



East Plant Area TSCA Vault Annual Monitoring Report Calendar Year 2013

GM CET - Bedford Facility
105 GM Drive
Bedford, Indiana

EPA ID# IND006036099
AOC Docket No. V-W-'03-C-747

Prepared for: GM LLC

Conestoga-Rovers & Associates

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**Global Environmental
& Sustainability**

July 15, 2014

Reference No. 013968

Mr. Peter Ramanauskas
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Land and Chemicals Division
U.S. EPA Region 5
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Dear Mr. Ramanauskas:

Re: Annual Monitoring Report - East Plant Area TSCA Vault - Calendar Year 2013
GM CET – Bedford Facility, IND 006036099
Voluntary RCRA Corrective Action
Bedford, Indiana

Enclosed for your review, please find a copy of the Annual Monitoring Report, entitled East Plant Area TSCA Vault: Calendar Year 2013. This document has been submitted by General Motors LLC (GM), to meet the requirements for annual reporting in accordance with the Risk-Based Approval to Dispose of Polychlorinated Biphenyls (PCBs) Pursuant to 40 CFR 761.61c; Conditions of Approval; Reporting; Paragraph 27 dated October 18, 2006 (Vault Approval), and the Post-Closure Plan submitted by GM, dated February 3, 2012.

Final closure of the Vault occurred on March 27, 2012 and the post-closure monitoring is ongoing. As required by the Vault Approval, all leachate from the leachate collection system and leak detection system, and the water from the underdrain system is treated prior to discharge at the on-site water treatment plant (WTP) under NPDES Permit No. IN0003573.

Finally, in the process of implementing Post Closure monitoring operational activities the last few years, we have identified several issues related to meeting the Vault Approval requirements that warrant discussion with U.S. EPA and IDEM. For example, based on the operating experience gained over the last several years and the actual operating allowances needed by the pumping equipment in the sumps, GM will be submitting a request for 1) an alternate schedule for monitoring the water levels and 2) modifying the water level set-points for operating the sump pumps within the Vault as outlined in Paragraphs 14 and 51 of the Conditions of Approval section of the Vault Approval. We would like to discuss those issues and any others at a convenient time following your review.

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

Yours truly,
General Motors LLC

Cheryl R. Hiatt
Project Manager

Encl.

c.c.: See Attached Distribution List

Mr. Peter Ramanauskas
July 15, 2014
Page 2

GM Bedford Distribution List

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Table of Contents

		Page
Section 1.0	Introduction.....	1
1.1	Purpose and Organization of Report	1
Section 2.0	Summary of Record Keeping Log	3
2.1	Summary of LCS, LDS, and Underdrain System Sump Monitoring Logs	3
2.2	Summary of Water Treated in the SSC Water Treatment Plant and 2,000 gpm Treatment System	4
2.3	Summary of the Vault Inspection Log and Maintenance Activities	4
Section 3.0	Analytical Results.....	5
3.1	Groundwater Monitoring Analytical Results	6
3.2	Leachate and Leak Detection Water Monitoring Analytical Results.....	8
3.3	Underdrain Analytical Results.....	10
3.4	Water Treatment Facility Analytical Results.....	10
Section 4.0	Leachate and Leak Detection Water Disposal.....	10
Section 5.0	Summary and Review of Water Elevations.....	11
5.1	Leachate Collection System	11
5.2	Leak Detection System.....	13
5.3	Gravel Underdrain System.....	14
Section 6.0	Issues Encountered and Remedial Actions	15
Section 7.0	Spill Cleanup Reports	16
Section 8.0	Financial Assurance.....	16
Section 9.0	References	16

**List of Figures
(Following Text)**

- Figure 2.1 Groundwater Sampling Locations
- Figure 3.1 EI CA750 Groundwater Analytical Results for PCBs for First Semi-Annual Event of 2013
- Figure 3.2 EI CA750 Groundwater Analytical Results for PCBs for Second Semi-Annual Event of 2013
- Figure 5.1 Summary of Average Monthly Volume of Water Removed from LCS and LDS

**List of Tables
(Following Text)**

- Table 2.1 2013 Summary of Daily Leachate Collection System Log
- Table 2.2 2013 Summary of Daily Leak Detection System Log
- Table 2.3 2013 Summary of Daily Groundwater Underdrain System Log
- Table 2.4 Summary of 2013 Water Elevations
- Table 2.5 2013 LCS, LDS, and Underdrain Maximum Water Elevation Summary
- Table 2.6 2013 Summary of Monthly Total Volume of Water Treated in SSC WTP and 2,000 gpm Treatment System
- Table 3.1 Summary of Total PCBs Analytical Results for EI CA750 2013 First Semi-Annual Groundwater Samples
- Table 3.2 Summary of Total PCBs Analytical Results for EI CA750 2013 Second Semi-Annual Groundwater Samples
- Table 3.3 2013 Leachate Collection System Monitoring Analytical Results
- Table 3.4 2013 Leak Detection System Monitoring Analytical Results
- Table 3.5 2013 Water Treatment Plant (SSC WTP and 2,000 gpm Treatment System) Monitoring Analytical Results

List of Appendices

- Appendix A
 - A.1 LCS Sump Field Logs
 - A.2 LDS Sump Field Logs
 - A.3 GUS Sump Field Logs
 - A.4 Automated Pumping System Logs
- Appendix B Sediment and Erosion Control Inspection Forms – Severson Environmental Services
- Appendix C Inspection Report – Cardno JF New, September 5, 2013
- Appendix D Mag Meter Verification Certification Report

List of Terms and Acronyms

2,000 gpm treatment system	the on-Facility 2,000 gallon per minute design capacity water treatment system
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
CRA	Conestoga-Rovers & Associates, Inc.
CET	Castings Engines and Transmissions
EI	Environmental Indicator
EQ tank	equalization tank
FA	financial assurance
Facility	GM CET Bedford Facility in Bedford, Indiana
ft	foot/feet
GM	General Motors LLC
gpm	gallons per minute
GUS	gravel underdrain system
HASP	Health and Safety Plan
IDEM	Indiana Department of Environmental Management
IM	Interim Measure
LCS	leachate collection system
LDS	leak detection system
MCL	Maximum Contaminant Level
mg/L	milligram-per-liter
NAPL	non-aqueous phase liquid
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 2013
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
WTP	water treatment plant
µg/L	microgram-per-liter

Section 1.0 Introduction

This Annual Monitoring Report (Report) summarizes data from the calendar year of 2013 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) Castings Engines and Transmissions (CET, formerly Powertrain) Bedford Plant (Facility), in Lawrence County, Bedford, Indiana. This Report has been prepared by Conestoga-Rovers and Associates, Inc. (CRA) on behalf of GM in accordance with the East Plant Area Vault Post-Closure Plan (CRA, 2012). The Vault is a part of the cleanup activities being conducted at the Facility under the East Plant Area Interim Measure (IM) and concurrent with other IMs at the Facility. The Approvals 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 disposal of PCB contaminated waste in the Vault. The Vault was constructed as a component of the East Plant Area IM during Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) activities conducted under a Performance-Based CA Agreement (effective March 20, 2001, and amended October 1, 2002, March 29, 2007, and May 9, 2008) for the Facility.

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 water treatment plant (WTP). The PCP prescribes a reduced frequency of record keeping procedures to at least monthly, however, was generally completed on a daily frequency in on 2013. Monitoring results are discussed in the sections below for each collection system. Generally, current recording of levels in the Vault systems and sampling and analysis of the systems continue to be in excess of the required monthly monitoring frequency established in the PCP. Additional post-closure monitoring required by the PCP includes semi-annual inspections of the Vault for the first two years following closure, and annually thereafter, recorded in a maintenance log. Consistent with the PCP, the next annual report covering post-closure monitoring data for the calendar year of 2014 will be submitted to U.S. EPA on or before July 15, 2015.

1.1 Purpose and Organization of Report

This Report presents the requirements for current annual reporting for the Vault in compliance with the monitoring requirements 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 from the LCS, LDS, and the GUS and quantity discharged from these systems to the 300 gallons per minute (gpm) design capacity Water Treatment Plant (Site Source Control [SSC] WTP) and/or the 2,000 gpm design capacity treatment system (2,000 gpm treatment system) for treatment, water elevations in the GUS, over the primary liner (LCS), and over the secondary liner (LDS) if any, and the Vault inspection log.

Section 3.0 – Analytical Results

This section provides all analytical results from the monitoring of the LCS, LDS, and GUS combined effluent from the SSC WTP and 2,000 gpm treatment system, 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 (\geq) 1 part per million (ppm).

Section 5.0 – Summary and Review of Water Elevations

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

Section 6.0 – Issues Encountered and Rectification Actions

This section identifies potential 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 if they occurred outside of the Exclusion Zone established in accordance with the Site Health and Safety Plan (HASP).

Section 8.0 – Financial Assurance

This section discusses the future financial assurance for the Vault.

Section 9.0 – References

This section presents references cited in this Report.

Section 2.0 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 water elevations 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 SSC WTP and 2,000 gpm treatment system for treatment, and the respective PCB concentration (if known).
- 6) The Vault inspection log and maintenance activities.

2.1 Summary of LCS, LDS, and Underdrain System Sump Monitoring Logs

For the majority of 2013, the water level in each of the Vault systems was recorded on a daily basis. Summaries of the water levels recorded for the LCS, LDS, and GUS are presented in Tables 2.1, 2.2, and 2.3, respectively. Manual water level measurements were completed in the LCS, LDS and GUS sumps by Severson Environmental Services as part of their East Plant Area construction activities, and reported to CRA, including when manual pumping was being performed (Appendices A.1, A.2, and A.3, respectively). When the automated systems (LCS and GUS) located within the on-Facility SSC WTP were active, CRA recorded the levels and pumped volumes reported by these systems (Appendix A.4). The levels and quantity of liquid pumped from the Vault collection systems are also presented in Tables 2.1 through 2.3. In accordance with the Approvals, water pumped from the LCS, LDS, and GUS is managed in compliance with the National Pollutant Discharge Elimination System (NPDES) permit (NPDES Permit No. IN0003573). It should also be noted that Tables 2.1 through 2.3 incorporate corrections, and additional annotations over the field logs found in Appendix A.

Table 2.4 presents a summary of the elevation of water 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, Primary liner system, LDS, secondary liner system, and GUS). Table 2.5 presents a summary of the maximum monthly water elevations in each of the systems. 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 SSC Water Treatment Plant and 2,000 gpm Treatment System

Water removed from the Vault sumps is directed via permanent forcemain to the equalization tank (EQ tank) located south of the on-Facility SSC WTP, where it is combined with water from three groundwater collection system wet wells prior to treatment in the WTP. Water from the Vault sumps is primarily treated through the SSC WTP, but can be treated through the 2,000 gpm treatment system, which is similar in design but has a much larger throughput capacity. Both the on-Facility SSC WTP and the 2,000 gpm treatment system discharge at Outfall 003 (combined treated effluent streams from the SSC WTP and 2,000 gpm treatment system), which is sampled monthly under the NPDES permit (NPDES Permit No. IN0003573). Data collected during the 2013 calendar year were reported according to the permit.

The SSC WTP was shut down mid-May 2013 for maintenance and it remained off through the rest of 2013 for repairs to the Astrasand filter (replacement of airlift assembly tube and repair of a leak in the tank). During the period of time that the SSC WTP was not operational, water removed from the Vault sumps and groundwater from the wet wells was treated via the 2,000 gpm treatment system prior to being discharged at Outfall 003.

The amount of water treated in and discharged from the SSC WTP is recorded daily. A summary of the total monthly volume and daily average of treated water in the SSC WTP for 2013 is provided in Table 2.6. Also presented in Table 2.6 is a summary of the water (from Vault Sumps, wet wells, and storm water) treated in the 2,000 gpm treatment system for 2013.

2.3 Summary of the Vault Inspection Log and Maintenance Activities

Various maintenance and inspection activities were performed at the Vault during the calendar year 2013.

Sevenson Environmental Services completed daily sediment and erosion control inspections of the Vault cover system between April 24 and 30, 2013, which resulted in satisfactory conditions, which did not require any further action. Copies of the inspection forms are included in Appendix B.

The Vault final cover system was inspected on September 5, 2013 by Cardno JF New, in terms of providing a qualitative analysis of the progress of native grass and wildflower plantings. The

inspection revealed that overall vegetation cover was approximately 80 percent. However, less than ten percent of the cover was native plantings, with the remainder of the vegetation comprised of various weedy growth. The inspection did not reveal any significant erosion. A copy of the inspection report is included in Appendix C (note that the Vault is referred to as "Area 4"). No erosion or ponding issues were noted by GM, CRA, and SES personnel located on-Site through the year.

Due to the limited run time of the two Flygt MP3085.172 submersible pumps in the LCS sump, service of the pumps was not necessary in 2013. The need to service the pumps is judged on the ability of the pumps to maintain the water levels in the sump sufficient to keep the pumps cool. This level exceeds the 1 foot (ft) level listed in the approval and therefore, we will be requesting a variance in the level above the liner of between 1 ft and 3 ft (672 ft above mean sea level [AMSL] and 674 ft AMSL) to maintain the integrity of the pumps. This request will follow with the formal responses to comments on the 2012 Annual Vault Report. The Grundfos 40S submersible pump in the GUS did not require service, based on an assessment made by the pump's ability to maintain the water levels (i.e., the pump settings/triggers described in the PCP) in the sump between 2 ft and 5 ft (664.18 ft AMSL and 667.18 ft AMSL, respectively). This level kept the maximum level of water in the sump at least 3 inches below the level of the liner. However, as U.S. EPA's comments on the 2012 Report indicate, the Approvals require the level be kept 1 ft below the liner. Therefore, this year the upper level will be dropped to 4 ft (666.18 ft AMSL, which will keep at least a 15-inch difference.

The magnetic flow meter (mag meter), identified as FIT-Vault (serial number F1095B16000), measures 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 WTP. Annual inspection and verification of the FIT-Vault mag meter occurred on March 13, 2013 by Turnkey Instrument Solutions. FIT-Vault achieved test results to show that the instrument is functioning correctly and is within +/- 1% of calibration values for the tested items, which include the amplifier, current output 1, pulse output 1, and test sensor. A copy of the verification certification report is provided in Appendix D.

