800	83.8	669.16				1567410	
14	0800	84.2	669.19				1567410	
15	0800	84.1	669.18				1567410	
16	0800	84.1	669.18				1567410	
17	0800	84.1	669.18				1567410	
18	0800	83.9	669.17				1567410	
19	0800	84.0	669.18				1567410	
20	0800	84.0	669.18				1567410	
21	0800	84.1	669.18				1567410	
22	0800	84.1	669.18				1567410	
23	0800	84.0	669.18				1567410	
24	0800	84.0	669.18				1567410	
25	0800	83.9	669.17				1567410	
26	0800	83.7	669.15				1567410	
27	0800	83.9	669.17				1567410	
28	0800	83.8	669.16				1567410	
29								
30								
31								

* NO MANUAL MEASUREMENT CAN BE TAKEN

YEAR: 2019 MONTH: February

LEACHATE COLLECTION SYSTEM

REV. 4
January 13, 2016
Page 1 of 1

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 740.83* *Bottom of sump (feet AMSL): 671.00* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 69.83*
Pump operating level between 1.5 ft (672.50 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(a) **Water level not to rise above 36 inches deep (equates to** a water level of 674.00 ft AMSL or 66.83 ft below top of the sump). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (674.00 ft AMSL).

(b) **Depth to water level should not be less than 66.83 ft below the top of sump** (equates to a water level of 674.00 ft AMSL or water depth of 36 inches). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (674.00 ft AMSL), initiate pumping.

(c) Readout from display on magnetic flow meter (serial number F1095C16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	13.5	672.12	0			1567410	
2	0805	13.6	672.13	0			1567410	
3	0805	13.6	672.13	0			1567410	
4	0805	13.6	672.13	0	67.79	673.04	1567410	
5	0805	13.6	672.13	0			1567410	
6	0805	13.6	672.13	0			1567410	
7	0805	13.6	672.13	0			1567410	
8	0805	13.7	672.14	0			1567410	
9	0905	13.8	672.15	0			1567410	
10	0705	13.9	672.15	0			1567410	
11	0805	14.0	672.16	0	67.73	673.1	1567410	
12	0805	14.0	672.16	0			1567410	
13	0805	14.1	672.17	0			1567410	
14	0805	14.2	672.18	0			1567410	
15	0805	14.2	672.18	0			1567410	
16	0805	14.3	672.19	0			1567410	
17	0805	14.4	672.2	0			1567410	
18	0805	14.5	672.2	0	67.66	673.17	1567410	
19	0805	14.5	672.2	0			1567410	
20	0805	14.6	672.21	0			1567410	
21	0805	14.7	672.22	0			1567410	
22	0805	14.8	672.23	0			1567410	
23	0805	14.9	672.24	0			1567410	
24	0805	15.0	672.25	0			1567410	
25	0805	15.1	672.25	0	67.59	673.24	1567410	
26	0805	15.1	672.25	0			1567410	
27	0805	15.2	672.26	0			1567410	
28	0805	15.3	672.27	0			1567410	
29								
30								
31								

YEAR: 2019 MONTH: February

LEAK DETECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 741.14* *Bottom of sump (feet AMSL): 668.50* *inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 72.64*

(a) **Water level not to rise above 18 inches deep** (equates to a water level of 670.0 ft AMSL or 71.14 ft below top of the sump). Pumping must be initiated if the water level is above 670.00 ft AMSL.

(b) **If water level is equal to or exceeds one foot over the primary liner (equates to a water level of 671.5 ft AMSL or 69.99 ft below the top of the sump), initiate pumping and notify the PM immediately.**

(c) Compare the collection rate/average daily flow rate to the Action Leakage Rate (ALR) of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicate a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate and if the collection rate exceeds the Action Leakage Rate of 32,000 gallons/acre/day.

(d) Example average daily flow rate calculation: Vault footprint = 7 acres (this value is constant). Local flow meter reading on September 1 (X_1) = 22,000 gallons. Local flow meter reading on October 3 (X_2) = 58,000 gallons. Elapsed time between pumping events (Y) = 33 days. Volume pumped ($X_2 - X_1$) = (Z) = 58,000 - 22,000 = 36,000 gallons. Average daily flow rate (Z / Y) / 7 = (36,000 / 33) / 7 acres = 155 gallons/day/acre. Therefore, the average daily flow rate < ALR.

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) $= X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) $= (Z / Y) / 7$	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2									
3									
4	0825	71.61							
5									
6									
7									
8									
9									
10									
11	0926	71.55							
12									
13									
14									
15									
16									
17									
18	0815	71.49							
19									
20									
21									
22									
23									
24									
25	0918	71.42							
26									
27									
28									
29									
30									
31									

YEAR: 2019 MONTH: March

GRAVEL UNDERDRAIN SYSTEM

Notes: *Top of sump [top of concrete] (feet AMSL): 738.99* *Bottom of sump (feet AMSL): 662.18* *Inside diameter of sump (feet): 3* *Total depth of sump manhole (feet): 76.81*
Pump operating level between 2.5 ft (664.68 ft AMSL or 74.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.49 ft below the top of sump) of water in the GUS manhole.

(a) **Water level not to rise above 52 inches deep** (equates to a water level of 666.5 ft AMSL or 72.49 ft below top of the sump). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(b) **Depth to water level should not be less than 72.49 ft below the top of sump** (equates to a water level of 666.5 ft AMSL or water depth of 52 inches). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(c) Readout from display on magnetic flow meter (serial number F1095B16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	84.0	669.18	0	*		1567410	
2	0900	84.0	669.18	0	*		1567410	
3	0900	84.1	669.18	0	*		1567410	
4	0800	84.1	669.18	0	*		1567410	
5	0800	84.0	669.18	0	*		1567410	
6	0800	84.0	669.18	0	*		1567410	
7	0800	83.9	669.17	0	*		1567410	
8	0800	84.1	669.18	0	*		1567410	
9	0800	84.0	669.18	0	*		1567410	
10	0900	83.9	669.17	0	*		1567410	
11	0800	83.6	669.14	0	*		1567410	
12	0800	83.6	669.14	0	*		1567410	
13	0800	83.9	669.17	0	*		1567410	
14	0800	83.9	669.17	0	*		1567410	
15	0800	83.6	669.14	0	*		1567410	
16	0800	83.9	669.17	0	*		1567410	
17	0800	84.0	669.18	0	*		1567410	
18	0800	83.9	669.17	0	*	[redacted]	1567410	
19	0800	83.9	669.17	0	*		1567410	
20	0800	84.0	669.18	0	*		1567410	
21	0800	84.1	669.18	0	*		1567410	
22	0800	83.9	669.17	0	*		1567410	
23	0800	83.9	669.17	0	*		1567410	
24	0800	83.9	669.17	0	*		1567410	
25	0800	83.6	669.14	0	*		1567400	
26	0800	83.9	669.17	0	*		1567410	
27	0800	83.8	669.16	0	*		1567410	
28	0800	84.0	669.18	0	*		1567410	
29	0800	83.8	669.16	0	*		1567410	
30	0900	83.8	669.16	0	*		1567410	
31	0900	83.8	669.16	0	*		1567410	

* no manual measurement can be taken

YEAR: 2011 MONTH: March

LEACHATE COLLECTION SYSTEM

REV. 4
January 13, 2016
Page 1 of 1

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 740.83* *Bottom of sump (feet AMSL): 671.00* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 69.83*
Pump operating level between 1.5 ft (672.50 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(a) **Water level not to rise above 36 inches deep (equates to a** water level of 674.00 ft AMSL or 66.83 ft below top of the sump). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (674.00 ft AMSL).
(b) **Depth to water level should not be less than 66.83 ft below the top of sump** (equates to a water level of 674.00 ft AMSL or water depth of 36 inches). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (674.00 ft AMSL), initiate pumping.
(c) Readout from display on magnetic flow meter (serial number F1095C16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0815	15.4	672.28	0			1567410	
2	0915	15.5	672.29	0			1567410	
3	0915	15.5	672.29	0			1567410	
4	0815	15.6	672.30	0	67.56	673.27	1567410	
5	0810	15.7	672.30	0			1567410	
6	0805	15.8	672.31	0			1567410	
7	0810	15.9	672.32	0			1567410	
8	0805	16.0	672.33	0			1567410	
9	0810	16.0	672.33	0			1567410	
10	0910	16.0	672.33	0			1567410	
11	0802	15.9	672.32	0	67.54	673.29	1567410	
12	0805	16.0	672.33	0			1567410	
13	0805	16.0	672.33	0			1567410	
14	0805	16.1	672.34	0			1567410	
15	0802	16.1	672.34	0			1567410	
16	0805	16.2	672.35	0			1567410	
17	0805	16.3	672.35	0			1567410	
18	0805	16.2	672.35	0	67.49	673.34	1567410	
19	0802	16.3	672.35	0			1567410	
20	0805	16.4	672.36	0			1567410	
21	0805	16.4	672.36	0			1567410	
22	0805	16.5	672.37	0			1567410	
23	0805	16.6	672.38	0			1567410	
24	0805	16.7	672.39	0			1567410	
25	0805	16.8	672.40	0	67.46	673.37	1567410	
26	0805	16.7	672.39	0			1567410	
27	0805	16.7	672.39	0			1567410	
28	0805	16.8	672.40	0			1567410	
29	0805	16.9	672.40	0			1567410	
30	0908	16.9	672.40	0			1567410	
31	0908	16.9	672.40	0			1567410	

YEAR: 2019 MONTH: March

LEAK DETECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 741.14* *Bottom of sump (feet AMSL): 668.50* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 72.64*

(a) **Water level not to rise above 18 inches deep** (equates to a water level of 670.0 ft AMSL or 71.14 ft below top of the sump). Pumping must be initiated if the water level is above 670.00 ft AMSL.