Section 3.0 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

Groundwater sampling specific to the TSCA Vault or the GUS did not occur in 2013 although bi-annual groundwater samples were collected for the Facility, including this area. The recharge rate of the LDS did not significantly change or approach the TSCA theoretical Leakage Action Rate and so there is no evidence of a release from the Vault to the groundwater table. Groundwater samples are collected at the perimeter of the Facility on a semi-annual basis under the Environmental Indicator (EI) CA750 monitoring program for the Facility. EI CA750 groundwater monitoring results for 2013 events have been previously reported under separate cover, but have also been included in this report. Groundwater sampling locations proximate to the Vault, and groundwater sampling locations under the EI CA750 in the vicinity of the Vault are presented on Figure 2.1.

The first semi-annual EI CA750 groundwater sampling in 2013 was completed June 26 through 28, 2013, and the second semi-annual sampling event was completed October 28 through 30, 2013.

Analytical results for PCBs in the first semi-annual sampling event of 2013 is summarized in Table 3.1. Figure 3.1 presents databoxes, which summarize the groundwater and surface water analytical results for the PCBs sampling locations in the EI CA750 monitoring program for the first semi-annual sampling event of 2013. No PCB detections were proximate to the Vault.

PCBs were detected on the Facility, not near the Vault at two sampling locations CH-42 and MW-X227Y054 within the Facility property at total PCB concentrations of 0.086 J and 5.4 micrograms-per-liter ($\mu\text{g}/\text{L}$), respectively. Both locations are south of the Vault and not downgradient from it. MW-X227Y054 had a previous detection noted during the July/August 2012 sampling event; and CH-42 had a previous detection noted during the March 2011 sampling event. Non-aqueous phase liquid (NAPL) has historically been observed at MW-X227Y054. Detections at other wells with previous recent detections of PCBs (MW-X227Y100) were not observed during this event. With the exception of the total PCBs result from MW-X227Y054, the concentrations of total PCBs during this sampling event were below the Maximum Contaminant Level (MCL) of 0.5 $\mu\text{g}/\text{L}$.

Analytical results for PCBs for the second semi-annual sampling event of 2013 are summarized in Table 3.2. Figure 3.2 presents databoxes, which summarize the groundwater and surface water analytical results for the PCB sampling locations in the EI CA750 monitoring program for the second semi-annual sampling event of 2013. No PCB detections were proximate to the Vault.

There were PCBs detected at five sampling locations at the Facility, not near the Vault; CH-42 (0.12 J µg/L) and CH-44 (0.056 J µg/L), MW-X085Y070S-2 (0.073 J µg/L), MW-X227Y054 (6.5 µg/L), and Tributary 3-3 (0.084 J µg/L and non-detect). The monitoring wells are located south and of the Vault and not downgradient from it. CH-42 and MW-X227Y054 had a previous detection noted during the first semi-annual sampling event in June 2013. NAPL has historically been observed at MW-X227Y054. With the exception of the total PCBs result from MW-X227Y054, which has a historical NAPL detection, the concentrations of total PCBs during this sampling event were below the MCL of 0.5 µg/L.

Sample Quality

Two samples, taken at locations MW-X085Y070S-1, MW-X085Y070S-2, from the first semi-annual EI CA750 groundwater sampling event of 2013 and two samples, taken at locations MW-X033Y147S and MW-X043Y186, from the second semi-annual EI CA750 groundwater sampling event of 2013 exhibited data quality problems and the results were rejected during sample validation. Samples were rejected for Aroclor-1254 (PCB-1254) and Aroclor-1260 (PCB-1260) due to surrogate non-compliance. The laboratory spiked each sample with a non-target compound (in this case Decachlorobiphenyl [DCB]) prior to extraction. Spiking the sample is done to ensure that the sample was extracted without issues, and that any present PCBs would be detected.

In the case of these samples, the surrogate recovery was <10%, which is outside of the acceptable quality bounds so the results for those sample parameters were rejected. This effect is commonly observed when the composition of the water matrix inhibits the surrogate recovery, which also can imply poor recovery of the compounds of interest (PCBs) during the sample preparation. PCBs (including Decachlorobiphenyl (DCB) used for surrogates) are non-polar and highly insoluble in water. The PCBs and DCB low spike recoveries in water can be affected by numerous factors, including matrix interference. The factors which have been shown to cause lower recoveries include matrix interference (which is not uncommon) that can suppress the efficiency of the extraction or be a positive interference showing elevated baseline and mask the recovery of the late eluting PCBs more commonly. Another factor may be particulate present in the sample which the PCB will adsorb to, thereby inhibiting and lowering the efficiency of extraction of the water matrix. This is not an exceptional occurrence, and samples are routinely qualified for surrogate non-compliance. The surrogates are not typically severely inhibited, in which case the results may be qualified as estimated. All other quality control parameters were within the acceptance limits.

In the 2013 sampling events, the slightly low recovery of late eluting PCBs (A-1260) in the MS/MSDs were likely caused due to inherent insolubility of PCBs in water, coupled with a slightly lower efficiency due to the tetrabutylammonium (TBA) clean-up procedures (SW 846

Method 3660) used to minimize matrix interference in the sample. The clean-up procedure used by the laboratory has been shown to lower the efficiencies of recovery by an additional 5-6%. The MS/MSD recoveries observed were just slightly below the laboratory calculated recovery limits (6% and 11% lower than the QC lower control limit), and resulted in the associated sample being considered estimated. No significant issues were observed during the quantitation of the matrix spike/matrix spike duplicate, and the slightly lower recoveries do not significantly impact the results of the samples.

The significantly low recoveries (<10%) of the surrogate DCB in the samples appear to be due to insolubility coupled with factors associated with the sample matrix and likely not related to sampling technique. This is based on the review of the sample chromatograms along with the quality control charts of "real world" water samples which has a mean DCB recovery of 43% and the laboratory's quality control charts of a matrix-free sample (laboratory blank) which has a mean recovery of DCB of 77%. The actual matrix interference that may be present in the affected samples is not readily determined with the information generated from the analytical data of PCBs. Further extensive research would be required in order to possibly identify the root cause of interferences present for the selected locations.

For future sampling events, if data quality issues are encountered during a sampling event that result in unreliable data, a resampling event will be scheduled for the locations in question as soon as the data quality issues become apparent.

3.2 Leachate and Leak Detection Water Monitoring Analytical Results

The PCP requires that water from the LCS and LDS is sampled a minimum of quarterly for PCBs. Both the LCS and LDS were sampled on a monthly basis during 2013. All analytical data for samples collected from the LCS and LDS in 2013 are presented in Tables 3.3 and 3.4, respectively. The LCS samples were analyzed for volatile organic compounds (VOCs) and PCBs, while LDS samples were only analyzed for PCBs.

Pursuant to US 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." No samples collected from the LCS and LDS exhibited results with PCB concentrations \geq 1 milligram per liter (mg/L or ppm), therefore there is no TSCA material to report. All water pumped from the LCS and LDS was treated in the on-Facility SSC WTP or 2,000 gpm treatment system during 2013.

Sampling results for the LCS sump ranged from 1.8 µg/L to non-detect for PCBs. The peak in 2012 was 15.3 µg/L, therefore the 2013 results represent a year over year decrease of one order of magnitude. This is likely the result of more consistent pump operations through 2013 and a decrease in contact time within the sump. There were also some very low, estimated detections of benzene at 0.18 µg/L, 0.22 µg/L and 0.16 µg/L during April, July and August 2013. Similar detections were also previously present during November and December 2012.

Sampling results for the LDS sump ranged from 13 µg/L to non-detect for PCBs. The sampling results continue to be erratic, occasionally, but not consistently showing some possible correlation to pumping events. The varying results are likely the effect of contamination previously introduced during construction of the LDS, caused by those sediments accidentally introduced into the LDS occasionally dislodging from further up in the system and making their way into the sump.

Sample Quality

Sample WL-AOI7-121913-GS-399686 collected from the LCS, and samples WL-AOI7-012313-GS-39927 and WL-AOI7-062513-GS-39965 collected from the LDS in 2013 exhibited data quality problems and the results were rejected during sample validation.

Sample WL-AOI7-121913-GS-399686 collected from the LCS was rejected for chloroethane due to a continuing calibration response factor (0.033) below the minimum required set by U.S. EPA of 0.05. Samples analyzed in association with non-compliant continuing calibration are rejected for non-detects.

Samples WL-AOI7-012313-GS-39927 and WL-AOI7-062513-GS-39965 collected from the LDS were rejected for Aroclor-1260 (PCB-1260), and Aroclor-1254 (PCB-1254) and Aroclor-1260 (PCB-1260), respectively, due to surrogate non-compliance. The laboratory spiked each sample with a non-target compound (DCB) prior to extraction. Spiking the sample is done to ensure that the sample was extracted without issues, and that any present PCBs would be detected. In the case of these samples, the surrogate recovery was <10%, which is outside of the acceptable quality bounds so the results for those sample parameters were rejected. Please refer to Section 3.1 for further discussion on why this issue may occur. GM and CRA are evaluating the sampling and analysis procedures and will continue to work with the lab to prevent these issues from occurring in the future.

3.3 Underdrain Analytical Results

There were no samples collected from the GUS in 2013. CRA believes that with respect to monitoring potential environmental impacts, maintaining sampling at the perimeter of the Vault (currently being conducted under the EI CA750) is the best way to monitor for downgradient changes to groundwater quality, as groundwater concentrations in the immediate vicinity of the Vault have not differed in pre-Vault sampling and are not anticipated in the future to differ significantly in chemical composition or concentrations from those found in the LCS and LDS. Therefore, the GUS sample would be expected to have low levels of PCBs, unrelated to the Vault. However, to address U.S. EPA questions on the 2012 Annual Report, CRA is investigating methods for collecting a sample from the GUS in 2014.

Perforated drain pipes beneath the base of the Vault collect bedrock groundwater beneath the Vault and direct it to a sump located outside (i.e., north side) the Vault footprint. Groundwater collected in the GUS sump was directed for treatment at the SSC WTP until mid-May 2013 and to 2,000 gpm treatment system starting mid-May 2013 for the remainder of the year, as the Astrasand filter in the groundwater treatment system was down, waiting for parts on order to repair the system. Analytical results for samples collected from the treated water discharge stream from the SSC WTP and 2,000 gpm treatment system (the discharge streams from each treatment system are combined and treated at the same location) are discussed in the following section.

3.4 Water Treatment Facility Analytical Results

In 2013, water removed from the LCS and GUS was directed via permanent forcemain to the SSC WTP for treatment until mid-May, and then to treatment via the 2,000 gpm treatment system for the remainder of 2013. Water removed in 2013 from the LDS was pumped via a temporary pump and temporary hoses to the LCS manhole. Effluent from the SSC WTP and the 2,000 gpm treatment system are combined prior to being discharged at Outfall 003. Monthly samples were collected from Outfall 003 under the NPDES Permit (NPDES Permit No. IN0003573) and the data have been reported according to the permit. The analytical results for monthly samples collected from Outfall 003 in 2013 are presented in Table 3.5.

Section 4.0 Leachate and Leak Detection Water Disposal

Pursuant to US 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." There were no analytical results with \geq 1 mg/L (ppm) PCBs for water samples collected from the LCS or LDS during the calendar year of 2013. All of the pumped leachate, leak detection liquid, and groundwater were treated by the on-Facility SSC WTP or 2,000 gpm treatment system.

Section 5.0 Summary and Review of Water Elevations

The water level above the primary liner (LCS), the secondary liner (LDS) and GUS continued to be manually measured on a daily basis (holidays and weekends excepted) throughout most of 2013, with the exception of a period from June 26 to July 15, 2013 (see Table 2.4, when personnel were not available to measure the levels.

Accumulated water above the primary liner (i.e. in the LCS) and in the GUS continues to be transported via forcemain and discharged for treatment to the on-Facility SSC WTP or 2,000 gpm treatment system (transported via temporary hoses for the period the SSC WTP has not been operational), as required in the Approvals and subsequent PCP. In addition, the LDS is monitored and manually pumped via temporary pump and hose into the LCS manhole, when necessary, to lower the levels below the base (i.e. the primary liner) of the Vault. As previously described in Section 2.2, a summary of the water elevations above the primary liner (LCS), the secondary liner (LDS), and in the GUS are presented in Tables 2.1, 2.2, and 2.3, 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 system are presented in Table 2.5. Copies of the field logs for manual measurements collected from the LCS, LDS, and GUS sumps, as well as recorded values from the automated pumping system 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.

5.1 Leachate Collection System

Two submersible pumps (one pump is a duty unit and the other is a standby unit) were permanently installed in the LCS sump in November 2008. The pumps require at least 1 ft of water depth in the sump to keep the pump motors submerged in order to prevent overheating. The operating range for the pump has been set to a maximum of 3 ft of water depth in the sump to keep the number of pump cycles per hour within the range needed to prevent early failure of the pump. This exceeds the level in the Approval. CRA will be requesting an increase in the allowed levels in the sump to allow automated pump efficiency and to prevent burnout of the pumps.

Due to the pump's operating range, the LCS automated system is designed to operate between 1 ft and 3 ft depths of liquid above the floor of the sump (AFOS) (bottom of sump at 671.00 ft AMSL or 69.83 ft below the top of the sump). Due to hardware and radio communication problems that were encountered in 2012 between the SSC WTP and the Vault, the automated pumping system was not operational for the first half of 2013 to allow for the system to be repaired. During this period, water was allowed to accumulate in the sump to aid to help problem solve automated recoding issues by determining why the correct flow rates and water levels were not being recorded at the PLC. Manual water level measurements were collected generally on a daily basis (in excess of the monthly monitoring required by the PCP) while the automated system was unavailable for collecting flow data for the first half of the year.

Levels greater than the operational 3 ft in the LDS occurred during 2013 from February through June 2013 and were related to the following issues:

- Communication issues with the Prosoft RadioLinx wireless system continued from 2012 and work was done to identify the on-going cause of the radio failures (i.e. possible lightning strikes at the Vault in 2012 [ProSoft indicated high likelihood of lightning having struck the system], antenna alignment issues etc.). Prosoft was engaged to troubleshoot the radios starting in late June 2013. The conclusion of the Prosoft study was that despite direct line of site, a reliable signal at the WTP from the Vault was not possible, so the automated pumping system at the LCS was shut off to prevent the pumps from running dry, although manual pumping continued. An evaluation was conducted in the latter half of 2013 and the radio system was replaced with a cellular based communications system in April 2014, which has addressed this issue.
- Annual flow meter verification service was performed on the flow meters in March 2013, and it was identified that the LCS flow meter was not be operating. Repairs to the LCS meter were completed in April 2013, where it was also identified that a loose wire that was preventing the meter from transmitting the flow volumes to the PLC. This repair fixed the problem.
- Other shut-offs were required in March and May related to the maintenance at the SSC and 2,000 gpm treatment system WTPs. Carbon changeouts were completed at the SSC WTP in March 2013. In May 2013, maintenance of the Astrasand filter was required and it was found that the airlift assembly pipe within the recirculating sand filter had to be replaced (This took longer than anticipated due to ordering and shipping problems). Since it was no longer possible to operate the SSC WTP, pumping was stopped until the temporary lay flat line could be put in place to divert the water from the LCS and GUS into the storm water pond (and treatment through the 2,000 gpm treatment system). There was concern that the lay flat hoses could freeze, and potentially burst, which required stopping the system in the later months of 2013 and persisted into 2014 due to the unseasonably cold winter.