(b) **If water level is equal to or exceeds one foot over the primary liner (equates to a water level of 671.5 ft AMSL or 69.99 ft below the top of the sump), initiate pumping and notify the PM immediately.**

(c) Compare the collection rate/average daily flow rate to the Action Leakage Rate (ALR) of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicate a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate and if the collection rate exceeds the Action Leakage Rate of 32,000 gallons/acre/day.

(d) Example average daily flow rate calculation: Vault footprint = 7 acres (this value is constant). Local flow meter reading on September 1 (X_1) = 22,000 gallons. Local flow meter reading on October 3 (X_2) = 58,000 gallons. Elapsed time between pumping events (Y) = 33 days. Volume pumped ($X_2 - X_1$) = (Z) = 58,000 - 22,000 = 36,000 gallons. Average daily flow rate (Z / Y) / 7 = (36,000 / 33) / 7 acres = 155 gallons/day/acre. Therefore, the average daily flow rate < ALR.

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2									
3									
4	0825	71.37							
5									
6									
7									
8									
9									
10									
11	0815	71.31							
12									
13									
14									
15									
16									
17									
18	1030	71.26							
19									
20									
21									
22									
23									
24									
25	1035	71.24							
26									
27									
28									
29									
30									
31									

YEAR: 2019 MONTH: April

GRAVEL UNDERDRAIN SYSTEM

Notes: *Top of sump [top of concrete] (feet AMSL): 738.99* *Bottom of sump (feet AMSL): 662.18* *Inside diameter of sump (feet): 3* *Total depth of sump manhole (feet): 75.81*
Pump operating level between 2.5 ft (664.68 ft AMSL or 74.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.49 ft below the top of sump) of water in the GUS manhole.

(a) **Water level not to rise above 52 inches deep** (equates to a water level of 666.5 ft AMSL or 72.49 ft below top of the sump). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(b) **Depth to water level should not be less than 72.49 ft below the top of sump** (equates to a water level of 666.5 ft AMSL or water depth of 52 inches). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(c) Readout from display on magnetic flow meter (serial number F1095B16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	83.9	669.17	0	*		1567410	
2	0800	83.9	669.17	0	*		1567410	
3	0800	84.0	669.18	0	*		1567410	
4	0800	83.9	669.17	0	*		1567410	
5	0800	83.8	669.16	0	*		1567410	
6	0900	83.7	669.15	0	*		1567410	
7	0900	83.8	669.13	0	*		1567410	
8	0800	83.3	669.12	0	*		1567410	
9	0800	83.7	669.15	0	*		1567410	
10	0800	83.5	669.13	0	*		1567410	
11	0800	83.6	669.14	0	*		1567410	
12	0800	83.3	669.12	0	*		1567410	
13	08.00	83.3	669.12	0	*		1567410	
14	08:00	83.5	669.13	0	*		1567410	
15	08:00	83.3	669.12	0	*		1567410	
16	0800	83.3	669.12	0	*		1567410	
17	0800	83.5	669.13	0	*		1567410	
18	0800	83.8	669.16	0	*		1567410	
19	0600	83.6	669.14	0	*		1567410	
20	0800	83.5	669.13	0	*		1567410	
21	0900	83.3	669.12	0	*		1567410	
22	0800	83.3	669.12	0	*		1567410	
23	0800	83.2	669.12	0	*		1567410	
24	0800	83.4	669.13	0	*		1567410	
25	0800	83.3	669.12	0	*		1567410	
26	0800	83.7	669.15	0	*		1567410	
27	0900	83.6	669.14	0	*		1567410	
28	0900	83.6	669.14	0	*		1567410	
29	0800	83.7	669.15	0	*		1567410	
30	0800	83.3	669.12	0	*		1567410	
31								

* NO MANUAL MEASUREMENT CAN be taken

YEAR: 2017 MONTH: April

LEACHATE COLLECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 740.83* *Bottom of sump (feet AMSL): 671.00* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 69.83*
Pump operating level between 1.5 ft (672.50 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(a) **Water level not to rise above 36 inches deep (equates to a** water level of 674.00 ft AMSL or 66.83 ft below top of the sump). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (674.00 ft AMSL).

(b) **Depth to water level should not be less than 66.83 ft below the top of sump** (equates to a water level of 674.00 ft AMSL or water depth of 36 inches). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (674.00 ft AMSL), initiate pumping.

(c) Readout from display on magnetic flow meter (serial number F1095C16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	17.0	672.41		67.44	673.39	1567410	
2	0805	17.0	672.41				1567410	
3	0805	17.0	672.41				1567410	
4	0805	17.0	672.41				1567410	
5	0805	17.0	672.41				1567410	
6	0905	17.0	672.41				1567410	
7	0905	17.1	672.42				1567410	
8	0805	17.1	672.42		67.42	673.41	1567410	
9	0805	17.1	672.42				1567410	
10	0805	17.1	672.42				1567410	
11	0805	17.2	672.43				1567410	
12	0805	17.3	672.44				1567410	
13	0805	17.2	672.44				1567410	
14	8:05	17.3	672.44				1567410	
15	8:05	17.3	672.44		67.38	673.45	1567410	
16	0805	17.4	672.45				1567410	
17	0805	17.4	672.45				1567410	
18	0805	17.5	672.45				1567410	
19	0605	17.6	672.46				1567410	
20	0805	17.7	672.47				1567410	
21	0905	17.6	672.46				1567410	
22	0805	17.6	672.46		67.34	673.49	1567410	
23	0805	17.7	672.47				1567410	
24	0805	17.8	672.48				1567410	
25	0805	17.9	672.49				1567410	
26	0805	18.0	672.50				1567410	
27	0905	17.9	672.49				1567410	
28	0905	17.9	672.49				1567410	
29	0805	18.0	672.50		67.34	673.49	1567410	
30	0805	18.0	672.50				1567410	
31								

YEAR: 2019 MONTH: April

LEAK DETECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 741.14* *Bottom of sump (feet AMSL): 668.50* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 72.64*

(a) **Water level not to rise above 18 inches deep** (equates to a water level of 670.0 ft AMSL or 71.14 ft below top of the sump). Pumping must be initiated if the water level is above 670.00 ft AMSL.

(b) **If water level is equal to or exceeds one foot over the primary liner (equates to a water level of 671.5 ft AMSL or 69.99 ft below the top of the sump), initiate pumping and notify the PM immediately.**

(c) Compare the collection rate/average daily flow rate to the Action Leakage Rate (ALR) of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicate a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate and if the collection rate exceeds the Action Leakage Rate of 32,000 gallons/acre/day.

(d) Example average daily flow rate calculation: Vault footprint = 7 acres (this value is constant). Local flow meter reading on September 1 (X_1) = 22,000 gallons. Local flow meter reading on October 3 (X_2) = 58,000 gallons. Elapsed time between pumping events (Y) = 33 days. Volume pumped ($X_2 - X_1$) = (Z) = 58,000 - 22,000 = 36,000 gallons. Average daily flow rate (Z / Y) / 7 = (36,000 / 33) / 7 acres = 155 gallons/day/acre. Therefore, the average daily flow rate < ALR.

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1	1000	71.22							
2									
3									
4									
5									
6									
7									
8	0832	71.12							
9									
10									
11									
12									
13									
14									
15	1015	71.12							
16									
17									
18									
19									
20									
21									
22	0920	71.11							
23									
24									
25									
26									
27									
28									
29	1117	71.11							
30									
31									

YEAR: 2019 MONTH: MAY

GRAVEL UNDERDRAIN SYSTEM

REV. 4
December 9, 2015
Page 1 of 1

Notes: *Top of sump [top of concrete] (feet AMSL): 738.99* *Bottom of sump (feet AMSL): 662.18* *Inside diameter of sump (feet): 3* *Total depth of sump manhole (feet): 76.81*
Pump operating level between 2.5 ft (664.68 ft AMSL or 74.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.49 ft below the top of sump) of water in the GUS manhole.

(a) **Water level not to rise above 52 inches deep** (equates to a water level of 666.5 ft AMSL or 72.49 ft below top of the sump). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(b) **Depth to water level should not be less than 72.49 ft below the top of sump** (equates to a water level of 666.5 ft AMSL or water depth of 52 inches). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(c) Readout from display on magnetic flow meter (serial number F1095B16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	83.6	669.14	0	*		156710	
2	0800	83.6	669.14	0	*		156710	
3	0800	83.7	669.15	0	*		156710	
4	0800	83.7	669.15	0	*		156710	
5	0900	83.7	669.15	0	*		156710	
6	0800	83.4	669.13	0	*		156710	
7	0800	83.4	669.13	0	*		156710	
8	0800	83.4	669.13	0	*		156710	
9	0800	83.6	669.14	0	*		156710	
10	0800	83.6	669.14	0	*		156710	
11	0900	83.6	669.14	0	*		156710	
12	0900	83.7	669.15	0	*		156710	
13	0800	83.6	669.14	0	*		156710	
14	0800	83.7	669.15	0	*		156710	
15	0800	83.6	669.14	0	*		156710	
16	0800	83.6	669.14	0	*		156710	
17	0800	83.7	669.15	0	*		156710	
18	0900	83.6	669.14	0	*		156710	
19	0900	83.6	669.14	0	*		156710	
20	0800	83.6	669.14	0	*		156710	
21	0800	83.7	669.15	0	*		156710	
22	0800	83.7	669.15	0	*		156710	
23	0800	83.6	669.14	0	*		156710	
24	0800	83.4	669.13	0	*		156710	
25	0900	83.4	669.13	0	*		156710	
26	0900	83.7	669.15	0	*		156710	
27	0900	83.6	669.14	0	*		156710	
28	0900	83.6	669.14	0	*		156710	
29	0800	83.4	669.13	0	*		156710	
30	0800	83.4	669.13	0	*		156710	
31	0800	83.4	669.13	0	*		156710	

* NO MANUAL MEASUREMENT CAN BE TAKEN

YEAR: 2017 MONTH: MAY

LEACHATE COLLECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 740.83* *Bottom of sump (feet AMSL): 671.00* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 69.83*
Pump operating level between 1.5 ft (672.50 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(a) **Water level not to rise above 36 inches deep (equates to a** water level of 674.00 ft AMSL or 66.83 ft below top of the sump). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (674.00 ft AMSL).

(b) **Depth to water level should not be less than 66.83 ft below the top of sump** (equates to a water level of 674.00 ft AMSL or water depth of 36 inches). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (674.00 ft AMSL), initiate pumping.

(c) Readout from display on magnetic flow meter (serial number F1095C16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	18.1	672.50		67.34	673.49	1567410	
2	0805	18.1	672.50				1567410	
3	0805	18.2	672.51				1567410	
4	0805	18.2	672.51				1567410	
5	0905	18.3	672.52				1567410	
6	0800	18.2	672.51		67.28	673.55	1567410	
7	0805	18.2	672.51				1567410	
8	0805	18.3	672.52				1567410	
9	0905	18.3	672.52				1567410	
10	0805	18.4	672.53				1567410	
11	0905	18.5	672.54				1567410	
12	0905	18.5	672.54				1567410	
13	0800	18.6	672.55		67.23	673.6	1567410	
14	0805	18.6	672.55				1567410	
15	0805	18.6	672.55				1567410	
16	0805	18.7	672.55				1567410	
17	0805	18.7	672.55				1567410	
18	0905	18.7	672.55				1567410	
19	0905	18.8	672.56				1567410	
20	0805	18.8	672.56		67.19	673.64	1567410	
21	0805	18.9	672.57				1567410	
22	0805	18.9	672.57				1567410	
23	0805	19.0	672.58				1567410	
24	0805	19.0	672.58				1567410	
25	0905	19.1	672.59				1567410	
26	0905	19.1	672.59				1567410	
27	0905	19.2	672.60		67.15	673.68	1567410	
28	0805	19.2	672.60				1567410	
29	0805	19.3	672.60				1567410	
30	0805	19.4	672.61				1567410	
31	0805	19.4	672.61				1567410	

YEAR: 2019 MONTH: MAY

LEAK DETECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 741.14* *Bottom of sump (feet AMSL): 668.50* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 72.64*

(a) **Water level not to rise above 18 inches deep** (equates to a water level of 670.0 ft AMSL or 71.14 ft below top of the sump). Pumping must be initiated if the water level is above 670.00 ft AMSL.

(b) **If water level is equal to or exceeds one foot over the primary liner (equates to a water level of 671.5 ft AMSL or 69.99 ft below the top of the sump), initiate pumping and notify the PM immediately.**

(c) Compare the collection rate/average daily flow rate to the Action Leakage Rate (ALR) of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicate a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate and if the collection rate exceeds the Action Leakage Rate of 32,000 gallons/acre/day.

(d) Example average daily flow rate calculation: Vault footprint = 7 acres (this value is constant). Local flow meter reading on September 1 (X_1) = 22,000 gallons. Local flow meter reading on October 3 (X_2) = 58,000 gallons. Elapsed time between pumping events (Y) = 33 days. Volume pumped ($X_2 - X_1$) = (Z) = 58,000 - 22,000 = 36,000 gallons. Average daily flow rate (Z / Y) / 7 = (36,000 / 33) / 7 acres = 155 gallons/day/acre. Therefore, the average daily flow rate < ALR.

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1	0815	71.11							
2									
3									
4									
5									
6	0915	71.06							
7									
8									
9									
10									
11									
12									
13	0900	71.01							
14									
15									
16									
17									
18									
19									
20	0830	70.99							
21									
22									
23									
24									
25									
26									
27	0930	70.94							
28									
29									
30									
31									

YEAR: 2019 MONTH: June

GRAVEL UNDERDRAIN SYSTEM

Notes: *Top of sump [top of concrete] (feet AMSL): 738.99* *Bottom of sump (feet AMSL): 662.18* *Inside diameter of sump (feet): 3* *Total depth of sump manhole (feet): 76.81*
Pump operating level between 2.5 ft (664.68 ft AMSL or 74.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.49 ft below the top of sump) of water in the GUS manhole.

(a) **Water level not to rise above 52 inches deep** (equates to a water level of 666.5 ft AMSL or 72.49 ft below top of the sump). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(b) **Depth to water level should not be less than 72.49 ft below the top of sump** (equates to a water level of 666.5 ft AMSL or water depth of 52 inches). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(c) Readout from display on magnetic flow meter (serial number F1095B16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0900	83.4	669.13	0	*		1567410	
2	0900	83.4	669.13	0	*		1567410	
3	0800	83.3	669.12	0	*		1567410	
4	0800	83.4	669.13	0	*		1567410	
5	0800	83.4	669.13	0	*		1567410	
6	0800	83.4	669.13	0	*		1567410	
7	0800	83.4	669.13	0	*		1567410	
8	0700	83.5	669.13	0	*		1567410	
9	0800	83.5	669.13	0	*		1567410	
10	0700	83.5	669.13	0	*		1567410	
11	0700	83.5	669.13	0	*		1567410	
12	0700	83.5	669.13	0	*		1567410	
13	0700	83.5	669.13	0	*		1567410	
14	0800	83.5	669.13	0	*		1567410	
15	0800	83.4	669.13	0	*		1567410	
16	0800	83.4	669.13	0	*		1567410	
17	0800	83.4	669.13	0	*		1567410	
18	0800	83.4	669.13	0	*		1567410	
19	0800	83.4	669.13	0	*		1567410	
20	0800	83.4	669.13	0	*		1567410	
21	0800	83.4	669.13	0	*		1567410	
22	0800	83.4	669.13	0	*		1567410	
23	0800	83.4	669.13	0	*		1567410	
24	0800	83.4	669.13	0	*		1567410	
25	0800	83.4	669.13	0	*		1567410	
26	0800	83.4	669.13	0	*		1567410	
27	0800	83.5	669.13	0	*		1567410	
28	0800	83.5	669.13	0	*		1567410	
29	0900	83.5	669.13	0	*		1567410	
30	0800	83.4	669.13	0	*		1567410	
31								

* MANUAL MEASURMENT CAN NOT be TAKEN

YEAR: 2019 MONTH: June

LEACHATE COLLECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 740.83* *Bottom of sump (feet AMSL): 671.00* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 69.83*
Pump operating level between 1.5 ft (672.50 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(a) **Water level not to rise above 36 inches deep (equates to a** water level of 674.00 ft AMSL or 66.83 ft below top of the sump). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (674.00 ft AMSL).
(b) **Depth to water level should not be less than 66.83 ft below the top of sump** (equates to a water level of 674.00 ft AMSL or water depth of 36 inches). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (674.00 ft AMSL), initiate pumping.
(c) Readout from display on magnetic flow meter (serial number F1095C16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0905	19.4	672.61				1567410	
2	0705	19.4	672.61				1567410	
3	0805	19.4	672.61		67.14	673.69	1567410	
4	0805	19.5	672.62				1567410	
5	0805	19.6	672.63				1567410	
6	0805	19.7	672.64				1567410	
7	0805	19.7	672.64				1567410	
8	0705	19.7	672.64				1567410	
9	0805	19.7	672.64				1567410	
10	0705	19.7	672.64		67.08	673.75	1567410	
11	0705	19.7	672.64				1567410	
12	0705	19.7	672.64				1567410	
13	0705	19.7	672.64				1567410	
14	0805	19.7	672.64				1567410	
15	0805	19.7	672.64				1567410	
16	0805	20.1	672.67				1567410	
17	0805	20.1	672.67		67.02	673.81	1567410	
18	0805	20.1	672.67				1567410	
19	0805	20.1	672.67				1567410	
20	0805	20.1	672.67				1567410	
21	0805	20.1	672.67				1567410	
22	0805	20.1	672.67				1567410	
23	0805	20.1	672.67				1567410	
24	0805	20.1	672.67		66.96	673.87	1567410	
25	0805	20.9	672.74				1567410	
26	0805	21.0	672.75				1567410	
27	0805	21.0	672.75				1567410	
28	0805	21.1	672.75				1567410	
29	0705	21.1	672.75				1567410	
30	0800	21.2	672.74				1567410	
31								

YEAR: 2019 MONTH: June

LEAK DETECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 741.14* *Bottom of sump (feet AMSL): 668.50* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 72.64*

(a) **Water level not to rise above 18 inches deep** (equates to a water level of 670.0 ft AMSL or 71.14 ft below top of the sump). Pumping must be initiated if the water level is above 670.00 ft AMSL.

(b) **If water level is equal to or exceeds one foot over the primary liner (equates to a water level of 671.5 ft AMSL or 69.99 ft below the top of the sump), initiate pumping and notify the PM immediately.**

(c) Compare the collection rate/average daily flow rate to the Action Leakage Rate (ALR) of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicate a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate and if the collection rate exceeds the Action Leakage Rate of 32,000 gallons/acre/day.

(d) Example average daily flow rate calculation: Vault footprint = 7 acres (this value is constant). Local flow meter reading on September 1 (X_1) = 22,000 gallons. Local flow meter reading on October 3 (X_2) = 58,000 gallons. Elapsed time between pumping events (Y) = 33 days. Volume pumped ($X_2 - X_1$) = (Z) = 58,000 - 22,000 = 36,000 gallons. Average daily flow rate (Z / Y) / 7 = (36,000 / 33) / 7 acres = 155 gallons/day/acre. Therefore, the average daily flow rate < ALR.

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1	0900	70.95							
2									
3	0915	70.94							
4									
5									
6									
7									
8									
9									
10	0805	70.90							
11									
12									
13									
14									
15									
16									
17	0910	70.87							
18									
19									
20									
21									
22									
23									
24	0845	70.84							
25									
26									
27									
28									
29									
30									
31									

YEAR: 2019 MONTH: July

GRAVEL UNDERDRAIN SYSTEM

Notes: *Top of sump [top of concrete] (feet AMSL): 738.99* *Bottom of sump (feet AMSL): 662.18* *Inside diameter of sump (feet): 3* *Total depth of sump manhole (feet): 76.81*
Pump operating level between 2.5 ft (664.68 ft AMSL or 74.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.49 ft below the top of sump) of water in the GUS manhole.