The automated pumping system was reactivated in the latter half of June 2013 when the radio system was replaced with a cellular based communications system and the lay flat hoses were in place to divert water to the storm water pond. The maximum depth in the sump occurred just before the automated pump was activated, with approximately 4.3 ft of water AFOS. The minimum depth of water was approximately 1.3 ft AFOS and occurred following the pumping on June 20, 2013. Pumping was activated by the automated system on one other occasion in 2013 on November 20, 2013, and LCS sump depths were maintained below the 3 ft described in the PCP.

When the LDS is pumped into the LCS, a change in water level in the LCS is not noted. This is a result of the greater storage capacity of the LCS in comparison to the LDS. (i.e., more unconfined gravel). The Post-Closure Plan will be revised to require manual pumping if the static level of water in the LCS is close to the required limit when the LDS water is pumped into the LCS.

The automated system was turned off on December 10, 2013 to allow for pump and flow meter testing. Following completion of pump and flow meter testing, the automated system could not be activated on December 18, 2013 due to problems with the temporary overland water lines running to the 2,000 gpm treatment system freezing because of the cold temperatures. The automated system remained off for the remainder of 2013 due to frozen lines. The SSC WTP was been repaired in April 2014 and this problem is not anticipated this winter. Manual water level measurements were collected weekly during this time and did not rise above 3 ft of water AFOS.

5.2 Leak Detection System

Pumping at the LDS, via a temporary pump discharging to the LCS manhole, occurred on five occasions in 2013 (February 27, April 26, June 5, September 13, and December 23), with the first four occasions removing approximately 1.5 ft of water depth (approximately 300 to 370 gallons), and the last pumping event removing just over approximately 0.5 ft of water depth (approximately 450 gallons based on flow meter). The total amount of water removed from the LDS during the 2013 calendar year was approximately 1,800 gallons. During 2013, the depth of water in the LDS was maintained between 0.3 ft and 2.10 ft AFOS (bottom of sump at 668.5 ft AMSL or 72.64 ft below the top of the sump), with the maximum depth of 2.1 ft AFOS measured prior to pumping the level down to 0.54 ft AFOS on February 27, 2013.

The pumping rate was determined based on the estimated volume removed and averaged over the time in days between events (a flowmeter was used on the last pumping event). The actual

calculated rate of pumping for the Vault ranged from 0.4 gallons/acre/day to 1.3 gallons/acre/day. The TSCA theoretical sustained Leakage Action Rate is calculated in the PCP as 32,000 gallons/acre/day, therefore a leak is not suspected at this time, as the actual rate is much lower than the theoretical rate at which leakage might occur.

5.3 Gravel Underdrain System

A permanent pump (3 ft long vertical pump) was installed in the underdrain sump in November 2008, which requires the pump to remain submerged by at least 2 ft of water at all times in order to prevent overheating of the pump motor.

The automated system for the GUS is designed to operate between water depths of 2 ft and 5 ft AFOS (at the approximate elevation of the base of the secondary liner beneath the Vault) (bottom of sump at 662.18 ft AMSL or 77.31 ft below the top of the sump structure). At the maximum end of the range the level is 3 inches lower than the liner. The Approvals require that a 1 ft minimum distance be maintained and was noted in the 2012 Report comments. To meet the Approval requirements, the upper operational depth allowable will be set to 4 ft to maintain a minimum distance of 15 inches between the upper operating range and the secondary liner. Due to the hardware and communication problems that the automated system encountered in 2012 and resulting repair work that occurred into 2013, as described in Section 5.1, automated pumping was not active for the first half of 2013, which resulted in the water level in the GUS sump to rise above the secondary liner system. The automated system was active starting June 20 to 25 and July 1 to December 9, 2013, and the water level in the sump was maintained below the secondary liner system. The automated system was shut off between December 9 and December 17, 2013 to allow for pump and flow meter testing; however, when these maintenance activities were completed, the pumping system remained off through the remainder of 2013 due to water being frozen in the temporary overland hoses that discharge to the 2,000 gpm treatment system. The frozen water acted as a blockage and prevented any more water from being pumped from the GUS and LCS to the storm water pond. As a result of no pumping, the water level in the GUS sump rose above the secondary liner system at the end of 2013.

Water depth in the GUS was maintained between approximately 2 ft and 7 ft through 2013. The highest level of 7.0 ft AFOS was recorded in June prior to the activation of the automated pumping system. The system shutdowns related to the radio communications problems, treatment system maintenance, and freezing risk are identified in Section 5.1 for the LDS. Higher measurements during non-active pumping periods likely represent the typical groundwater level beneath the Vault. The automated system recorded a total flow of approximately 1,000,000 gallons removed from the GUS.

Section 6.0 Issues Encountered and Remedial Actions

The following is a list of issues, related to the Vault, encountered during the 2013 calendar year and actions taken to rectify the issues:

- Due to hardware and radio communication problems that were encountered in 2012 between the SSC WTP and the Vault, replacement communications parts were ordered and installed in October 2012. The communications issues persisted into November 2012.
 - The automated system was not operated for the first half of 2013. Water was allowed to accumulate in the LCS and GUS sumps to aid in PLC calibration following the repairs.
 - A decision was made to purchase communications systems based on cellular technologies, ordered and installed.
 - While the automated communication system was unavailable for collecting flow and level data, manual water level measurements were collected generally on a daily basis.
 - Repairs to the automation system radio communications were completed in April 2014.
- The SSC WTP was shut down mid-May 2013 for maintenance/repairs to the Astrasand filter and it remained off through the rest of 2013 while replacement parts were obtained and installed.
 - Water removed from the Vault sumps (LCS and GUS) was diverted to the storm water pond in the East Plant Area via temporary overland hoses while the SSC WTP was not in operation. Water in the storm water pond is sent to the 2,000 gpm treatment system (which is essentially the same treatment train as the groundwater treatment) prior to being discharged at Outfall 003.
- The automated system was turned off on December 10, 2013 to allow for pump and flow meter testing. Following completion of pump and flow meter testing, the automated system could not be activated due to problems with the temporary overland water line to the treatment system freezing (i.e., lines were blocked) because of the cold temperatures. These conditions persisted into 2014 which prevented pumping water to the storm water pond. This did cause levels in the sumps to rise above those levels required in the Approvals. Work is continuing this year to reduce the levels in the sumps to acceptable levels.
 - Manual water level measurements continued to be collected generally on a daily basis. The groundwater treatment system repairs were completed in April 2014 and the use of layflat hose is not anticipated for this winter (2014-2015).

Section 7.0 Spill Cleanup Reports

There were no on-Facility PCB spills that occurred outside or inside the Exclusion Zone that was established in accordance with the project HASP (CRA, August 2008). Additionally, there were no spills on public roads.

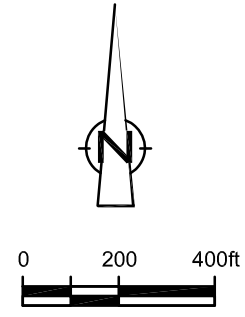
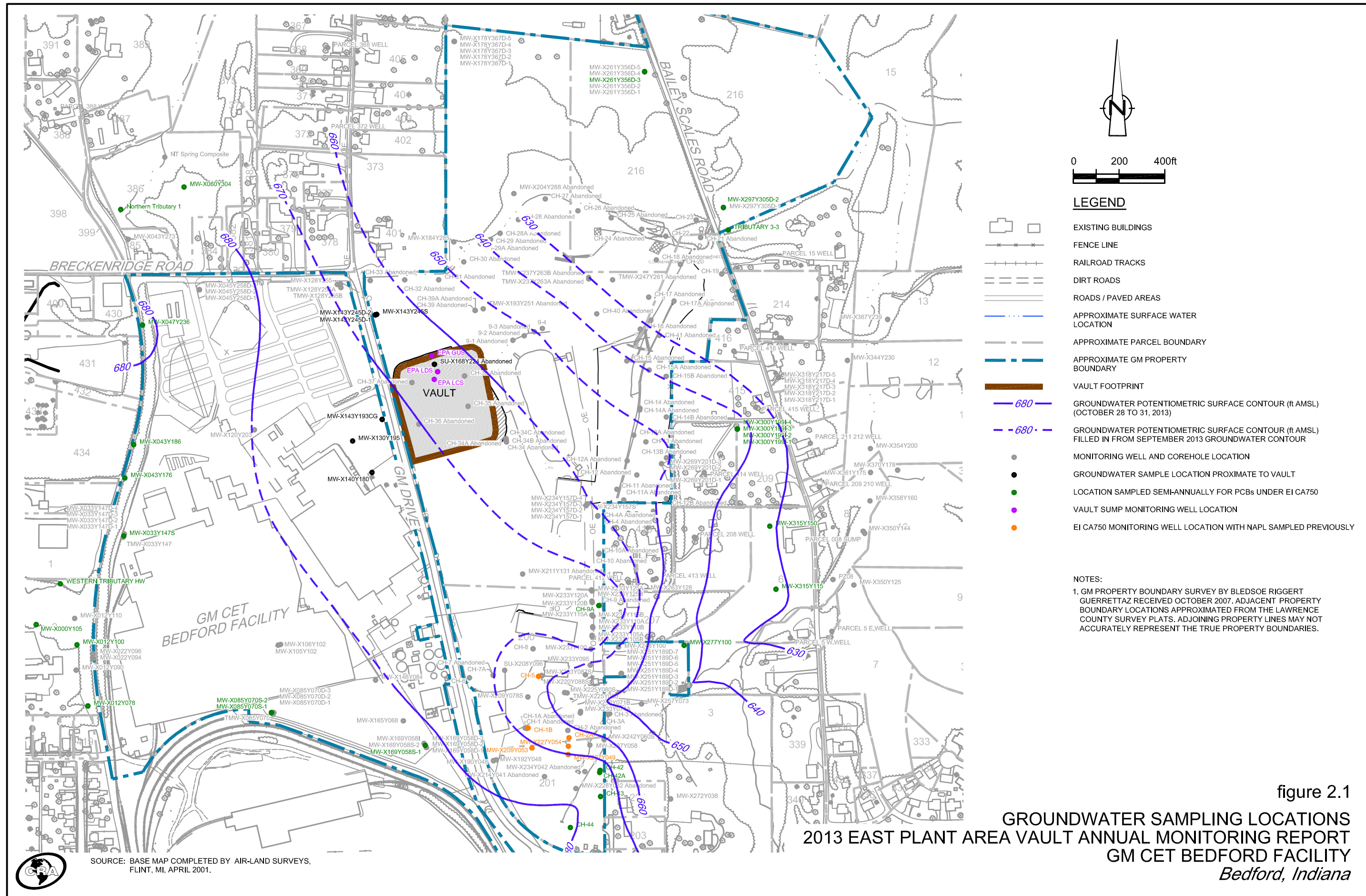
Section 8.0 Financial Assurance

Remedial construction of the IMs for the East Plant Area, which includes the Vault, is continuing at the Facility. The Approvals from U.S. EPA TSCA and IDEM established that, "The financial assurance (FA) mechanism can be part of the financial assurance mechanism developed for the East Plant Area or the final Corrective Measures". GM is currently negotiating a 3008 (h) RCRA Order for the facility, which includes financial assurance cost estimates for operation and maintenance related to the Vault through the approval of the Corrective Measures Proposal (CMP).

Section 9.0 References

CRA, Consolidated GM Bedford Health and Safety Plan (HASP), August 2008.

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

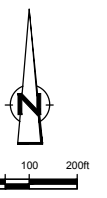
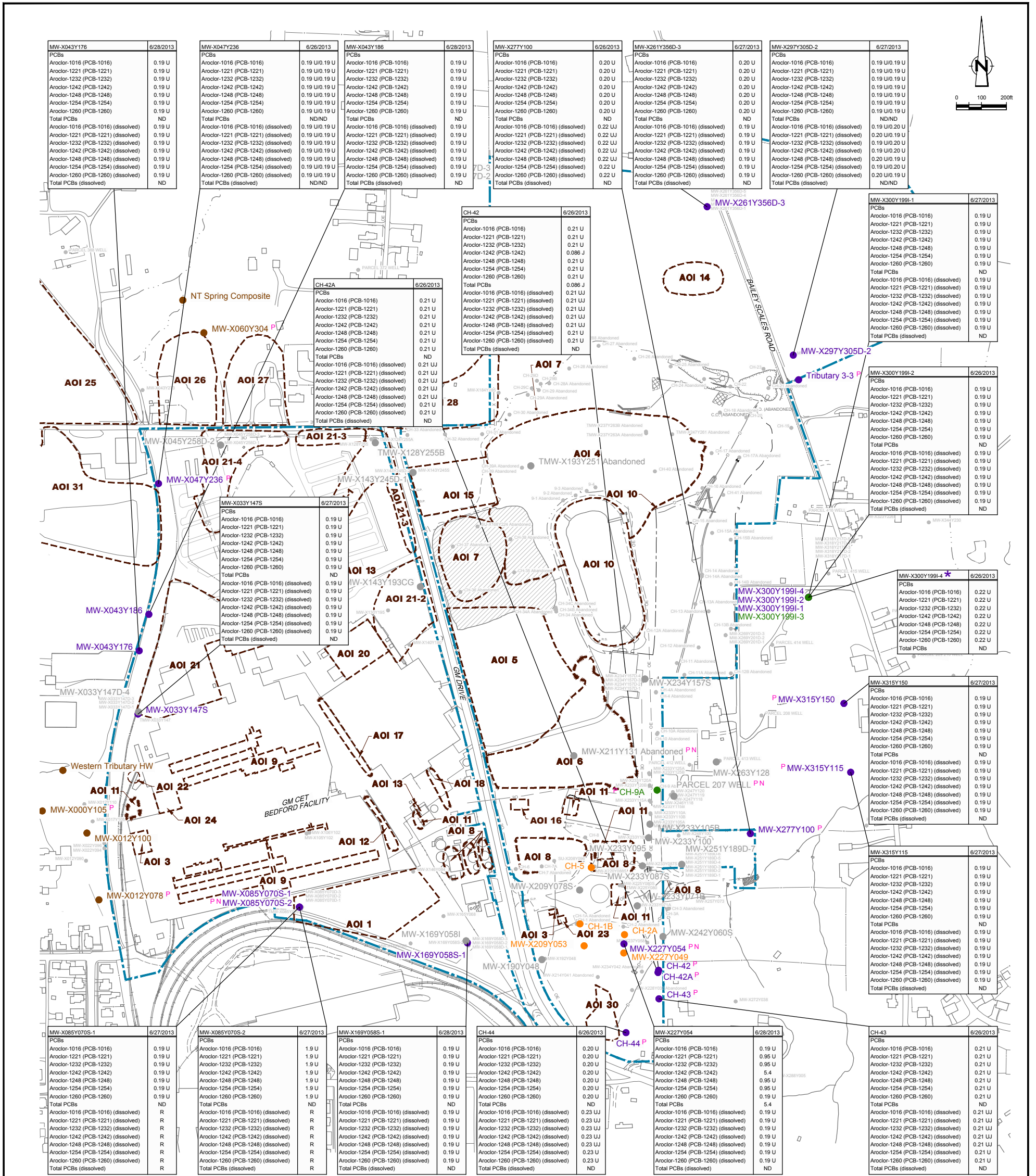