(a) **Water level not to rise above 52 inches deep** (equates to a water level of 666.5 ft AMSL or 72.49 ft below top of the sump). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(b) **Depth to water level should not be less than 72.49 ft below the top of sump** (equates to a water level of 666.5 ft AMSL or water depth of 52 inches). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(c) Readout from display on magnetic flow meter (serial number F1095B16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	83.4	669.13	0	*		1567410	
2	0800	83.4	669.13	0	*		1567410	
3	0800	83.4	669.13	0	*		1567410	
4	0800	83.3	669.12	0	*		1567410	
5	0800	83.3	669.12	0	*		1567410	
6	0800	83.3	669.12	0	*		1567410	
7	0800	83.3	669.12	0	*		1567410	
8	0800	83.3	669.12	0	*		1567410	
9	0800	83.4	669.13	0	*		1567410	
10	0800	83.4	669.13	0	*		1567410	
11	0800	83.4	669.13	0	*		1567410	
12	0800	83.4	669.13	0	*		1567410	
13	0800	83.4	669.13	0	*		1567410	
14	0800	83.4	669.13	0	*		1567410	
15	0800	83.4	669.13	0	*		1567410	
16	0800	83.4	669.13	0	*		1567410	
17	0800	83.5	669.13	0	*		1567410	
18	0800	83.3	669.12	0	*		1567410	
19	0800	83.3	669.12	0	*		1567410	
20	0800	83.3	669.12	0	*		1567410	
21	0800	83.5	669.13	0	*		1567410	
22	0800	83.6	669.13	0	*		1567410	
23	0800	83.5	669.13	0	*		1567410	
24	0800	83.5	669.13	0	*		1567410	
25	0800	83.5	669.13	0	*		1567410	
26	0800	83.5	669.13	0	*		1567410	
27	0800	83.5	669.13	0	*		1567410	
28	0800	83.5	669.13	0	*		1567410	
29	0800	83.5	669.13	0	*		1567410	
30	0800	83.5	669.13	0	*		1567410	
31	0800	83.5	669.13	0	*		1567410	

* NO MANUAL depth CAN be taken

YEAR: 2019 MONTH: July

LEACHATE COLLECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 740.83* *Bottom of sump (feet AMSL): 671.00* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 69.83*
Pump operating level between 1.5 ft (672.50 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(a) **Water level not to rise above 36 inches deep (equates to a** water level of 674.00 ft AMSL or 66.83 ft below top of the sump). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (674.00 ft AMSL).

(b) **Depth to water level should not be less than 66.83 ft below the top of sump** (equates to a water level of 674.00 ft AMSL or water depth of 36 inches). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (674.00 ft AMSL), initiate pumping.

(c) Readout from display on magnetic flow meter (serial number F1095C16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	21.2	672.76		66.94	673.89	1567410	
2	0805	21.3	672.77				1567410	
3	0805	21.3	672.77				1567410	
4	0805	21.4	672.78				1567410	
5	0805	21.4	672.78				1567410	
6	0805	21.5	672.79				1567410	
7	0805	21.6	672.80				1567410	
8	0805	21.7	672.80		66.9	673.93	1567410	
9	0805	21.8	672.81				1567410	
10	0805	21.8	672.81				1567410	
11	0805	22.0	672.83				1567410	
12	0805	22.0	672.83				1567410	
13	0805	22.1	672.84				1567410	
14	0805	22.1	672.84				1567410	
15	0805	22.1	672.84		66.86	673.97	1567410	
16	0805	22.2	672.85				1567410	
17	0805	22.3	672.85				1567410	
18	0805	22.3	672.85				1567410	
19	0805	22.3	672.85				1567410	
20	0805	22.4	672.86				1567410	
21	0805	22.5	672.87				1567410	
22	0805	22.6	672.87		66.83	674.0	1567410	
23	0805	22.6	672.88				1567410	
24	0805	22.6	672.88				1567410	
25	0805	22.6	672.88				1567410	
26	0805	22.6	672.88				1567410	
27	0805	22.7	672.89				1567410	
28	0805	22.7	672.89				1567410	
29	0805	22.8	672.90		66.77	674.06	1567410	
30	0805	22.8	672.90				1567410	
31	0805	22.8	672.90				1567410	

YEAR: 2019 MONTH: July

LEAK DETECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 741.14* *Bottom of sump (feet AMSL): 668.50* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 72.64*

(a) **Water level not to rise above 18 inches deep** (equates to a water level of 670.0 ft AMSL or 71.14 ft below top of the sump). Pumping must be initiated if the water level is above 670.00 ft AMSL.

(b) **If water level is equal to or exceeds one foot over the primary liner (equates to a water level of 671.5 ft AMSL or 69.99 ft below the top of the sump), initiate pumping and notify the PM immediately.**

(c) Compare the collection rate/average daily flow rate to the Action Leakage Rate (ALR) of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicate a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate and if the collection rate exceeds the Action Leakage Rate of 32,000 gallons/acre/day.

(d) Example average daily flow rate calculation: Vault footprint = 7 acres (this value is constant). Local flow meter reading on September 1 (X_1) = 22,000 gallons. Local flow meter reading on October 3 (X_2) = 58,000 gallons. Elapsed time between pumping events (Y) = 33 days. Volume pumped ($X_2 - X_1$) = (Z) = 58,000 - 22,000 = 36,000 gallons. Average daily flow rate (Z / Y) / 7 = (36,000 / 33) / 7 acres = 155 gallons/day/acre. Therefore, the average daily flow rate < ALR.

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1	0824	70.81							
2									
3									
4									
5									
6									
7									
8	0815	70.77							
9									
10									
11									
12									
13									
14									
15	0822	70.73							
16									
17									
18									
19									
20									
21									
22	0818	70.69							
23									
24									
25									
26									
27									
28									
29	0910	70.61							
30									
31									

YEAR: 2019 MONTH: August

GRAVEL UNDERDRAIN SYSTEM

Notes: *Top of sump [top of concrete] (feet AMSL): 738.99* *Bottom of sump (feet AMSL): 662.18* *Inside diameter of sump (feet): 3* *Total depth of sump manhole (feet): 76.81*
Pump operating level between 2.5 ft (664.68 ft AMSL or 74.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.49 ft below the top of sump) of water in the GUS manhole.

(a) **Water level not to rise above 52 inches deep** (equates to a water level of 666.5 ft AMSL or 72.49 ft below top of the sump). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(b) **Depth to water level should not be less than 72.49 ft below the top of sump** (equates to a water level of 666.5 ft AMSL or water depth of 52 inches). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(c) Readout from display on magnetic flow meter (serial number F1095B16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	83.2	669.11	0	*		1567410	
2	0800	83.3	669.12	0	*		1567410	
3	0800	83.3	669.12	0	*		1567410	
4	0900	83.3	669.12	0	*		1567410	
5	0800	83.2	669.11	0	*		1567410	
6	0800	83.3	669.12	0	*		1567410	
7	0800	83.2	669.11	0	*		1567410	
8	0800	83.2	669.11	0	*		1567410	
9	0800	83.2	669.11	0	*		1567410	
10	0800	83.2	669.11	0	*		1567410	
11	0800	83.3	669.12	0	*		1567410	
12	0800	83.3	669.12	0	*		1567410	
13	0800	83.2	669.11	0	*		1567410	
14	0800	83.2	669.11	0	*		1567410	
15	0800	83.2	669.11	0	*		1567410	
16	0800	82.9	669.08	0	*		1567410	
17	0800	82.9	669.08	0	*		1567410	
18	0800	82.9	669.08	0	*		1567410	
19	0800	82.9	669.08	0	*		1567410	
20	0800	82.9	669.08	0	*		1567410	
21	0800	82.9	669.08	0	*		1567410	
22	0800	82.9	669.08	0	*		1567410	
23	0800	82.9	669.08	0	*		1567410	
24	0800	82.9	669.08	0	*		1567410	
25	0800	82.9	669.08	0	*		1567410	
26	0800	82.9	669.08	0	*		1567410	
27	0800	82.9	669.08	0	*		1567410	
28	0800	82.9	669.08	0	*		1567410	Tried to pull pump - failed
29	0800	82.9	669.08	0	*		1567410	
30	0800	82.9	669.08	0	*		1567410	
31	0800	82.9	669.08	0	*		1567410	

* NO MANUAL MEASUREMENT CAN BE TAKEN

YEAR: 2017 MONTH: August

LEACHATE COLLECTION SYSTEM

REV. 4
January 13, 2016
Page 1 of 1

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 740.83* *Bottom of sump (feet AMSL): 671.00* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 69.83*
Pump operating level between 1.5 ft (672.50 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(a) **Water level not to rise above 36 inches deep (equates to a** water level of 674.00 ft AMSL or 66.83 ft below top of the sump). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (674.00 ft AMSL).
(b) **Depth to water level should not be less than 66.83 ft below the top of sump** (equates to a water level of 674.00 ft AMSL or water depth of 36 inches). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (674.00 ft AMSL), initiate pumping.
(c) Readout from display on magnetic flow meter (serial number F1095C16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	23.0	672.91				1567410	
2	0805	23.0	672.91				1567410	
3	0805	23.1	672.92				1567410	
4	0805	23.1	672.92				1567410	
5	0805	23.1	672.92		66.77	674.06	1567410	
6	0805	23.2	672.93				1567410	
7	0805	23.2	672.93				1567410	
8	0805	23.2	672.93				1567410	
9	0805	23.3	672.94				1567410	
10	0805	23.3	672.94				1567410	
11	0805	23.3	672.94				1567410	
12	0805	23.4	672.95		66.73	674.10	1567410	
13	0805	23.4	672.95				1567410	
14	0805	22.6	672.88	810	66.81	674.02	1567410	- Testing pump
15	0805	22.6	672.88				1567410	
16	0805	22.6	672.88				1567410	
17	0805	22.7	672.89				1567410	
18	0805	22.8	672.90				1567410	
19	0805	22.8	672.90		66.78	674.05	1567410	
20	0805	22.8	672.90				1567410	
21	0805	22.9	672.90				1567410	
22	0805	22.9	672.90				1567410	
23	0805	23.0	672.91				1567410	
24	0805	23.0	672.91				1567410	
25	0805	23.1	672.92				1567410	
26	0805	23.1	672.92		66.75	674.08	1567410	
27	0805	23.3	672.94				1567410	
28	0805	23.4	672.95				1567410	
29	0805	23.5	672.96				1567410	
30	0805	23.5	672.96				1567410	
31	0805	23.6	672.96				1567410	

YEAR: 2019 MONTH: August

LEAK DETECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 741.14* *Bottom of sump (feet AMSL): 668.50* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 72.64*

(a) **Water level not to rise above 18 inches deep** (equates to a water level of 670.0 ft AMSL or 71.14 ft below top of the sump). Pumping must be initiated if the water level is above 670.00 ft AMSL.

(b) **If water level is equal to or exceeds one foot over the primary liner (equates to a water level of 671.5 ft AMSL or 69.99 ft below the top of the sump), initiate pumping and notify the PM immediately.**

(c) Compare the collection rate/average daily flow rate to the Action Leakage Rate (ALR) of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicate a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate and if the collection rate exceeds the Action Leakage Rate of 32,000 gallons/acre/day.

(d) Example average daily flow rate calculation: Vault footprint = 7 acres (this value is constant). Local flow meter reading on September 1 (X_1) = 22,000 gallons. Local flow meter reading on October 3 (X_2) = 58,000 gallons. Elapsed time between pumping events (Y) = 33 days. Volume pumped ($X_2 - X_1$) = (Z) = 58,000 - 22,000 = 36,000 gallons. Average daily flow rate (Z / Y) / 7 = (36,000 / 33) / 7 acres = 155 gallons/day/acre. Therefore, the average daily flow rate < ALR.

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2									
3									
4									
5	0910	70.57							
6									
7									
8									
9									
10									
11									
12	1020	70.50							
13									
14									
15									
16									
17									
18									
19	1015	70.50							
20									
21									
22									
23									
24									
25									
26	0915	70.51							
27									
28									
29									
30									
31									

YEAR: 2019 MONTH: September

GRAVEL UNDERDRAIN SYSTEM

Notes: *Top of sump [top of concrete] (feet AMSL): 738.99* *Bottom of sump (feet AMSL): 662.18* *Inside diameter of sump (feet): 3* *Total depth of sump manhole (feet): 76.81*
Pump operating level between 2.5 ft (664.68 ft AMSL or 74.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.49 ft below the top of sump) of water in the GUS manhole.

(a) **Water level not to rise above 52 inches deep** (equates to a water level of 666.5 ft AMSL or 72.49 ft below top of the sump). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(b) **Depth to water level should not be less than 72.49 ft below the top of sump** (equates to a water level of 666.5 ft AMSL or water depth of 52 inches). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(c) Readout from display on magnetic flow meter (serial number F1095B16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	82.9	669.08	0	*		156710	
2	0800	82.9	669.08	0	*		156710	
3	0800	82.9	669.08	0	*		156710	
4	0800	82.9	669.08	0	*		156710	
5	0800	82.9	669.08	0	*		156710	
6	0800	82.9	669.08	0	*		156710	
7	0800	82.9	669.08	0	*		156710	
8	0800	82.9	669.08	0	*		156710	
9	0800	82.9	669.08	0	*		156710	
10	0800	82.9	669.08	0	*		156710	
11	0800	82.9	669.08	0	*		156710	
12	0800	82.9	669.08	0	*		156710	
13	0800	83.1	669.10	0	*		156710	
14	0800	83.1	669.10	0	*		156710	
15	0800	82.9	669.08	0	*		156710	
16	0800	82.9	669.08	0	*		156710	
17	0800	82.9	669.08	0	*		156710	
18	0800	82.9	669.08	0	*		156710	
19	0800	82.9	669.08	0	*		156710	
20	0800	82.9	669.08	0	*		156710	
21	0800	82.9	669.08	0	*		156710	
22	0800	82.9	669.08	0	*		156710	
23	0800	82.9	669.08	0	*		156710	
24	0800	82.9	669.08	0	*		156710	
25	0800	82.9	669.08	0	*		156710	
26	0800	82.9	669.08	0	*		156710	
27	0800	82.9	669.08	0	*		156710	
28	0800	82.9	669.08	0	*		156710	
29	0800	82.9	669.08	0	*		156710	
30	0800	82.9	669.08	0	*		156710	
31								

* No manual measurement taken

YEAR: 2019 MONTH: September

LEACHATE COLLECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 740.83* *Bottom of sump (feet AMSL): 671.00* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 69.83*
Pump operating level between 1.5 ft (672.50 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(a) **Water level not to rise above 36 inches deep (equates to a** water level of 674.00 ft AMSL or 66.83 ft below top of the sump). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (674.00 ft AMSL).

(b) **Depth to water level should not be less than 66.83 ft below the top of sump** (equates to a water level of 674.00 ft AMSL or water depth of 36 inches). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (674.00 ft AMSL), initiate pumping.

(c) Readout from display on magnetic flow meter (serial number F1095C16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0900	23.7	672.97				1567410	
2	0900	23.7	672.97		66.72	674.11	1567410	
3	0805	23.7	672.97				1567410	
4	0805	23.7	672.97				1567410	
5	0805	23.8	672.98				1567410	
6	0805	23.8	672.98				1567410	
7	0805	23.8	672.98				1567410	
8	0805	23.9	672.99				1567410	
9	0805	23.9	672.99		66.93	673.9	1567410	
10	0805	23.9	672.99				1567410	
11	0805	24.0	673.00				1567410	
12	0805	24.0	673.00				1567410	
13	0805	24.0	673.00				1567410	
14	0805	21.5	672.79				1567410	
15	0805	21.6	672.80				1567410	
16	0805	21.7	672.80		66.90	673.93	1567410	
17	0805	21.8	672.81				1567410	
18	0805	21.7	672.80				1567410	
19	0805	21.9	672.82				1567410	
20	0805	21.8	672.81				1567410	
21	0805	21.9	672.82				1567410	
22	0805	22.0	672.83				1567410	
23	0805	22.0	672.83		66.87	673.96	1567410	
24	0805	22.1	672.84				1567410	
25	0805	22.1	672.84				1567410	
26	0805	22.1	672.84				1567410	
27	0805	22.2	672.85				1567410	
28	0805	22.2	672.85				1567410	
29	0805	22.2	672.85				1567410	
30	0805	22.3	672.85		66.84	673.99	1567410	
31								

YEAR: 2019 MONTH: September

LEAK DETECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 741.14* *Bottom of sump (feet AMSL): 668.50* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 72.64*

(a) **Water level not to rise above 18 inches deep** (equates to a water level of 670.0 ft AMSL or 71.14 ft below top of the sump). Pumping must be initiated if the water level is above 670.00 ft AMSL.

(b) **If water level is equal to or exceeds one foot over the primary liner (equates to a water level of 671.5 ft AMSL or 69.99 ft below the top of the sump), initiate pumping and notify the PM immediately.**

(c) Compare the collection rate/average daily flow rate to the Action Leakage Rate (ALR) of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicate a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate and if the collection rate exceeds the Action Leakage Rate of 32,000 gallons/acre/day.

(d) Example average daily flow rate calculation: Vault footprint = 7 acres (this value is constant). Local flow meter reading on September 1 (X_1) = 22,000 gallons. Local flow meter reading on October 3 (X_2) = 58,000 gallons. Elapsed time between pumping events (Y) = 33 days. Volume pumped ($X_2 - X_1$) = (Z) = 58,000 - 22,000 = 36,000 gallons. Average daily flow rate (Z / Y) / 7 = (36,000 / 33) / 7 acres = 155 gallons/day/acre. Therefore, the average daily flow rate < ALR.

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2	0910	70.54							
3	"								
4									
5									
6									
7									
8									
9	0905	70.48							
10									
11									
12									
13									
14									
15									
16	0922	70.42							
17									
18									
19									
20									
21									
22									
23	0901	70.36							
24									
25									
26									
27									
28									
29									
30	0955	70.32							
31									

YEAR: 2019 MONTH: October

GRAVEL UNDERDRAIN SYSTEM

Notes: *Top of sump [top of concrete] (feet AMSL): 738.99* *Bottom of sump (feet AMSL): 662.18* *Inside diameter of sump (feet): 3* *Total depth of sump manhole (feet): 76.81*
Pump operating level between 2.5 ft (664.68 ft AMSL or 74.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.49 ft below the top of sump) of water in the GUS manhole.