- LEGEND**
- EXISTING BUILDINGS
 - FENCE LINE
 - RAILROAD TRACKS
 - DIRT ROADS
 - ROADS / PAVED AREAS
 - APPROXIMATE SURFACE WATER LOCATION
 - APPROXIMATE PARCEL BOUNDARY
 - APPROXIMATE GM PROPERTY BOUNDARY
 - VAULT FOOTPRINT
 - 680 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (ft AMSL) (OCTOBER 28 TO 31, 2013)
 - 680 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (ft AMSL) FILLED IN FROM SEPTEMBER 2013 GROUNDWATER CONTOUR
 - MONITORING WELL AND COREHOLE LOCATION
 - GROUNDWATER SAMPLE LOCATION PROXIMATE TO VAULT
 - LOCATION SAMPLED SEMI-ANNUALLY FOR PCBs UNDER EI CA750
 - VAULT SUMP MONITORING WELL LOCATION
 - EI CA750 MONITORING WELL LOCATION WITH NAPL SAMPLED PREVIOUSLY

NOTES:
 1. GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES.

figure 2.1
 GROUNDWATER SAMPLING LOCATIONS
 2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
 GM CET BEDFORD FACILITY
 Bedford, Indiana

SOURCE: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001.



LEGEND

- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE SURFACE WATER LOCATION
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE PARCEL BOUNDARY
- AOI BOUNDARY
- VAULT FOOTPRINT
- GROUNDWATER SAMPLE LOCATION
- GROUNDWATER SAMPLE LOCATION - HISTORICAL PCB DETECTION
- JUNE 2013 EI CA750 SAMPLING SUMMARY LOCATION
- RACER TRUST LOCATION NOT SAMPLED, NO ACCESS
- MONITORING WELL LOCATION WITH NAPL SAMPLED PREVIOUSLY
- MONITORING WELL LOCATION DRY

- P PREVIOUS PCB GROUNDWATER DETECTION
- N HISTORICAL NAPL DETECTION

SAMPLE LOCATION IDENTIFIER	
DATE SAMPLE TAKEN	CHEMICAL NAME
MW-X033Y147S	6/27/2013
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U

AOI SUMMARY

AOI ID	Description
AOI 1	Former Railroad Operations and Minerals Processing Facility
AOI 2	Waste Storage Area
AOI 3	PCB Storage Areas
AOI 4	Former North Disposal Area
AOI 5	Former East Sand Disposal Area
AOI 6	Former Sludge Disposal and Fire Training Area
AOI 7	Former North Lagoon and Outfall 001
AOI 8	Former South Lagoons and Outfall 002
AOI 9	Service Tunnels
AOI 10	Existing Stormwater Lagoon and Outfall 003
AOI 11	Aboveground Storage Tanks
AOI 12	Area Affected by the Reclaimed Hydraulic Fluid Release
AOI 13	Underground Storage Tanks
AOI 14	McBride Cows Disposal Area
AOI 15	Former Equipment Storage Area
AOI 16	Former East Electrical Substation
AOI 17	Piston Building Oil Accumulations
AOI 18	Area Affected by the Henry System Discharge

NOTES:
 1) GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGETT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES.

* AT MW-X300Y199I-4, INSUFFICIENT VOLUME FOR DISSOLVED PCB RESULTS.

AOI SUMMARY

AOI ID	Description
AOI 19	Area Affected by the Paint and Thinner Spill
AOI 20	Northern Portion of the Piston Building
AOI 21	Filled Ravine North of Die Cast Building
AOI 21-1	Former Drainage Valley Under Hourly Parking Lot
AOI 21-2	Former Drainage Valley Northeast of Piston and Office Buildings
AOI 21-3	Surface Water Ditches Located Along GM Drive and Breckenridge Road
AOI 21-4	Former Drainage Valley East of Electrical Sub-Station, Breckenridge Road
AOI 22	Tool Room Annex Dock Release
AOI 23	Area Affected by the 1996 Wastewater Treatment Filter Cake Release
AOI 24	Area Affected by the June 2000 Die Lube 5150 Release
AOI 25	Off-Site Suspected Fill Area - Parcel 398
AOI 26	Off-Site Suspected Fill Area - Parcels 384 & 386
AOI 27	Off-Site Suspected Fill Area - Parcels 381 & 382
AOI 28	Off-Site Suspected Fill Area - Parcel 401
AOI 29	Off-Site Suspected Fill Area - Parcel 399
AOI 30	On-Site Suspected Fill Area - Parcel 201
AOI 31	Off-Site Suspected Fill Area - Parcel 400

No.	Revision	Date	Initial

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

Approved: _____

**GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT

**EI CA750 GROUNDWATER ANALYTICAL
RESULTS FOR PCBs FOR
FIRST SEMI-ANNUAL EVENT OF 2013**

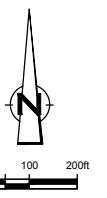
CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT MI. APRIL 2001.

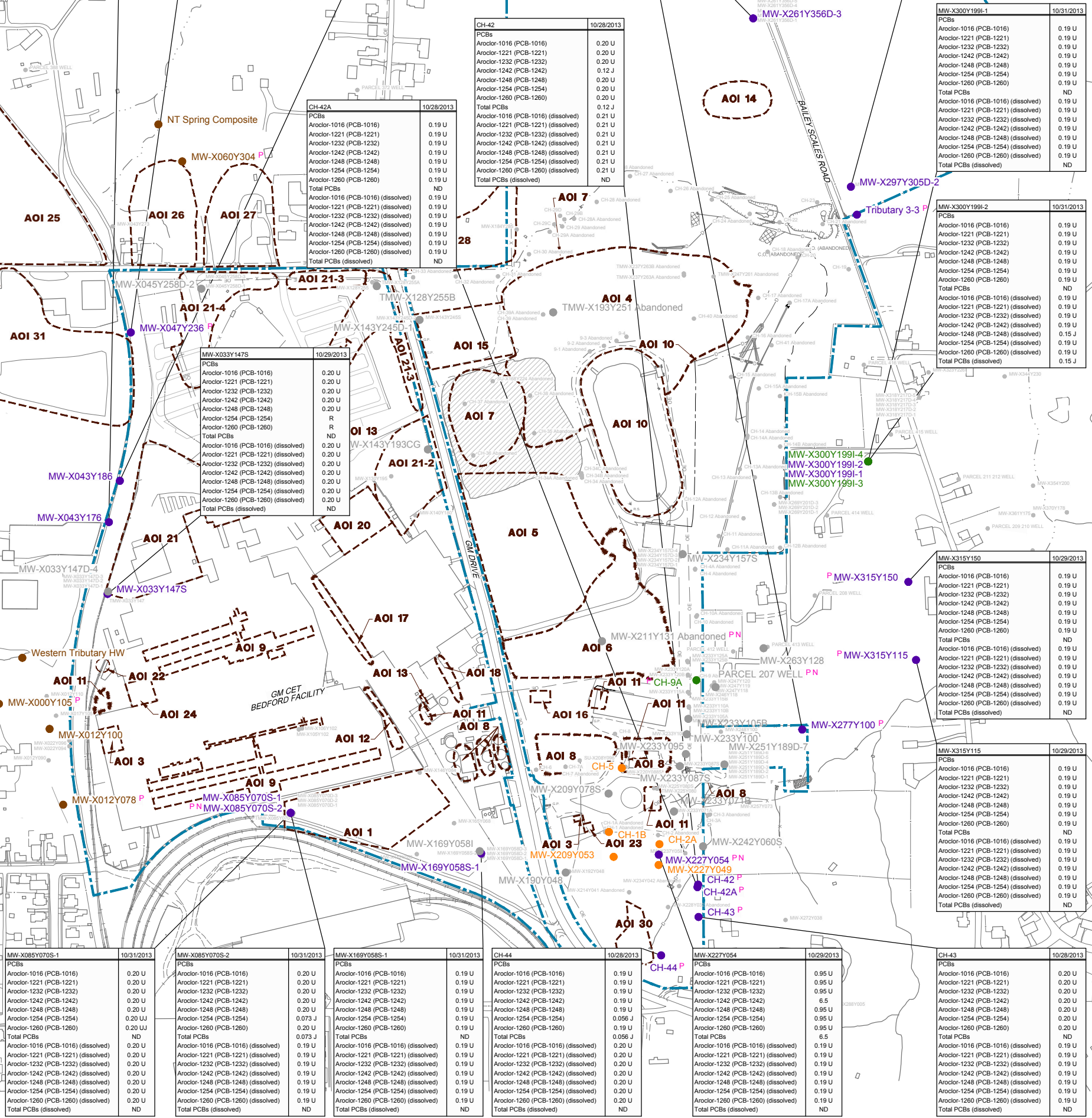
Project Manager: J.M. Reviewed By: S.S. Date: OCTOBER 2006

Scale: AS SHOWN Project No: 13968-00 Report No: 373 Drawing No: figure 3.1

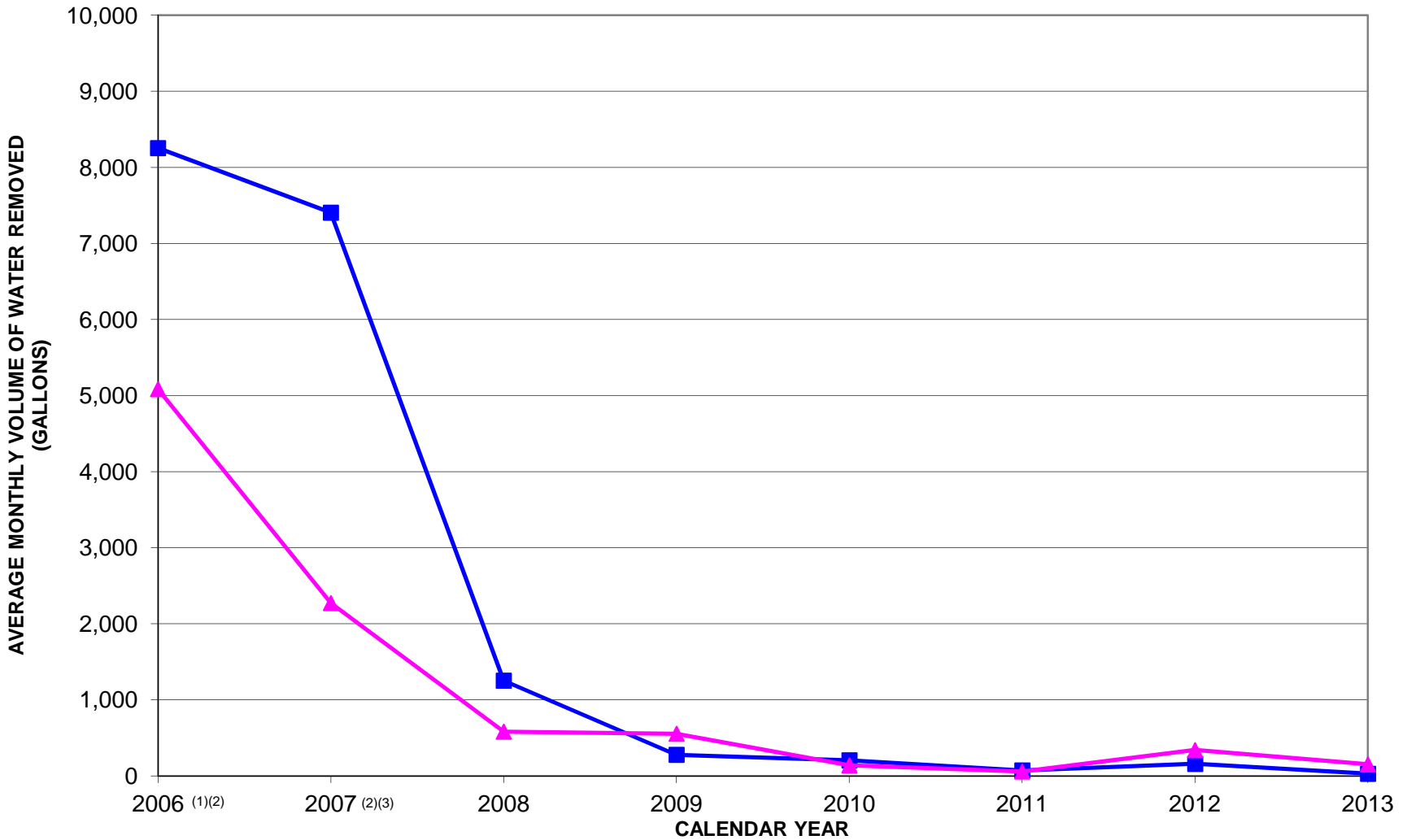
13968-00(373)GN-WA002 JUL 14/2014



MW-X043Y176	10/30/2013	MW-X047Y236	10/29/2013	MW-X043Y186	10/30/2013	MW-X277Y100	10/30/2013	MW-X261Y356D-3	10/30/2013	MW-X297Y305D-2	10/30/2013
PCBs											
Aroclor-1016 (PCB-1016)	0.19 U/0.19 UJ	Aroclor-1016 (PCB-1016)	0.19 U	Aroclor-1016 (PCB-1016)	0.20 UJ	Aroclor-1016 (PCB-1016)	0.20 U	Aroclor-1016 (PCB-1016)	0.20 U	Aroclor-1016 (PCB-1016)	0.20 U/0.20 U
Aroclor-1221 (PCB-1221)	0.19 U/0.19 UJ	Aroclor-1221 (PCB-1221)	0.19 U	Aroclor-1221 (PCB-1221)	0.20 UJ	Aroclor-1221 (PCB-1221)	0.20 U	Aroclor-1221 (PCB-1221)	0.20 U	Aroclor-1221 (PCB-1221)	0.20 U/0.20 U
Aroclor-1232 (PCB-1232)	0.19 U/0.19 UJ	Aroclor-1232 (PCB-1232)	0.19 U	Aroclor-1232 (PCB-1232)	0.20 UJ	Aroclor-1232 (PCB-1232)	0.20 U	Aroclor-1232 (PCB-1232)	0.20 U	Aroclor-1232 (PCB-1232)	0.20 U/0.20 U
Aroclor-1242 (PCB-1242)	0.19 U/0.19 UJ	Aroclor-1242 (PCB-1242)	0.19 U	Aroclor-1242 (PCB-1242)	0.20 UJ	Aroclor-1242 (PCB-1242)	0.20 U	Aroclor-1242 (PCB-1242)	0.20 U	Aroclor-1242 (PCB-1242)	0.20 U/0.20 U
Aroclor-1248 (PCB-1248)	0.19 U/0.19 UJ	Aroclor-1248 (PCB-1248)	0.19 U	Aroclor-1248 (PCB-1248)	0.20 UJ	Aroclor-1248 (PCB-1248)	0.20 U	Aroclor-1248 (PCB-1248)	0.20 U	Aroclor-1248 (PCB-1248)	0.20 U/0.20 U
Aroclor-1254 (PCB-1254)	0.19 U/0.19 UJ	Aroclor-1254 (PCB-1254)	0.19 U	Aroclor-1254 (PCB-1254)	0.20 UJ	Aroclor-1254 (PCB-1254)	0.20 U	Aroclor-1254 (PCB-1254)	0.20 U	Aroclor-1254 (PCB-1254)	0.20 U/0.20 U
Aroclor-1260 (PCB-1260)	0.19 U/0.19 UJ	Aroclor-1260 (PCB-1260)	0.19 U	Aroclor-1260 (PCB-1260)	0.20 UJ	Aroclor-1260 (PCB-1260)	0.20 U	Aroclor-1260 (PCB-1260)	0.20 U	Aroclor-1260 (PCB-1260)	0.20 U/0.20 U
Total PCBs	ND/ND	Total PCBs	ND	Total PCBs	ND	Total PCBs	ND	Total PCBs	ND	Total PCBs	ND/ND
(dissolved)											
Aroclor-1016 (PCB-1016)	0.19 U/0.19 UJ	Aroclor-1016 (PCB-1016)	0.19 U	Aroclor-1016 (PCB-1016)	0.19 U	Aroclor-1016 (PCB-1016)	0.19 U	Aroclor-1016 (PCB-1016)	0.19 U	Aroclor-1016 (PCB-1016)	0.20 U/0.20 U
Aroclor-1221 (PCB-1221)	0.19 U/0.19 UJ	Aroclor-1221 (PCB-1221)	0.19 U	Aroclor-1221 (PCB-1221)	0.19 U	Aroclor-1221 (PCB-1221)	0.19 U	Aroclor-1221 (PCB-1221)	0.19 U	Aroclor-1221 (PCB-1221)	0.20 U/0.20 U
Aroclor-1232 (PCB-1232)	0.19 U/0.19 UJ	Aroclor-1232 (PCB-1232)	0.19 U	Aroclor-1232 (PCB-1232)	0.19 U	Aroclor-1232 (PCB-1232)	0.19 U	Aroclor-1232 (PCB-1232)	0.19 U	Aroclor-1232 (PCB-1232)	0.20 U/0.20 U
Aroclor-1242 (PCB-1242)	0.19 U/0.19 UJ	Aroclor-1242 (PCB-1242)	0.19 U	Aroclor-1242 (PCB-1242)	0.19 U	Aroclor-1242 (PCB-1242)	0.19 U	Aroclor-1242 (PCB-1242)	0.19 U	Aroclor-1242 (PCB-1242)	0.20 U/0.20 U
Aroclor-1248 (PCB-1248)	0.19 U/0.19 UJ	Aroclor-1248 (PCB-1248)	0.19 U	Aroclor-1248 (PCB-1248)	0.19 U	Aroclor-1248 (PCB-1248)	0.19 U	Aroclor-1248 (PCB-1248)	0.19 U	Aroclor-1248 (PCB-1248)	0.20 U/0.20 U
Aroclor-1254 (PCB-1254)	0.19 U/0.19 UJ	Aroclor-1254 (PCB-1254)	0.19 U	Aroclor-1254 (PCB-1254)	0.19 U	Aroclor-1254 (PCB-1254)	0.19 U	Aroclor-1254 (PCB-1254)	0.19 U	Aroclor-1254 (PCB-1254)	0.20 U/0.20 U
Aroclor-1260 (PCB-1260)	0.19 U/0.19 UJ	Aroclor-1260 (PCB-1260)	0.19 U	Aroclor-1260 (PCB-1260)	0.19 U	Aroclor-1260 (PCB-1260)	0.19 U	Aroclor-1260 (PCB-1260)	0.19 U	Aroclor-1260 (PCB-1260)	0.20 U/0.20 U
Total PCBs (dissolved)	ND/ND	Total PCBs (dissolved)	ND	Total PCBs (dissolved)	ND	Total PCBs (dissolved)	ND	Total PCBs (dissolved)	ND	Total PCBs (dissolved)	ND/ND



MW-X033Y147S	6/27/2013	MW-X085Y070S-2	10/31/2013	MW-X169Y058S-1	10/31/2013	CH-44	10/28/2013	MW-X227Y054	10/29/2013	CH-43	10/28/2013
PCBs											
Aroclor-1016 (PCB-1016)	0.20 U	Aroclor-1016 (PCB-1016)	0.20 U	Aroclor-1016 (PCB-1016)	0.19 U	Aroclor-1016 (PCB-1016)	0.19 U	Aroclor-1016 (PCB-1016)	0.95 U	Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U	Aroclor-1221 (PCB-1221)	0.20 U	Aroclor-1221 (PCB							



LEGEND

- Leachate Collection System
- ▲ Leak Detection System

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.

figure 5.1
SUMMARY OF AVERAGE MONTHLY VOLUME OF WATER REMOVED FROM LCS AND LDS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
Bedford, Indiana



TABLE 2.1

2013 SUMMARY OF DAILY LEACHAGE COLLECTION SYSTEM LOG
2013 EAST PLANT AREA ANNUAL VAULT MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

Monitoring Location Information

Top of sump (datum reference)	740.83
Bottom of sump (feet BTOS)	69.83
Bottom of sump (datum reference)	671.00
Diameter of sump (feet)	6

Date	Time of Measurement (hh:mm)	Water Level ⁽¹⁾ (feet BTOS)	Water Depth ⁽¹⁾ (feet AFOS)	Water Depth Removed (feet)	Volume Removed ^(1,2) (gallons)	Comments
12/31/12	--	--	--	--	-508	Sump accumulation from 2012 that was not pumped prior to 1/1/13
1/1/13	14:00	67.20	2.63	--	--	
1/2/13	14:22	67.20	2.63	--	--	
1/3/13	13:00	67.20	2.63	--	--	
1/4/13	10:30	67.20	2.63	--	--	
1/5/13	--	--	--	--	--	
1/6/13	--	--	--	--	--	
1/7/13	11:15	67.15	2.68	--	--	
1/8/13	13:08	67.15	2.68	--	--	
1/9/13	13:40	67.15	2.68	--	--	
1/10/13	8:05	67.10	2.73	--	--	
1/11/13	10:50	67.10	2.73	--	--	
1/12/13	--	--	--	--	--	
1/13/13	--	--	--	--	--	
1/14/13	10:00	67.10	2.73	--	--	
1/15/13	9:00	67.10	2.73	--	--	
1/16/13	8:15	67.05	2.78	--	--	
1/17/13	8:45	67.00	2.83	--	--	
1/18/13	14:18	67.00	2.83	--	--	
1/19/13	--	--	--	--	--	
1/20/13	--	--	--	--	--	
1/21/13	8:20	66.95	2.88	--	--	
1/22/13	11:18	66.95	2.88	--	--	
1/23/13	14:16	66.95	2.88	--	--	
1/24/13	10:38	66.90	2.93	--	--	
1/25/13	9:23	66.90	2.93	--	--	
1/26/13	--	--	--	--	--	
1/27/13	--	--	--	--	--	
1/28/13	8:30	66.85	2.98	--	--	
1/29/13	8:18	66.85	2.98	--	--	
1/30/13	--	--	--	--	--	
1/31/13	--	--	--	--	--	
2/1/13	9:00	66.80	3.03	--	--	
2/2/13	--	--	--	--	--	
2/3/13	--	--	--	--	--	
2/4/13	11:10	66.80	3.03	--	--	
2/5/13	9:20	66.80	3.03	--	--	
2/6/13	13:30	66.80	3.03	--	--	
2/7/13	9:40	66.75	3.08	--	--	
2/8/13	10:30	66.75	3.08	--	--	
2/9/13	--	--	--	--	--	
2/10/13	--	--	--	--	--	

TABLE 2.1

2013 SUMMARY OF DAILY LEACHAGE COLLECTION SYSTEM LOG
 2013 EAST PLANT AREA ANNUAL VAULT MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

Date	Time of Measurement	Water Level ⁽¹⁾	Water Depth ⁽¹⁾	Water Depth Removed	Volume Removed ^(1,2)	Comments
	(hh:mm)	(feet BTOS)	(feet AFOS)	(feet)	(gallons)	
2/11/13	9:10	66.70	3.13	--	--	
2/12/13	9:32	66.70	3.13	--	--	
2/13/13	10:10	66.65	3.18	--	--	
2/14/13	9:20	66.65	3.18	--	--	
2/15/13	8:18	66.65	3.18	--	--	
2/16/13	--	--	--	--	--	
2/17/13	--	--	--	--	--	
2/18/13	9:00	66.65	3.18	--	--	
2/19/13	8:48	66.65	3.18	--	--	
2/20/13	9:58	66.65	3.18	--	--	
2/21/13	9:10	66.65	3.18	--	--	
2/22/13	10:18	66.60	3.23	--	--	
2/23/13	--	--	--	--	--	
2/24/13	--	--	--	--	--	
2/25/13	8:40	66.55	3.28	--	--	
2/26/13	9:30	66.55	3.28	--	--	
2/27/13	9:15	66.55	3.28	--	-370 ^(a)	received from LDS
2/28/13	9:00	66.65	3.18	--	--	^(b)
3/1/13	8:48	66.65	3.18	--	--	
3/2/13	--	--	--	--	--	
3/3/13	--	--	--	--	--	
3/4/13	9:26	66.60	3.23	--	--	
3/5/13	9:02	66.60	3.23	--	--	
3/6/13	10:50	66.60	3.23	--	--	
3/7/13	10:30	66.45	3.38	--	--	
3/8/13	8:28	66.30	3.53	--	--	^(b)
3/9/13	--	--	--	--	--	
3/10/13	--	--	--	--	--	
3/11/13	9:00	66.60	3.23	--	--	
3/12/13	8:15	66.60	3.23	--	--	
3/13/13	10:15	66.60	3.23	--	--	
3/14/13	10:45	66.60	3.23	--	--	
3/15/13	10:20	66.60	3.23	--	--	
3/16/13	--	--	--	--	--	
3/17/13	--	--	--	--	--	
3/18/13	11:18	66.50	3.33	--	--	
3/19/13	8:20	66.50	3.33	--	--	
3/20/13	9:20	66.50	3.33	--	--	
3/21/13	2:30	66.50	3.33	--	--	
3/22/13	8:50	66.50	3.33	--	--	
3/23/13	--	--	--	--	--	
3/24/13	--	--	--	--	--	
3/25/13	9:00	66.45	3.38	--	--	
3/26/13	9:00	66.45	3.38	--	--	
3/27/13	9:00	66.40	3.43	--	--	
3/28/13	8:00	66.40	3.43	--	--	
3/29/13	8:00	66.40	3.43	--	--	
3/30/13	--	--	--	--	--	
3/31/13	--	--	--	--	--	

TABLE 2.1

2013 SUMMARY OF DAILY LEACHAGE COLLECTION SYSTEM LOG
 2013 EAST PLANT AREA ANNUAL VAULT MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

Date	Time of Measurement	Water Level ⁽¹⁾	Water Depth ⁽¹⁾	Water Depth Removed	Volume Removed ^(1,2)	Comments
	(hh:mm)	(feet BTOS)	(feet AFOS)	(feet)	(gallons)	
4/1/13	8:45	66.40	3.43	--	--	
4/2/13	8:45	66.40	3.43	--	--	
4/3/13	8:50	66.40	3.43	--	--	
4/4/13	8:15	66.40	3.43	--	--	
4/5/13	8:10	66.40	3.43	--	--	
4/6/13	--	--	--	--	--	
4/7/13	--	--	--	--	--	
4/8/13	13:00	66.40	3.43	--	--	
4/9/13	10:30	66.40	3.43	--	--	
4/10/13	12:15	66.40	3.43	--	--	
4/11/13	13:00	66.35	3.48	--	--	
4/12/13	14:45	66.30	3.53	--	--	
4/13/13	--	--	--	--	--	
4/14/13	--	--	--	--	--	
4/15/13	14:30	66.30	3.53	--	--	
4/16/13	9:00	66.30	3.53	--	--	
4/17/13	14:30	66.30	3.53	--	--	
4/18/13	11:00	66.30	3.53	--	--	
4/19/13	9:00	66.30	3.53	--	--	
4/20/13	--	--	--	--	--	
4/21/13	--	--	--	--	--	
4/22/13	13:30	66.25	3.58	--	--	
4/23/13	13:15	66.20	3.63	--	--	
4/24/13	9:00	66.20	3.63	--	--	
4/25/13	9:00	66.20	3.63	--	--	
4/26/13	7:40	66.20	3.63	--	-360 ^(a)	received from LDS
4/27/13	--	--	--	--	--	
4/28/13	--	--	--	--	--	
4/29/13	14:10	66.10	3.73	--	--	
4/30/13	11:20	66.10	3.73	--	--	
5/1/13	8:10	66.10	3.73	--	--	
5/2/13	7:40	66.05	3.78	--	--	
5/3/13	8:00	66.05	3.78	--	--	
5/4/13	--	--	--	--	--	
5/5/13	--	--	--	--	--	
5/6/13	10:30	66.00	3.83	--	--	
5/7/13	10:00	66.00	3.83	--	--	
5/8/13	10:30	65.95	3.88	--	--	
5/9/13	8:20	65.95	3.88	--	--	
5/10/13	8:00	65.95	3.88	--	--	
5/11/13	--	--	--	--	--	
5/12/13	--	--	--	--	--	
5/13/13	9:10	65.95	3.88	--	--	
5/14/13	8:00	65.90	3.93	--	--	
5/15/13	7:30	65.90	3.93	--	--	
5/16/13	8:30	65.90	3.93	--	--	
5/17/13	8:20	65.90	3.93	--	--	
5/18/13	--	--	--	--	--	