(a) **Water level not to rise above 52 inches deep** (equates to a water level of 666.5 ft AMSL or 72.49 ft below top of the sump). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(b) **Depth to water level should not be less than 72.49 ft below the top of sump** (equates to a water level of 666.5 ft AMSL or water depth of 52 inches). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(c) Readout from display on magnetic flow meter (serial number F1095B16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	82.7	669.07	0	*		156740	
2	0800	82.9	669.08	0	*		156740	
3	0800	82.9	669.08	0	*		156740	
4	0800	82.9	669.08	0	*		156740	
5	0800	82.9	669.08	0	*		156740	
6	0800	82.7	669.07	0	*		156740	
7	0800	82.7	669.07	0	*		156740	
8	0800	82.3	669.03	0	*		156740	
9	0800	82.3	669.03	0	*		156740	
10	0800	82.3	669.03	0	*		156740	
11	0800	82.3	669.03	0	*		156740	
12	0800	82.3	669.03	0	*		156740	
13	0800	82.3	669.03	0	*		156740	
14	0800	82.3	669.03	0	*		156740	
15	0800	82.3	669.03	0	*		156740	
16	0800	82.3	669.03	0	*		156740	
17	0800	82.1	669.02	0	*		156740	
18	0800	82.1	669.02	0	*		156740	
19	0800	82.3	669.03	0	*		156740	
20	0800	82.3	669.03	0	*		156740	
21	0800	82.3	669.03	0	*		156740	
22	0800	82.7	669.07	0	*		156740	
23	0800	82.7	669.07	0	*		156740	
24	0800	82.7	669.07	0	*		156740	
25	0800	82.3	669.03	0	*		156740	
26	0800	82.3	669.03	0	*		156740	
27	0800	82.3	669.03	0	*		156740	
28	0800	82.9	669.08	0	*		156740	
29	0800	82.9	669.08	0	*		156740	
30	0800	82.9	669.08	0	*		156740	
31	0800	82.9	669.08	0	*		156740	

* NO MANUAL MEASUREMENT CAN be TAKEN

YEAR: 2017 MONTH: October

LEACHATE COLLECTION SYSTEM

REV. 4
January 13, 2016
Page 1 of 1

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 740.83* *Bottom of sump (feet AMSL): 671.00* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 69.83*
Pump operating level between 1.5 ft (672.50 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(a) **Water level not to rise above 36 inches deep (equates to a** water level of 674.00 ft AMSL or 66.83 ft below top of the sump). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (674.00 ft AMSL).
(b) **Depth to water level should not be less than 66.83 ft below the top of sump** (equates to a water level of 674.00 ft AMSL or water depth of 36 inches). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (674.00 ft AMSL), initiate pumping.
(c) Readout from display on magnetic flow meter (serial number F1095C16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	22.3	672.85				1567410	
2	0805	22.3	672.85				1567410	
3	0805	22.4	672.86				1567410	
4	0805	22.4	672.86				1567410	
5	0805	22.5	672.87				1567410	
6	0805	22.6	672.88				1567410	
7	0805	22.6	672.88				1567410	
8	0805	22.6	672.88				1567410	
9	0805	22.7	672.89				1567410	
10	0805	22.7	672.89				1567410	
11	0805	22.8	672.90				1567410	
12	0805	22.8	672.90				1567410	
13	0805	22.9	672.90				1567410	
14	0805	22.9	672.90				1567410	
15	0805	23.0	672.91				1567410	
16	0805	23.0	672.91				1567410	
17	0805	23.1	672.92				1567410	
18	0805	23.1	672.92				1567410	
19	0805	23.1	672.92				1567410	
20	0805	23.2	672.93				1567410	
21	0805	23.2	672.93				1567410	
22	0805	23.3	672.94				1567410	
23	0805	23.3	672.94				1567410	
24	0805	23.4	672.95				1567410	
25	0805	23.4	672.95				1567410	
26	0805	23.5	672.95				1567410	
27	0805	23.5	672.95				1567410	
28	0805	23.6	67296				1567410	
29	0805	23.8	672.98				1567410	
30	0805	23.8	672.98				1567410	
31	0805	23.9	672.99				1567410	

YEAR: 2019 MONTH: October

LEAK DETECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 741.14* *Bottom of sump (feet AMSL): 668.50* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 72.64*

(a) **Water level not to rise above 18 inches deep** (equates to a water level of 670.0 ft AMSL or 71.14 ft below top of the sump). Pumping must be initiated if the water level is above 670.00 ft AMSL.

(b) **If water level is equal to or exceeds one foot over the primary liner (equates to a water level of 671.5 ft AMSL or 69.99 ft below the top of the sump), initiate pumping and notify the PM immediately.**

(c) Compare the collection rate/average daily flow rate to the Action Leakage Rate (ALR) of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicate a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate and if the collection rate exceeds the Action Leakage Rate of 32,000 gallons/acre/day.

(d) Example average daily flow rate calculation: Vault footprint = 7 acres (this value is constant). Local flow meter reading on September 1 (X_1) = 22,000 gallons. Local flow meter reading on October 3 (X_2) = 58,000 gallons. Elapsed time between pumping events (Y) = 33 days. Volume pumped ($X_2 - X_1$) = (Z) = 58,000 - 22,000 = 36,000 gallons. Average daily flow rate (Z / Y) / 7 = (36,000 / 33) / 7 acres = 155 gallons/day/acre. Therefore, the average daily flow rate < ALR.

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2									
3									
4									
5									
6									
7	0915	70.34							
8									
9									
10									
11									
12									
13									
14	0922	70.36							
15									
16									
17									
18									
19									
20									
21	0910	70.36							
22									
23									
24									
25									
26									
27									
28	0920	70.34							
29									
30									
31									

YEAR: 2019 MONTH: November

GRAVEL UNDERDRAIN SYSTEM

Notes: *Top of sump [top of concrete] (feet AMSL): 738.99* *Bottom of sump (feet AMSL): 662.18* *Inside diameter of sump (feet): 3* *Total depth of sump manhole (feet): 76.81*
Pump operating level between 2.5 ft (664.68 ft AMSL or 74.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.49 ft below the top of sump) of water in the GUS manhole.

(a) **Water level not to rise above 52 inches deep** (equates to a water level of 666.5 ft AMSL or 72.49 ft below top of the sump). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(b) **Depth to water level should not be less than 72.49 ft below the top of sump** (equates to a water level of 666.5 ft AMSL or water depth of 52 inches). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(c) Readout from display on magnetic flow meter (serial number F1095B16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	81.8	668.99	0	*		1567410	
2	0800	81.8	668.99	0	*		1567410	
3	0800	81.8	668.99	0	*		1567410	
4	0800	82.1	669.02	0	*		1567410	
5	0800	82.1	669.02	0	*		1567410	
6	0800	82.1	669.02	0	*		1567410	
7	0800	82.1	669.02	0	*		1567410	
8	0800	82.1	669.02	0	*		1567410	
9	0800	82.1	669.02	0	*		1567410	
10	0800	82.3	669.03	0	*		1567410	
11	0800	82.3	669.03	0	*		1567410	
12	0800	82.3	669.03	0	*		1567410	
13	0800	82.3	669.03	0	*		1567410	
14	0800	82.1	669.02	0	*		1567410	
15	0800	82.1	669.02	0	*		1567410	
16	0800	82.1	669.02	0	*		1567410	
17	0800	82.3	669.03	0	*		1567410	
18	0800	82.3	669.03	0	*		1567410	
19	0800	82.1	669.02	0	*		1567410	
20	0800	82.1	669.02	0	*		1567410	
21	0800	82.1	669.02	0	*		1567410	
22	0800	82.1	669.02	0	*		1567410	
23	0800	82.1	669.02	0	*		1567410	
24	0800	82.1	669.02	0	*		1567410	
25	0800	82.1	669.02	0	*		1567410	
26	0800	82.1	669.02	0	*		1567410	
27	0800	82.1	669.02	0	*		1567410	
28	0800	82.3	669.03	0	*		1567410	
29	0800	82.1	669.02	0	*		1567410	
30	0800	82.1	669.02	0	*		1567410	
31								

* NO MANUAL MEASURMENT CAN be taken

YEAR: 2019 MONTH: November

LEACHATE COLLECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 740.83* *Bottom of sump (feet AMSL): 671.00* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 69.83*
Pump operating level between 1.5 ft (672.50 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(a) **Water level not to rise above 36 inches deep (equates to a** water level of 674.00 ft AMSL or 66.83 ft below top of the sump). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (674.00 ft AMSL).
(b) **Depth to water level should not be less than 66.83 ft below the top of sump** (equates to a water level of 674.00 ft AMSL or water depth of 36 inches). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm manual water level measurement. If confirmedmeasurement exceeds the maximum allowable level (674.00 ft AMSL), initiate pumping.
(c) Readout from display on magnetic flow meter (serial number F1095C16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC[a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION[a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL[b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION[b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING[c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	23.9	672.99	0			1567410	
2	0805	23.9	672.99	0			1567410	
3	0805	23.9	672.99	0			1567410	
4	0805	23.9	672.99	0	66.68	674.15	1567410	
5	0805	24.0	673.0	0			1567410	
6	0805	24.0	673.0	0			1567410	
7	0805	24.1	673.0	0			1567410	
8	0805	24.2	673.01	0			1567410	
9	0805	24.2	673.01	0			1567410	
10	0805	24.4	673.03	0			1567410	
11	0805	24.4	673.03	0	66.65	674.18	1567410	
12	0805	24.5	673.04	0			1567410	
13	0805	24.5	673.04	0			1567410	
14	0805	24.6	673.05	0			1567410	
15	0805	24.6	673.05	0			1567410	
16	0805	24.7	673.05	0			1567410	
17	0805	24.7	673.05	0			1567410	
18	0805	24.8	673.06	0	66.62	674.21	1567410	
19	0805	24.8	673.06	0			1567410	
20	0805	24.9	673.07	0			1567410	
21	0805	24.9	673.07	0			1567410	
22	0805	24.8	673.06	0			1567410	
23	0805	24.9	673.07	0			1567410	
24	0805	25.0	673.08	0			1567410	
25	0805	25.0	673.08	0	66.59	674.24	1567410	
26	0805	25.0	673.08	0			1567410	
27	0805	25.1	673.09	0			1567410	
28	0805	25.1	673.09	0			1567410	
29	0805	25.2	673.10	0			1567410	
30	0805	25.2	673.10	0			1567410	
31								

YEAR: 2019 MONTH: November

LEAK DETECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 741.14* *Bottom of sump (feet AMSL): 668.50* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 72.64*

(a) **Water level not to rise above 18 inches deep** (equates to a water level of 670.0 ft AMSL or 71.14 ft below top of the sump). Pumping must be initiated if the water level is above 670.00 ft AMSL.

(b) **If water level is equal to or exceeds one foot over the primary liner (equates to a water level of 671.5 ft AMSL or 69.99 ft below the top of the sump), initiate pumping and notify the PM immediately.**

(c) Compare the collection rate/average daily flow rate to the Action Leakage Rate (ALR) of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicate a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate and if the collection rate exceeds the Action Leakage Rate of 32,000 gallons/acre/day.