TABLE 2.1

2013 SUMMARY OF DAILY LEACHAGE COLLECTION SYSTEM LOG
 2013 EAST PLANT AREA ANNUAL VAULT MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

Date	Time of	Water Level ⁽¹⁾	Water Depth ⁽¹⁾	Water Depth Removed	Volume Removed ^(1,2)	Comments
	Measurement	(feet BTOS)	(feet AFOS)	(feet)	(gallons)	
5/19/13	--	--	--	--	--	
5/20/13	9:10	65.85	3.98	--	--	
5/21/13	8:30	65.85	3.98	--	--	
5/22/13	8:20	65.85	3.98	--	--	
5/23/13	8:15	65.85	3.98	--	--	
5/24/13	8:20	65.85	3.98	--	--	
5/25/13	--	--	--	--	--	
5/26/13	--	--	--	--	--	
5/27/13	8:20	65.85	3.98	--	--	
5/28/13	8:10	65.80	4.03	--	--	
5/29/13	8:00	65.80	4.03	--	--	
5/30/13	11:00	65.80	4.03	--	--	
5/31/13	9:00	65.80	4.03	--	--	
6/1/13	--	--	--	--	--	
6/2/13	--	--	--	--	--	
6/3/13	8:20	65.80	4.03	--	--	
6/4/13	8:10	65.80	4.03	--	--	
6/5/13	10:15	65.80	4.03	--	-360 ^(a)	received from LDS
6/6/13	14:50	65.65	4.18	--	--	
6/7/13	10:30	65.65	4.18	--	--	
6/8/13	--	--	--	--	--	
6/9/13	--	--	--	--	--	
6/10/13	16:00	65.65	4.18	--	--	
6/11/13	9:15	65.65	4.18	--	--	
6/12/13	9:30	65.65	4.18	--	--	
6/13/13	8:20	65.65	4.18	--	--	
6/14/13	9:20	65.60	4.23	--	0	
6/15/13	--	--	--	--	0	
6/16/13	--	--	--	--	0	
6/17/13	13:20	65.60	4.23	--	0	
6/18/13	10:20	65.60	4.23	--	0	
6/19/13	9:15	65.60	4.23	--	0	
6/20/13	8:10	65.55	4.28	--	0	
6/21/13	13:30	68.55	1.28	3.00	635	Automated (PLC) pumping system commenced operation. PLC recorded 36,000 gallons removed. Later identified to be reading incorrectly.
6/22/13	--	--	--	--	0	
6/23/13	--	--	--	--	0	
6/24/13	9:50	68.50	1.33	--	0	
6/25/13	10:00	68.50	1.33	--	0	
6/26/13	--	--	--	--	--	Water level readings not collected due to vacation of field staff.
6/27/13	--	--	--	--	--	Water level readings not collected due to vacation of field staff.
6/28/13	--	--	--	--	--	Water level readings not collected due to vacation of field staff.
6/29/13	--	--	--	--	--	Water level readings not collected due to vacation of field staff.
6/30/13	--	--	--	--	--	Water level readings not collected due to vacation of field staff.
7/1/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/2/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/3/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/4/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/5/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.

TABLE 2.1

2013 SUMMARY OF DAILY LEACHAGE COLLECTION SYSTEM LOG
 2013 EAST PLANT AREA ANNUAL VAULT MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

Date	Time of Measurement	Water Level ⁽¹⁾	Water Depth ⁽¹⁾	Water Depth Removed	Volume Removed ^(1,2)	Comments
	(hh:mm)	(feet BTOS)	(feet AFOS)	(feet)	(gallons)	
7/6/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/7/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/8/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/9/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/10/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/11/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/12/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/13/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/14/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/15/13	--	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/16/13	6:00	68.3	1.53	--	0	
7/17/13	6:20	68.3	1.53	--	0	
7/18/13	6:15	68.25	1.58	--	0	
7/19/13	6:10	68.25	1.58	--	0	
7/20/13	--	--	--	--	0	
7/21/13	--	--	--	--	0	
7/22/13	8:15	68.25	1.58	--	0	
7/23/13	9:00	68.2	1.63	--	0	
7/24/13	6:15	68.2	1.63	--	0	
7/25/13	6:00	68.2	1.63	--	0	
7/26/13	6:00	68.2	1.63	--	0	
7/27/13	--	--	--	--	0	
7/28/13	--	--	--	--	0	
7/29/13	9:00	68.15	1.68	--	0	
7/30/13	6:00	68.15	1.68	--	0	
7/31/13	--	--	--	--	0	
8/1/13	8:30	68.15	1.68	--	0	
8/2/13	10:45	68.15	1.68	--	0	
8/3/13	--	--	--	--	0	
8/4/13	--	--	--	--	0	
8/5/13	14:15	68.1	1.73	--	0	
8/6/13	6:15	68.1	1.73	--	0	
8/7/13	9:45	68.1	1.73	--	0	
8/8/13	9:45	68.1	1.73	--	0	
8/9/13	8:15	68.1	1.73	--	0	
8/10/13	--	--	--	--	0	
8/11/13	--	--	--	--	0	
8/12/13	9:00	68	1.83	--	0	
8/13/13	10:45	68	1.83	--	0	
8/14/13	9:00	68	1.83	--	0	
8/15/13	9:00	68	1.83	--	0	
8/16/13	9:30	68	1.83	--	0	
8/17/13	--	--	--	--	0	
8/18/13	--	--	--	--	0	
8/19/13	15:30	68	1.83	--	0	
8/20/13	16:30	68	1.83	--	0	
8/21/13	8:00	68	1.83	--	0	
8/22/13	8:00	68	1.83	--	0	

TABLE 2.1

2013 SUMMARY OF DAILY LEACHAGE COLLECTION SYSTEM LOG
 2013 EAST PLANT AREA ANNUAL VAULT MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

Date	Time of Measurement	Water Level ⁽¹⁾	Water Depth ⁽¹⁾	Water Depth Removed	Volume Removed ^(1,2)	Comments
	(hh:mm)	(feet BTOS)	(feet AFOS)	(feet)	(gallons)	
8/23/13	8:00	68	1.83	--	0	
8/24/13	--	--	--	--	0	
8/25/13	--	--	--	--	0	
8/26/13	8:15	68	1.83	--	0	
8/27/13	7:00	68	1.83	--	0	
8/28/13	10:00	67.9	1.93	--	0	
8/29/13	9:50	67.9	1.93	--	0	
8/30/13	9:00	67.9	1.93	--	0	
8/31/13	--	--	--	--	0	
9/1/13	--	--	--	--	0	
9/2/13	--	--	--	--	0	
9/3/13	11:00	67.85	1.98	--	0	
9/4/13	9:00	67.85	1.98	--	0	
9/5/13	9:00	67.85	1.98	--	0	
9/6/13	9:00	67.85	1.98	--	0	
9/7/13	--	--	--	--	0	
9/8/13	--	--	--	--	0	
9/9/13	13:00	67.80	2.03	--	0	
9/10/13	7:30	67.80	2.03	--	0	
9/11/13	8:00	67.80	2.03	--	0	
9/12/13	9:00	67.80	2.03	--	0	
9/13/13	13:00	67.75	2.08	--	-296 ^(a)	received from LDS
9/14/13	--	--	--	--	0	
9/15/13	--	--	--	--	0	
9/16/13	8:30	67.70	2.13	--	0	
9/17/13	7:30	67.70	2.13	--	0	
9/18/13	13:51	67.35	2.48	--	0	
9/19/13	13:35	67.35	2.48	--	0	
9/20/13	10:37	67.35	2.48	--	0	
9/21/13	--	--	--	--	0	
9/22/13	--	--	--	--	0	
9/23/13	10:01	67.30	2.53	--	0	
9/24/13	11:55	67.30	2.53	--	0	
9/25/13	10:00	67.30	2.53	--	0	
9/26/13	9:30	67.60	2.23	--	0	(b)
9/27/13	9:15	67.60	2.23	--	0	
9/28/13	--	--	--	--	0	
9/29/13	--	--	--	--	0	
9/30/13	8:30	67.50	2.33	--	0	
10/1/13	13:30	67.50	2.33	--	0	
10/2/13	8:45	67.50	2.33	--	0	
10/3/13	14:00	67.50	2.33	--	0	
10/4/13	11:00	67.50	2.33	--	0	
10/5/13	--	--	--	--	0	
10/6/13	--	--	--	--	0	
10/7/13	8:00	67.50	2.33	--	0	
10/8/13	9:00	67.50	2.33	--	0	
10/9/13	8:00	67.50	2.33	--	0	

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2013 SUMMARY OF DAILY LEACHAGE COLLECTION SYSTEM LOG
 2013 EAST PLANT AREA ANNUAL VAULT MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

Date	Time of Measurement	Water Level ⁽¹⁾	Water Depth ⁽¹⁾	Water Depth Removed	Volume Removed ^(1,2)	Comments
	(hh:mm)	(feet BTOS)	(feet AFOS)	(feet)	(gallons)	
10/10/13	8:00	67.50	2.33	--	0	
10/11/13	8:00	67.50	2.33	--	0	
10/12/13	--	--	--	--	0	
10/13/13	--	--	--	--	0	
10/14/13	9:00	67.30	2.53	--	0	
10/15/13	8:00	67.30	2.53	--	0	
10/16/13	8:00	67.30	2.53	--	0	
10/17/13	8:30	67.40	2.43	--	0	(b)
10/18/13	9:00	67.30	2.53	--	0	
10/19/13	--	--	--	--	0	
10/20/13	--	--	--	--	0	
10/21/13	8:30	67.20	2.63	--	0	
10/22/13	8:30	67.20	2.63	--	0	
10/23/13	8:30	67.20	2.63	--	0	
10/24/13	13:00	67.30	2.53	--	0	(b)
10/25/13	14:30	67.30	2.53	--	0	
10/26/13	--	--	--	--	0	
10/27/13	--	--	--	--	0	
10/28/13	15:30	67.30	2.53	--	0	
10/29/13	11:30	67.30	2.53	--	0	
10/30/13	11:00	67.30	2.53	--	0	
10/31/13	8:00	67.30	2.53	--	0	
11/1/13	16:00	67.20	2.63	--	0	
11/2/13	--	--	--	--	0	
11/3/13	--	--	--	--	0	
11/4/13	8:00	67.20	2.63	--	0	
11/5/13	7:30	67.20	2.63	--	0	
11/6/13	7:30	67.20	2.63	--	0	
11/7/13	10:00	67.20	2.63	--	0	
11/8/13	9:00	67.20	2.63	--	0	
11/9/13	--	--	--	--	0	
11/10/13	--	--	--	--	0	
11/11/13	8:00	67.20	2.63	--	0	
11/12/13	8:00	67.20	2.63	--	0	
11/13/13	8:00	67.20	2.63	--	0	
11/14/13	9:00	67.20	2.63	--	0	
11/15/13	9:00	67.20	2.63	--	0	
11/16/13	--	--	--	--	0	
11/17/13	--	--	--	--	0	
11/18/13	8:00	67.10	2.73	--	0	
11/19/13	9:00	67.10	2.73	--	0	
11/20/13	14:00	68.10	1.73	1.00	212	Pumping system operated. PLC recorded 9,000 gallons removed. Later identified to be reading incorrectly.
11/21/13	8:00	68.10	1.73	--	0	
11/22/13	10:00	68.10	1.73	--	0	
11/23/13	--	--	--	--	0	
11/24/13	--	--	--	--	0	
11/25/13	8:00	68.00	1.83	--	0	
11/26/13	9:00	68.00	1.83	--	0	

TABLE 2.1

2013 SUMMARY OF DAILY LEACHAGE COLLECTION SYSTEM LOG
 2013 EAST PLANT AREA ANNUAL VAULT MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

Date	Time of Measurement (hh:mm)	Water Level ⁽¹⁾ (feet BTOS)	Water Depth ⁽¹⁾ (feet AFOS)	Water Depth Removed (feet)	Volume Removed ^(1,2) (gallons)	Comments
11/27/13	9:00	68.00	1.83	--	0	
11/28/13	--	--	--	--	0	
11/29/13	--	--	--	--	0	
11/30/13	--	--	--	--	0	
12/1/13	--	--	--	--	0	
12/2/13	9:30	67.90	1.93	--	0	
12/3/13	9:00	67.90	1.93	--	0	
12/4/13	--	--	--	--	0	
12/5/13	--	--	--	--	0	
12/6/13	--	--	--	--	0	
12/7/13	--	--	--	--	0	
12/8/13	--	--	--	--	0	
12/9/13	9:00	68.00	1.83	--	0	^(b)
12/10/13	--	--	--	--	0	PLC turned off for pump and flow meter testing
12/11/13	--	--	--	--	0	PLC off for pump and flow meter testing
12/12/13	--	--	--	--	0	PLC off for pump and flow meter testing
12/13/13	--	--	--	--	0	PLC off for pump and flow meter testing
12/14/13	--	--	--	--	0	PLC off for pump and flow meter testing
12/15/13	--	--	--	--	0	PLC off for pump and flow meter testing
12/16/13	8:00	67.80	2.03	--	0	PLC off for pump and flow meter testing
12/17/13	--	--	--	--	0	PLC off for pump and flow meter testing
12/18/13	--	--	--	--	0	PLC remaining off due to cold weather and difficulty with water line and treatment system
12/19/13	--	--	--	--	-454 ^(a)	PLC remaining off due to cold weather and difficulty with water line and treatment system. Received
12/20/13	--	--	--	--	0	PLC remaining off due to cold weather and difficulty with water line and treatment system
12/21/13	--	--	--	--	0	PLC remaining off due to cold weather and difficulty with water line and treatment system
12/22/13	--	--	--	--	0	PLC remaining off due to cold weather and difficulty with water line and treatment system
12/23/13	9:47	67.64	2.19	--	0	PLC remaining off due to cold weather and difficulty with water line and treatment system
12/24/13	--	--	--	--	0	PLC remaining off due to cold weather and difficulty with water line and treatment system
12/25/13	--	--	--	--	0	PLC remaining off due to cold weather and difficulty with water line and treatment system
12/26/13	--	--	--	--	0	PLC remaining off due to cold weather and difficulty with water line and treatment system
12/27/13	--	--	--	--	0	PLC remaining off due to cold weather and difficulty with water line and treatment system
12/28/13	--	--	--	--	0	PLC remaining off due to cold weather and difficulty with water line and treatment system
12/29/13	--	--	--	--	0	PLC remaining off due to cold weather and difficulty with water line and treatment system
12/30/13	--	--	--	--	0	PLC remaining off due to cold weather and difficulty with water line and treatment system
12/31/13	--	--	--	--	--	
1/1/14	--	--	--	--	--	
1/2/14	--	--	--	--	--	
1/3/14	--	--	--	--	--	
1/4/14	--	--	--	--	--	
1/5/14	--	--	--	--	--	
1/6/14	--	--	--	--	--	
1/7/14	10:00	67.6	2.23	0.04	7 ^(c)	Sump accumulation since last 2013 pumping event on 11/20/2013 (48 days prior to 1/7/14) would be approximately 8 gallons. Approximately 7 gallons would have accumulated in the sump as of 12/31/13.
Minimum		65.55	1.28			

TABLE 2.1

2013 SUMMARY OF DAILY LEACHAGE COLLECTION SYSTEM LOG
 2013 EAST PLANT AREA ANNUAL VAULT MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

<i>Date</i>	<i>Time of Measurement (hh:mm)</i>	<i>Water Level ⁽¹⁾ (feet BTOS)</i>	<i>Water Depth ⁽¹⁾ (feet AFOS)</i>	<i>Water Depth Removed (feet)</i>	<i>Volume Removed ^(1,2) (gallons)</i>	<i>Comments</i>
	Maximum	68.55	4.28			
	Mean	67.00	2.83			
	Pumping Events			2		
	Total Volume Accumulation in LCS carried forward from 2012 (gallons)				-508	
	Total Volume Accumulation in LCS from last pumping event to end of 2013 (gallons)				7	
	Total Volume Pumped from the LCS in 2013 (gallons)				846	
	Total Volume Accumulation Originating in the LCS in 2013 (gallons)				345	
	⁽⁴⁾ Total Volume Pumped to LCS from LDS in 2012 (gallons)				1,840	
	⁽²⁾⁺⁽³⁾⁺⁽⁴⁾ Net Volume Removed from the LCS in 2012 including volume from LDS (gallons)				2,693	

Notes:

- ⁽¹⁾ Recording of water level and volume of liquid removed required to be recorded on a monthly basis, consistent with the Post-Closure Plan, Bedford Plant Vault (CRA, February 2012).
- ⁽²⁾ Automated system controlled pumping of the LCS and calculate of liquid removed between 6/14/2013 and 12/10/2013.
- (--) Measurements were not collected.
- ⁽³⁾ Assumed that water pumped from LDS into LCS will be removed when LCS pump is started
- ⁽⁴⁾ Water level/water depth is either less/more than previous measurement due to human error while taking the measurement.
- ⁽⁵⁾ Assumed that water pumped from LDS into LCS on 12/23/2013 did not appreciably change the water level in the sump.

TABLE 2.2

2013 SUMMARY OF DAILY LEAK DETECTION SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

Monitoring Location Information

Top of sump (datum reference) 741.14
Bottom of sump (feet BTOS) 72.64
Bottom of sump (datum reference) 668.50
Diameter of sump (feet) 6

Date	Time of Measurement (hh:mm)	Water Level ^(b) (feet BTOS)	Water Depth ^(b) (feet AFOS)	Water Depth		Volume Removed ^(b) (gallons)	Average Daily Flow Rate ^(c) (gallons/day/acre)	Comments
				After Pumping (feet BTOS)	Removed (feet)			
12/31/12	--	--	--	---	---	-106	0.7	Sump accumulation from 2012 that was not pumped prior to 1/1/13
1/1/13	14:05	71.40	1.24	---	---	---	0.7	
1/2/13	14:25	71.40	1.24	---	---	---	0.7	
1/3/13	13:00	71.40	1.24	---	---	---	0.7	
1/4/13	10:30	71.40	1.24	---	---	---	0.7	
1/5/13	--	--	--	---	---	---	0.7	
1/6/13	--	--	--	---	---	---	0.7	
1/7/13	11:18	71.35	1.29	---	---	---	0.7	
1/8/13	13:10	71.35	1.29	---	---	---	0.7	
1/9/13	13:44	71.35	1.29	---	---	---	0.7	
1/10/13	8:10	71.35	1.29	---	---	---	0.7	
1/11/13	11:05	71.25	1.39	---	---	---	0.7	
1/12/13	--	--	--	---	---	---	0.7	
1/13/13	--	--	--	---	---	---	0.7	
1/14/13	10:00	71.20	1.44	---	---	---	0.7	
1/15/13	9:00	71.20	1.44	---	---	---	0.7	
1/16/13	8:12	71.20	1.44	---	---	---	0.7	
1/17/13	8:47	71.20	1.44	---	---	---	0.7	
1/18/13	14:20	71.20	1.44	---	---	---	0.7	
1/19/13	--	--	--	---	---	---	0.7	
1/20/13	--	--	--	---	---	---	0.7	
1/21/13	8:22	71.15	1.49	---	---	---	0.7	
1/22/13	11:20	71.05	1.59	---	---	---	0.7	
1/23/13	14:18	71.05	1.59	---	---	---	0.7	
1/24/13	10:40	71.05	1.59	---	---	---	0.7	
1/25/13	9:25	71.05	1.59	---	---	---	0.7	
1/26/13	--	--	--	---	---	---	0.7	
1/27/13	--	--	--	---	---	---	0.7	
1/28/13	8:32	71.05	1.59	---	---	---	0.7	
1/29/13	8:20	71.05	1.59	---	---	---	0.7	
1/30/13	--	--	--	---	---	---	0.7	
1/31/13	--	--	--	---	---	---	0.7	
2/1/13	9:00	71.05	1.59	---	---	---	0.7	
2/2/13	--	--	--	---	---	---	0.7	
2/3/13	--	--	--	---	---	---	0.7	
2/4/13	11:12	70.95	1.69	---	---	---	0.7	
2/5/13	9:22	70.95	1.69	---	---	---	0.7	
2/6/13	1:32	70.95	1.69	---	---	---	0.7	
2/7/13	9:42	70.90	1.74	---	---	---	0.7	
2/8/13	10:32	70.90	1.74	---	---	---	0.7	

TABLE 2.2

2013 SUMMARY OF DAILY LEAK DETECTION SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

Date	Time of Measurement (hh:mm)	Water Level ^(b) (feet BTOS)	Water Depth ^(b) (feet AFOS)	Water Depth		Volume Removed ^(b) (gallons)	Average Daily Flow Rate ^(c) (gallons/day/acre)	Comments
				After Pumping (feet BTOS)	Removed (feet)			
2/9/13	--	--	--	---	---	---	0.7	
2/10/13	--	--	--	---	---	---	0.7	
2/11/13	9:12	70.90	1.74	---	---	---	0.7	
2/12/13	9:34	70.90	1.74	---	---	---	0.7	
2/13/13	10:12	70.85	1.79	---	---	---	0.7	
2/14/13	9:22	70.80	1.84	---	---	---	0.7	
2/15/13	8:20	70.80	1.84	---	---	---	0.7	
2/16/13	--	--	--	---	---	---	0.7	
2/17/13	--	--	--	---	---	---	0.7	
2/18/13	9:02	70.80	1.84	---	---	---	0.7	
2/19/13	8:50	70.80	1.84	---	---	---	0.7	
2/20/13	10:00	70.80	1.84	---	---	---	0.7	
2/21/13	9:12	70.80	1.84	---	---	---	0.7	
2/22/13	10:20	70.75	1.89	---	---	---	0.7	
2/23/13	--	--	--	---	---	---	0.7	
2/24/13	--	--	--	---	---	---	0.7	
2/25/13	8:42	70.70	1.94	---	---	---	0.7	
2/26/13	9:32	70.70	1.94	---	---	---	0.7	
2/27/13	9:36	70.70	1.94	72.45	1.75	370	0.7	Pumped into LCS (volume removed based on calculation using sump manhole volume).
2/28/13	9:02	72.30	0.34	---	---	---	0.9	
3/1/13	8:50	72.30	0.34	---	---	---	0.9	
3/2/13	--	--	--	---	---	---	0.9	
3/3/13	--	--	--	---	---	---	0.9	
3/4/13	9:28	72.30	0.34	---	---	---	0.9	
3/5/13	9:04	72.30	0.34	---	---	---	0.9	
3/6/13	10:52	72.30	0.34	---	---	---	0.9	
3/7/13	10:32	72.25	0.39	---	---	---	0.9	
3/8/13	8:30	72.20	0.44	---	---	---	0.9	
3/9/13	--	--	--	---	---	---	0.9	
3/10/13	--	--	--	---	---	---	0.9	
3/11/13	9:00	72.15	0.49	---	---	---	0.9	
3/12/13	8:15	72.15	0.49	---	---	---	0.9	
3/13/13	10:15	72.15	0.49	---	---	---	0.9	
3/14/13	10:45	72.15	0.49	---	---	---	0.9	
3/15/13	10:20	72.15	0.49	---	---	---	0.9	
3/16/13	--	--	--	---	---	---	0.9	
3/17/13	--	--	--	---	---	---	0.9	
3/18/13	11:20	72.05	0.59	---	---	---	0.9	
3/19/13	8:22	72.05	0.59	---	---	---	0.9	
3/20/13	9:22	72.05	0.59	---	---	---	0.9	
3/21/13	2:32	72.00	0.64	---	---	---	0.9	
3/22/13	8:52	71.90	0.74	---	---	---	0.9	
3/23/13	--	--	--	---	---	---	0.9	
3/24/13	--	--	--	---	---	---	0.9	
3/25/13	9:00	71.80	0.84	---	---	---	0.9	
3/26/13	9:00	71.70	0.94	---	---	---	0.9	
3/27/13	9:00	71.65	0.99	---	---	---	0.9	
3/28/13	8:00	71.60	1.04	---	---	---	0.9	

TABLE 2.2

2013 SUMMARY OF DAILY LEAK DETECTION SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

Date	Time of Measurement (hh:mm)	Water Level ^(b) (feet BTOS)	Water Depth ^(b) (feet AFOS)	Water Depth		Volume Removed ^(b) (gallons)	Average Daily Flow Rate ^(c) (gallons/day/acre)	Comments
				After Pumping (feet BTOS)	Removed (feet)			
3/29/13	8:00	71.55	1.09	---	---	---	0.9	
3/30/13	--	--	--	---	---	---	0.9	
3/31/13	--	--	--	---	---	---	0.9	
4/1/13	8:45	71.45	1.19	---	---	---	0.9	
4/2/13	8:45	71.40	1.24	---	---	---	0.9	
4/3/13	8:50	71.35	1.29	---	---	---	0.9	
4/4/13	8:15	71.35	1.29	---	---	---	0.9	
4/5/13	8:10	71.30	1.34	---	---	---	0.9	
4/6/13	--	--	--	---	---	---	0.9	
4/7/13	--	--	--	---	---	---	0.9	
4/8/13	13:00	71.10	1.54	---	---	---	0.9	
4/9/13	10:30	71.10	1.54	---	---	---	0.9	
4/10/13	14:15	71.05	1.59	---	---	---	0.9	
4/11/13	13:00	71.00	1.64	---	---	---	0.9	
4/12/13	14:45	70.95	1.69	---	---	---	0.9	
4/13/13	--	--	--	---	---	---	0.9	
4/14/13	--	--	--	---	---	---	0.9	
4/15/13	14:30	70.90	1.74	---	---	---	0.9	
4/16/13	9:00	70.85	1.79	---	---	---	0.9	
4/17/13	14:30	70.80	1.84	---	---	---	0.9	
4/18/13	11:00	70.80	1.84	---	---	---	0.9	
4/19/13	9:00	70.80	1.84	---	---	---	0.9	
4/20/13	--	--	--	---	---	---	0.9	
4/21/13	--	--	--	---	---	---	0.9	
4/22/13	13:30	70.75	1.89	---	---	---	0.9	
4/23/13	13:15	70.70	1.94	---	---	---	0.9	
4/24/13	9:00	70.65	1.99	---	---	---	0.9	
4/25/13	9:00	70.60	2.04	---	---	---	0.9	
4/26/13	7:40	70.55	2.09	72.25	1.70	360	0.9	Pumped into LCS (volume removed based on calculation using sump manhole volume).
4/27/13	--	--	--	---	---	---	1.3	
4/28/13	--	--	--	---	---	---	1.3	
4/29/13	2:10	72.10	0.54	---	---	---	1.3	
4/30/13	11:20	72.10	0.54	---	---	---	1.3	
5/1/13	8:10	72.10	0.54	---	---	---	1.3	
5/2/13	7:40	72.05	0.59	---	---	---	1.3	
5/3/13	8:00	72.05	0.59	---	---	---	1.3	
5/4/13	--	--	--	---	---	---	1.3	
5/5/13	--	--	--	---	---	---	1.3	
5/6/13	10:30	71.75	0.89	---	---	---	1.3	
5/7/13	10:00	71.75	0.89	---	---	---	1.3	
5/8/13	10:30	71.60	1.04	---	---	---	1.3	
5/9/13	8:20	71.60	1.04	---	---	---	1.3	
5/10/13	8:00	71.55	1.09	---	---	---	1.3	
5/11/13	--	--	--	---	---	---	1.3	
5/12/13	--	--	--	---	---	---	1.3	
5/13/13	9:10	71.40	1.24	---	---	---	1.3	
5/14/13	8:00	71.35	1.29	---	---	---	1.3	
5/15/13	7:30	71.30	1.34	---	---	---	1.3	