(d) Example average daily flow rate calculation: Vault footprint = 7 acres (this value is constant). Local flow meter reading on September 1 (X_1) = 22,000 gallons. Local flow meter reading on October 3 (X_2) = 58,000 gallons. Elapsed time between pumping events (Y) = 33 days. Volume pumped ($X_2 - X_1$) = (Z) = 58,000 - 22,000 = 36,000 gallons. Average daily flow rate (Z / Y) / 7 = (36,000 / 33) / 7 acres = 155 gallons/day/acre. Therefore, the average daily flow rate < ALR.

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2									
3									
4	0915	70.32							
5									
6									
7									
8									
9									
10									
11	0902	70.31							
12									
13									
14									
15									
16									
17									
18	0912	70.27							
19									
20									
21									
22									
23									
24									
25	0910	70.26							
26									
27									
28									
29									
30									
31									

YEAR: 2019 MONTH: December

GRAVEL UNDERDRAIN SYSTEM

Notes: *Top of sump [top of concrete] (feet AMSL): 738.99* *Bottom of sump (feet AMSL): 662.18* *Inside diameter of sump (feet): 3* *Total depth of sump manhole (feet): 76.81*
Pump operating level between 2.5 ft (664.68 ft AMSL or 74.31 ft below the top of sump) and 4.33 ft (666.5 ft AMSL or 72.49 ft below the top of sump) of water in the GUS manhole.

(a) **Water level not to rise above 52 inches deep** (equates to a water level of 666.5 ft AMSL or 72.49 ft below top of the sump). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(b) **Depth to water level should not be less than 72.49 ft below the top of sump** (equates to a water level of 666.5 ft AMSL or water depth of 52 inches). Pumping must be initiated if the water level is above 666.5 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (666.5 ft AMSL), notify the PM immediately.
(c) Readout from display on magnetic flow meter (serial number F1095B16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	81.8	668.99	0	*		1567410	
2	0800	82.3	669.03	0	*		1567410	
3	0800	82.3	669.03	0	*		1567410	
4	0800	82.3	669.03	0	*		1567410	
5	0800	82.1	669.02	0	*		1567410	
6	0800	82.1	669.02	0	*		1567410	
7	0800	82.1	669.02	0	*		1567410	
8	0800	82.3	669.03	0	*		1567410	
9	0800	82.3	669.03	0	*		1567410	
10	0800	82.3	669.03	0	*		1567410	
11	0800	82.3	669.03	0	*		1567410	
12	0800	82.1	669.02	0	*		1567410	
13	0800	82.3	669.03	0	*		1567410	
14	0800	82.3	669.03	0	*		1567410	
15	0800	82.3	669.03	0	*		1567410	
16	0800	82.3	669.03	0	*		1567410	
17	0800	82.3	669.03	0	*		1567410	
18	0800	82.3	669.03	0	*		1567410	
19	0800	82.3	669.03	0	*		1567410	
20	0800	82.3	669.03	0	*		1567410	
21	0800	82.3	669.03	0	*		1567410	
22	0800	82.3	669.03	0	*		1567410	
23	0800	82.3	669.03	0	*		1567410	
24	0800	82.3	669.03	0	*		1567410	
25	0800	82.1	669.02	0	*		1567410	
26	0800	82.1	669.02	0	*		1567410	
27	0800	82.3	669.03	0	*		1567410	
28	0800	82.3	669.03	0	*		1567410	
29	0800	82.3	669.03	0	*		1567410	
30	0800	82.3	669.03	0	*		1567410	
31	0800	82.3	669.03	0	*		1567410	

* NO MANUAL MEASUREMENT CAN be taken

YEAR: 2019 MONTH: December

LEACHATE COLLECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 740.83* *Bottom of sump (feet AMSL): 671.00* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 69.83*
Pump operating level between 1.5 ft (672.50 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.

(a) **Water level not to rise above 36 inches deep (equates to a** water level of 674.00 ft AMSL or 66.83 ft below top of the sump). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm PLC water level measurement by taking a manual water level measurement. If both measurements exceed the maximum allowable level (674.00 ft AMSL).
(b) **Depth to water level should not be less than 66.83 ft below the top of sump** (equates to a water level of 674.00 ft AMSL or water depth of 36 inches). Pumping must be initiated if the water level is above 674.00 ft AMSL. Confirm manual water level measurement. If confirmed measurement exceeds the maximum allowable level (674.00 ft AMSL), initiate pumping.
(c) Readout from display on magnetic flow meter (serial number F1095C16000). Readings are cumulative unless noted otherwise.

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	25.4	673.11	0			1567410	
2	0805	25.4	673.11	0	66.58	674.25	1567410	
3	0805	25.4	673.11	0			1567410	
4	0805	25.5	673.12	0			1567410	
5	0805	25.6	673.13	0			1567410	
6	0805	25.6	673.13	0			1567410	
7	0805	25.7	673.14	0			1567410	
8	0805	25.7	673.14	0			1567410	
9	0805	25.8	673.15	0			1567410	
10	0805	25.8	673.15	0			1567410	
11	0805	25.8	673.15	0	66.56	674.27	1567410	
12	0805	25.9	673.15	0			1567410	
13	0805	26.0	673.16	0			1567410	
14	0805	26.1	673.17	0			1567410	
15	0805	26.1	673.17	0			1567410	
16	0805	26.2	673.18	0	66.55	674.28	1567410	
17	0805	26.3	673.19	0			1567410	
18	0805	26.4	673.20	0			1567410	
19	0805	26.4	673.20	0			1567410	
20	0805	26.5	673.20	0			1567410	
21	0805	26.5	673.20	0			1567410	
22	0805	26.6	673.21	0			1567410	
23	0930	26.6	673.21	UNKNOWN *	68.23	672.60	1567410	- Pumped and sampled
24	0805	7.9	671.65	0			1567410	
25	0805	8.1	671.67	0			1567410	
26	0805	8.2	671.68	0			1567410	
27	0805	8.3	671.69	0			1567410	
28	0805	8.4	671.70	0			1567410	
29	0805	8.5	671.70	0			1567410	
30	0805	8.6	671.71	0	68.68	672.15	1567410	
31	0805	8.7	671.72	0			1567410	

* Pump turned on. [redacted] pumped.
[redacted] Flowmeter not communicating with PLC for Gallons Pumped

YEAR: 2019 MONTH: December

LEAK DETECTION SYSTEM

Notes: *Top of sump [top of concrete manhole] (feet AMSL): 741.14* *Bottom of sump (feet AMSL): 668.50* *Inside diameter of sump (feet): 6* *Total depth of sump manhole (feet): 72.64*

(a) **Water level not to rise above 18 inches deep** (equates to a water level of 670.0 ft AMSL or 71.14 ft below top of the sump). Pumping must be initiated if the water level is above 670.00 ft AMSL.

(b) **If water level is equal to or exceeds one foot over the primary liner (equates to a water level of 671.5 ft AMSL or 69.99 ft below the top of the sump), initiate pumping and notify the PM immediately.**

(c) Compare the collection rate/average daily flow rate to the Action Leakage Rate (ALR) of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicate a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate and if the collection rate exceeds the Action Leakage Rate of 32,000 gallons/acre/day.

(d) Example average daily flow rate calculation: Vault footprint = 7 acres (this value is constant). Local flow meter reading on September 1 (X_1) = 22,000 gallons. Local flow meter reading on October 3 (X_2) = 58,000 gallons. Elapsed time between pumping events (Y) = 33 days. Volume pumped ($X_2 - X_1$) = (Z) = 58,000 - 22,000 = 36,000 gallons. Average daily flow rate (Z / Y) / 7 = (36,000 / 33) / 7 acres = 155 gallons/day/acre. Therefore, the average daily flow rate < ALR.

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2	1145	70.25							
3									
4									
5									
6									
7									
8									
9									
10									
11	0950	70.28							
12									
13									
14									
15									
16	0905	70.22							
17									
18									
19									
20									
21									
22									
23	0935	70.14	70.14	[illegible]	—	—	—	—	Pump turned on with no flow. Samples collected with bailer.
24									
25									
26									
27									
28									
29									
30	1320	70.13							
31									

Appendix B
Cover System Inspection Log

TABLE D.1

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

Date of Inspection:	4/24/2019	**Weather:**	Cloudy
Inspector:	Evan Meinzer	**Temperature:**	60 F

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	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	◉	○			
		- EXPPOSURE OF LINER	◉	○			
		- EROSION	○	◉	Fill areas with clean dirt	Burrows near ES3 and ES4	
		- LOCALIZED SETTLEMENT/SLUMPING	◉	○			
		- PONDING OF WATER/DRAINAGE	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	○	◉	Fill borrows	Some small clusters of burr	
		- ROOTING OF TREES	○	◉	Remove saplings	Sparse saplings	
	Transect EV2	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- EXPPOSURE OF LINER	◉	○			
		- EROSION	◉	○			
		- LOCALIZED SETTLEMENT/SLUMPING	◉	○			
		- PONDING OF WATER/DRAINAGE	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	○	◉	Fill borrows	Some small burrows throug	
		- ROOTING OF TREES	○	◉	Remove saplings	Sparse Saplings	

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	NOTES	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	◉	○			
		- EXPPOSURE OF LINER	◉	○			
		- EROSION	◉	○			
		- LOCALIZED SETTLEMENT/SLUMPING	◉	○			
		- PONDING OF WATER/DRAINAGE	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○			
		- ROOTING OF TREES	○	◉	Remove Saplings	Sparse saplings	
	Transect EV4	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- EXPPOSURE OF LINER	○	◉	Fill clean dirt atop liner	Liner visible in ditches	
		- EROSION	○	◉	Fill clean dirt into eroded area	Some wash out in ditches	
		- LOCALIZED SETTLEMENT/SLUMPING	◉	○			
		- PONDING OF WATER/DRAINAGE	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○			
		- ROOTING OF TREES	◉	○			
	Transect EV5	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- EXPPOSURE OF LINER	○	◉	Fill clean dirt atop liner	Liner exposed in ditches	
		- EROSION	○	◉	Fill clean dirt into eroded area	Some wash out in ditches	
		- LOCALIZED SETTLEMENT/SLUMPING	◉	○			
		- PONDING OF WATER/DRAINAGE	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	○	◉	Fill burrows	Some scattered burrows	
		- 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	NOTES	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	◉	○			
		- EXPPOSURE OF LINER	◉	○			
		- EROSION	◉	○			
		- LOCALIZED SETTLEMENT/SLUMPING	◉	○			
		- PONDING OF WATER/DRAINAGE	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○			
		- ROOTING OF TREES	○	◉	Remove saplings	Sparse saplings	
	Transect EV7	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- EXPPOSURE OF LINER	◉	○			
		- EROSION	◉	○			
		- LOCALIZED SETTLEMENT/SLUMPING	◉	○			
		- PONDING OF WATER/DRAINAGE	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○			
		- ROOTING OF TREES	◉	○			
	Transect EV8	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- EXPPOSURE OF LINER	◉	○			
		- EROSION	◉	○			
		- LOCALIZED SETTLEMENT/SLUMPING	◉	○			
		- PONDING OF WATER/DRAINAGE	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○			
		- ROOTING OF TREES	○	◉	Remove saplings	sparse saplings	

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	NOTES	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	◉	○			
		- EXPPOSURE OF LINER	◉	○			
		- EROSION	◉	○			
		- LOCALIZED SETTLEMENT/SLUMPING	◉	○			
		- PONDING OF WATER/DRAINAGE	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	○	◉	Fill burrows	Burrows on south slope	
		- ROOTING OF TREES	○	◉	Remove saplings	sparse saplings	
	Transect WV1	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- 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	NOTES	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	◉	○			
	Transect EA2	- QUALITY OF ASPHALT COVER	◉	○			
		- PRESENCE OF CRACKING OR DISCOLORATION	◉	○			
	Transect WA1	- QUALITY OF ASPHALT COVER	◉	○			
		- PRESENCE OF CRACKING OR DISCOLORATION	◉	○			
ACCESS ROAD							
	ACCESS ROAD	- EROSION	◉	○			
		- OBSTRUCTIONS/DEBRIS	◉	○			
		- POTHOLES	◉	○			
		- DAMAGE CAUSED BY VEHICULAR TRAFFIC	◉	○			

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	NOTES	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	◉	○			
		- EROSION	◉	○			
		- OBSTRUCTIONS	◉	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○			
		- ROOTING OF TREES	◉	○			
	Transect ES2	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- EROSION	◉	○			
		- OBSTRUCTIONS	◉	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○			
		- ROOTING OF TREES	◉	○			
	Transect ES3	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- EROSION	◉	○			
		- OBSTRUCTIONS	◉	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	○	◉	Fill burrows	Scattered burrows	
		- ROOTING OF TREES	○	◉	Remove saplings	Sparse saplings	

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	NOTES	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	◉	○			
		- EROSION	◉	○			
		- OBSTRUCTIONS	◉	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	○	◉	Fill burrows	Scattered burrows	
		- ROOTING OF TREES	◉	○			
	Transect ES5	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- EROSION	◉	○			
		- OBSTRUCTIONS	◉	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○			
		- ROOTING OF TREES	◉	○			
	Transect ES6	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- 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	NOTES	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	◉	○			
		- EROSION	◉	○			
		- OBSTRUCTIONS	◉	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○			
		- ROOTING OF TREES	◉	○			
	Transect ES8	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- EROSION	◉	○			
		- OBSTRUCTIONS	◉	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○			
		- ROOTING OF TREES	◉	○			
	Transect ES9	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- 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	NOTES	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	◉	○			
		- EROSION	◉	○			
		- OBSTRUCTIONS	◉	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○			
		- ROOTING OF TREES	◉	○			
	Transect ES11	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- 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	◉	○			
		- 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	NOTES	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	◉	○			
		- EROSION	◉	○			
		- OBSTRUCTIONS	◉	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○			
		- ROOTING OF TREES	◉	○			
	Transect ES13	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	◉	○			
		- 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

Date of Inspection:	4/24/2019	**Weather:**	Cloudy
Inspector:	Evan Meinzer	**Temperature:**	60 F

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	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	○	○			
		- EXPPOSURE OF LINER	○	○			
		- EROSION	○	○	Fill areas with clean dirt	Burrows near ES3 and ES4	
		- LOCALIZED SETTLEMENT/SLUMPING	○	○			
		- PONDING OF WATER/DRAINAGE	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○	Fill borrows	Some small clusters of burr	
		- ROOTING OF TREES	○	○	Remove saplings	Sparse saplings	
	Transect EV2	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- EXPPOSURE OF LINER	○	○			
		- EROSION	○	○			
		- LOCALIZED SETTLEMENT/SLUMPING	○	○			
		- PONDING OF WATER/DRAINAGE	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○	Fill borrows	Some small burrows throug	
		- ROOTING OF TREES	○	○	Remove saplings	Sparse Saplings	

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	NOTES	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	◉	○			
		- EXPPOSURE OF LINER	○	○			
		- EROSION	○	○			
		- LOCALIZED SETTLEMENT/SLUMPING	○	○			
		- PONDING OF WATER/DRAINAGE	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○	Fill areas with clean dirt		
		- ROOTING OF TREES	○	○		Sparse saplings	
	Transect EV4	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- EXPPOSURE OF LINER	○	○	Fill borrows	Liner visible in ditches	
		- EROSION	○	○	Remove saplings	Some wash out in ditches	
		- LOCALIZED SETTLEMENT/SLUMPING	○	○			
		- PONDING OF WATER/DRAINAGE	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○			
	Transect EV5	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- EXPPOSURE OF LINER	◉	○	Fill borrows	Liner exposed in ditches	
		- EROSION	◉	○	Remove saplings	Some wash out in ditches	
		- LOCALIZED SETTLEMENT/SLUMPING	◉	○			
		- PONDING OF WATER/DRAINAGE	◉	○			
		- SIGNS OF BURROWING BY ANIMALS	◉	○	Burrows near ES3 and ES4	Some scattered burrows	
		- 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	NOTES	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	○	○			
		- EXPPOSURE OF LINER	○	○			
		- EROSION	○	○			
		- LOCALIZED SETTLEMENT/SLUMPING	○	○			
		- PONDING OF WATER/DRAINAGE	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○	Remove saplings	Sparse saplings	
	Transect EV7	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- EXPPOSURE OF LINER	○	○		Sparse saplings	
		- EROSION	○	○			
		- LOCALIZED SETTLEMENT/SLUMPING	○	○			
		- PONDING OF WATER/DRAINAGE	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○			
	Transect EV8	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- EXPPOSURE OF LINER	○	○			
		- EROSION	○	○			
		- LOCALIZED SETTLEMENT/SLUMPING	○	○			
		- PONDING OF WATER/DRAINAGE	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○	Remove saplings	sparse saplings	

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	NOTES	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	○	○			
		- EXPPOSURE OF LINER	○	○			
		- EROSION	○	○			
		- LOCALIZED SETTLEMENT/SLUMPING	○	○			
		- PONDING OF WATER/DRAINAGE	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○	Fill burrows	Burrows on south slope	
		- ROOTING OF TREES	○	○	Remove saplings	sparse saplings	
	Transect WV1	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- EXPPOSURE OF LINER	○	○			
		- EROSION	○	○			
		- LOCALIZED SETTLEMENT/SLUMPING	○	○			
		- PONDING OF WATER/DRAINAGE	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○			

TABLE D.1

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

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	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	○	○			
	Transect EA2	- QUALITY OF ASPHALT COVER	○	○			
		- PRESENCE OF CRACKING OR DISCOLORATION	○	○			
	Transect WA1	- QUALITY OF ASPHALT COVER	○	○			
		- PRESENCE OF CRACKING OR DISCOLORATION	○	○			
ACCESS ROAD							
	ACCESS ROAD	- EROSION	○	○			
		- OBSTRUCTIONS/DEBRIS	○	○			
		- POTHOLES	○	○			
		- DAMAGE CAUSED BY VEHICULAR TRAFFIC	○	○			

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	NOTES	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	○	○			
		- EROSION	○	○			
		- OBSTRUCTIONS	○	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○			
	Transect ES2	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- EROSION	○	○			
		- OBSTRUCTIONS	○	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○			
	Transect ES3	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- EROSION	○	○			
		- OBSTRUCTIONS	○	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○	Fill burrows	Scattered burrows	
		- ROOTING OF TREES	○	○	Remove saplings	Sparse saplings	

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	NOTES	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	○	○			
		- EROSION	○	○			
		- OBSTRUCTIONS	○	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○	Fill burrows	Scattered burrows	
		- ROOTING OF TREES	○	○			
	Transect ES5	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- EROSION	○	○			
		- OBSTRUCTIONS	○	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○			
	Transect ES6	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- 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	NOTES	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	○	○			
		- EROSION	○	○			
		- OBSTRUCTIONS	○	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○			
	Transect ES8	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- EROSION	○	○			
		- OBSTRUCTIONS	○	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○			
	Transect ES9	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- 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	NOTES	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	○	○			
		- EROSION	○	○			
		- OBSTRUCTIONS	○	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○			
	Transect ES11	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- 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	○	○			
		- EROSION	○	○			
		- OBSTRUCTIONS	○	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○			

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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	NOTES	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	○	○			
		- EROSION	○	○			
		- OBSTRUCTIONS	○	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○			
	Transect ~~ES13~~ ES14	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	○	○			
		- EROSION	○	○			
		- OBSTRUCTIONS	○	○			
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	○	○			
		- SIGNS OF BURROWING BY ANIMALS	○	○			
		- ROOTING OF TREES	○	○			

about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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