TABLE 2.2

2013 SUMMARY OF DAILY LEAK DETECTION SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

Date	Time of Measurement (hh:mm)	Water Level ^(b) (feet BTOS)	Water Depth ^(b) (feet AFOS)	Water Depth		Volume Removed ^(b) (gallons)	Average Daily Flow Rate ^(c) (gallons/day/acre)	Comments
				After Pumping (feet BTOS)	Removed (feet)			
5/16/13	8:30	71.30	1.34	---	---	---	1.3	
5/17/13	8:20	71.20	1.44	---	---	---	1.3	
5/18/13	--	--	--	---	---	---	1.3	
5/19/13	--	--	--	---	---	---	1.3	
5/20/13	9:10	71.05	1.59	---	---	---	1.3	
5/21/13	8:30	71.05	1.59	---	---	---	1.3	
5/22/13	8:20	70.95	1.69	---	---	---	1.3	
5/23/13	8:15	70.95	1.69	---	---	---	1.3	
5/24/13	8:20	70.95	1.69	---	---	---	1.3	
5/25/13	--	--	--	---	---	---	1.3	
5/26/13	--	--	--	---	---	---	1.3	
5/27/13	8:20	70.75	1.89	---	---	---	1.3	
5/28/13	8:10	70.70	1.94	---	---	---	1.3	
5/29/13	8:00	70.70	1.94	---	---	---	1.3	
5/30/13	11:00	70.70	1.94	---	---	---	1.3	
5/31/13	9:00	70.70	1.94	---	---	---	1.3	
6/1/13	--	--	--	---	---	---	1.3	
6/2/13	--	--	--	---	---	---	1.3	
6/3/13	8:20	70.60	2.04	---	---	---	1.3	
6/4/13	8:10	70.55	2.09	---	---	---	1.3	
6/5/13	10:15	70.50	2.14	72.20	1.70	360	1.3	Pumped into LCS (volume removed based on calculation using sump manhole volume).
6/6/13	14:50	71.90	0.74	---	---	---	0.4	
6/7/13	10:30	71.80	0.84	---	---	---	0.4	
6/8/13	--	--	--	---	---	---	0.4	
6/9/13	--	--	--	---	---	---	0.4	
6/10/13	4:00	71.60	1.04	---	---	---	0.4	
6/11/13	8:15	71.60	1.04	---	---	---	0.4	
6/12/13	9:30	71.55	1.09	---	---	---	0.4	
6/13/13	8:20	71.55	1.09	---	---	---	0.4	
6/14/13	9:20	71.40	1.24	---	---	---	0.4	
6/15/13	--	--	--	---	---	---	0.4	
6/16/13	--	--	--	---	---	---	0.4	
6/17/13	13:20	71.25	1.39	---	---	---	0.4	
6/18/13	10:20	71.25	1.39	---	---	---	0.4	
6/19/13	9:15	71.20	1.44	---	---	---	0.4	
6/20/13	8:10	71.20	1.44	---	---	---	0.4	
6/21/13	13:30	71.15	1.49	---	---	---	0.4	
6/22/13	--	--	--	---	---	---	0.4	
6/23/13	--	--	--	---	---	---	0.4	
6/24/13	9:50	71.10	1.54	---	---	---	0.4	
6/25/13	10:00	71.10	1.54	---	---	---	0.4	
6/26/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
6/27/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
6/28/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
6/29/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
6/30/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/1/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/2/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.

TABLE 2.2

2013 SUMMARY OF DAILY LEAK DETECTION SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

Date	Time of Measurement (hh:mm)	Water Level ^(b) (feet BTOS)	Water Depth ^(b) (feet AFOS)	Water Depth		Volume Removed ^(b) (gallons)	Average Daily Flow Rate ^(c) (gallons/day/acre)	Comments
				After Pumping (feet BTOS)	Removed (feet)			
7/3/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/4/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/5/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/6/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/7/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/8/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/9/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/10/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/11/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/12/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/13/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/14/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/15/13	--	--	--	---	---	---	0.4	Water level readings (manual and PLC) not collected due to vacation of field staff.
7/16/13	6:00	71	1.64	---	---	---	0.4	
7/17/13	6:20	71	1.64	---	---	---	0.4	
7/18/13	6:15	71	1.64	---	---	---	0.4	
7/19/13	6:10	71	1.64	---	---	---	0.4	
7/20/13	--	--	--	---	---	---	0.4	
7/21/13	--	--	--	---	---	---	0.4	
7/22/13	8:15	70.95	1.69	---	---	---	0.4	
7/23/13	9:00	70.95	1.69	---	---	---	0.4	
7/24/13	6:15	70.95	1.69	---	---	---	0.4	
7/25/13	6:00	70.95	1.69	---	---	---	0.4	
7/26/13	6:00	70.95	1.69	---	---	---	0.4	
7/27/13	--	--	--	---	---	---	0.4	
7/28/13	--	--	--	---	---	---	0.4	
7/29/13	9:00	70.95	1.69	---	---	---	0.4	
7/30/13	6:00	70.95	1.69	---	---	---	0.4	
7/31/13	--	--	--	---	---	---	0.4	
8/1/13	8:30	70.95	1.69	---	---	---	0.4	
8/2/13	10:45	70.9	1.74	---	---	---	0.4	
8/3/13	--	--	--	---	---	---	0.4	
8/4/13	--	--	--	---	---	---	0.4	
8/5/13	14:15	70.9	1.74	---	---	---	0.4	
8/6/13	6:15	70.9	1.74	---	---	---	0.4	
8/7/13	9:45	70.9	1.74	---	---	---	0.4	
8/8/13	9:45	70.9	1.74	---	---	---	0.4	
8/9/13	8:15	70.9	1.74	---	---	---	0.4	
8/10/13	--	--	--	---	---	---	0.4	
8/11/13	--	--	--	---	---	---	0.4	
8/12/13	9:00	70.9	1.74	---	---	---	0.4	
8/13/13	10:45	70.9	1.74	---	---	---	0.4	
8/14/13	9:00	70.9	1.74	---	---	---	0.4	
8/15/13	9:00	70.9	1.74	---	---	---	0.4	
8/16/13	9:30	70.9	1.74	---	---	---	0.4	
8/17/13	--	--	--	---	---	---	0.4	
8/18/13	--	--	--	---	---	---	0.4	
8/19/13	15:30	70.9	1.74	---	---	---	0.4	

TABLE 2.2

2013 SUMMARY OF DAILY LEAK DETECTION SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

Date	Time of Measurement (hh:mm)	Water Level ^(b) (feet BTOS)	Water Depth ^(b) (feet AFOS)	Water Depth		Volume Removed ^(b) (gallons)	Average Daily Flow Rate ^(c) (gallons/day/acre)	Comments
				After Pumping (feet BTOS)	Removed (feet)			
8/20/13	16:30	70.9	1.74	---	---	---	0.4	
8/21/13	8:00	70.9	1.74	---	---	---	0.4	
8/22/13	8:00	70.9	1.74	---	---	---	0.4	
8/23/13	8:00	70.9	1.74	---	---	---	0.4	
8/24/13	--	--	--	---	---	---	0.4	
8/25/13	--	--	--	---	---	---	0.4	
8/26/13	8:15	70.9	1.74	---	---	---	0.4	
8/27/13	7:00	70.9	1.74	---	---	---	0.4	
8/28/13	10:00	70.85	1.79	---	---	---	0.4	
8/29/13	9:50	70.85	1.79	---	---	---	0.4	
8/30/13	9:00	70.85	1.79	---	---	---	0.4	
8/31/13	--	--	--	---	---	---	0.4	
9/1/13	--	--	--	---	---	---	0.4	
9/2/13	--	--	--	---	---	---	0.4	
9/3/13	11:00	70.85	1.79	---	---	---	0.4	
9/4/13	9:00	70.85	1.79	---	---	---	0.4	
9/5/13	9:00	70.85	1.79	---	---	---	0.4	
9/6/13	9:00	70.85	1.79	---	---	---	0.4	
9/7/13	--	--	--	---	---	---	0.4	
9/8/13	--	--	--	---	---	---	0.4	
9/9/13	13:00	70.8	1.84	---	---	---	0.4	
9/10/13	7:30	70.8	1.84	---	---	---	0.4	
9/11/13	8:00	70.8	1.84	---	---	---	0.4	
9/12/13	9:00	70.8	1.84	---	---	---	0.4	
9/13/13	13:00	70.8	1.84	72.2	1.40	296	0.4	Pumped into LCS (volume removed based on calculation using sump manhole volume).
9/14/13	--	--	--	---	---	---	0.7	
9/15/13	--	--	--	---	---	---	0.7	
9/16/13	8:30	72.2	0.44	---	---	---	0.7	
9/17/13	7:30	72.2	0.44	---	---	---	0.7	
9/18/13	14:00	72.19	0.45	---	---	---	0.7	
9/19/13	13:39	71.8	0.84	---	---	---	0.7	
9/20/13	10:38	71.8	0.84	---	---	---	0.7	
9/21/13	--	--	--	---	---	---	0.7	
9/22/13	--	--	--	---	---	---	0.7	
9/23/13	10:05	71.7	0.94	---	---	---	0.7	
9/24/13	12:10	71.65	0.99	---	---	---	0.7	
9/25/13	10:00	71.7	0.94	---	---	---	0.7	(a)
9/26/13	9:30	71.65	0.99	---	---	---	0.7	
9/27/13	9:15	71.6	1.04	---	---	---	0.7	
9/28/13	--	--	--	---	---	---	0.7	
9/29/13	--	--	--	---	---	---	0.7	
9/30/13	8:30	71.5	1.14	---	---	---	0.7	
10/1/13	13:30	71.5	1.14	---	---	---	0.7	
10/2/13	8:45	71.5	1.14	---	---	---	0.7	
10/3/13	14:00	71.4	1.24	---	---	---	0.7	
10/4/13	11:00	71.4	1.24	---	---	---	0.7	
10/5/13	--	--	--	---	---	---	0.7	
10/6/13	--	--	--	---	---	---	0.7	

TABLE 2.2

2013 SUMMARY OF DAILY LEAK DETECTION SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

Date	Time of Measurement (hh:mm)	Water Level ^(b) (feet BTOS)	Water Depth ^(b) (feet AFOS)	Water Depth		Volume Removed ^(b) (gallons)	Average Daily Flow Rate ^(c) (gallons/day/acre)	Comments
				After Pumping (feet BTOS)	Removed (feet)			
10/7/13	8:00	71.3	1.34	---	---	---	0.7	
10/8/13	9:00	71.3	1.34	---	---	---	0.7	
10/9/13	8:00	71.3	1.34	---	---	---	0.7	
10/10/13	8:00	71.5	1.14	---	---	---	0.7	(a)
10/11/13	8:00	71.2	1.44	---	---	---	0.7	
10/12/13	--	--	--	---	---	---	0.7	
10/13/13	--	--	--	---	---	---	0.7	
10/14/13	9:00	71.1	1.54	---	---	---	0.7	
10/15/13	8:00	71.2	1.44	---	---	---	0.7	(a)
10/16/13	8:00	71.2	1.44	---	---	---	0.7	(a)
10/17/13	8:30	71.3	1.34	---	---	---	0.7	(a)
10/18/13	9:00	71.1	1.54	---	---	---	0.7	
10/19/13	--	--	--	---	---	---	0.7	
10/20/13	--	--	--	---	---	---	0.7	
10/21/13	8:30	71.2	1.44	---	---	---	0.7	(a)
10/22/13	8:30	71.2	1.44	---	---	---	0.7	
10/23/13	8:30	71.2	1.44	---	---	---	0.7	
10/24/13	13:00	71.2	1.44	---	---	---	0.7	
10/25/13	14:30	71.2	1.44	---	---	---	0.7	
10/26/13	--	--	--	---	---	---	0.7	
10/27/13	--	--	--	---	---	---	0.7	
10/28/13	15:30	71	1.64	---	---	---	0.7	
10/29/13	11:30	71	1.64	---	---	---	0.7	
10/30/13	11:00	71	1.64	---	---	---	0.7	
10/31/13	8:00	70.9	1.74	---	---	---	0.7	
11/1/13	16:00	70.9	1.74	---	---	---	0.7	
11/2/13	--	--	--	---	---	---	0.7	
11/3/13	--	--	--	---	---	---	0.7	
11/4/13	8:00	70.9	1.74	---	---	---	0.7	
11/5/13	7:30	70.9	1.74	---	---	---	0.7	
11/6/13	7:30	70.9	1.74	---	---	---	0.7	
11/7/13	10:00	70.9	1.74	---	---	---	0.7	
11/8/13	9:00	71.0	1.64	---	---	---	0.7	(a)
11/9/13	--	--	--	---	---	---	0.7	
11/10/13	--	--	--	---	---	---	0.7	
11/11/13	8:00	71.1	1.54	---	---	---	0.7	(a)
11/12/13	8:00	71.1	1.54	---	---	---	0.7	
11/13/13	8:00	71.1	1.54	---	---	---	0.7	
11/14/13	9:00	71.1	1.54	---	---	---	0.7	
11/15/13	9:00	71.1	1.54	---	---	---	0.7	
11/16/13	--	--	--	---	---	---	0.7	
11/17/13	--	--	--	---	---	---	0.7	
11/18/13	8:00	70.7	1.94	---	---	---	0.7	
11/19/13	9:00	70.7	1.94	---	---	---	0.7	
11/20/13	14:00	70.7	1.94	---	---	---	0.7	
11/21/13	8:00	70.7	1.94	---	---	---	0.7	
11/22/13	10:00	70.7	1.94	---	---	---	0.7	
11/23/13	--	--	--	---	---	---	0.7	

TABLE 2.2

2013 SUMMARY OF DAILY LEAK DETECTION SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

Date	Time of Measurement (hh:mm)	Water Level ^(b) (feet BTOS)	Water Depth ^(b) (feet AFOS)	Water Depth	Water Depth	Volume	Average Daily Flow	Comments
				After Pumping (feet BTOS)	Removed (feet)	Removed ^(b) (gallons)	Rate ^(c) (gallons/day/acre)	
11/24/13	--	--	--	---	---	---	0.7	
11/25/13	8:00	70.8	1.84	---	---	---	0.7	(a)
11/26/13	9:00	70.7	1.94	---	---	---	0.7	
11/27/13	9:00	70.7	1.94	---	---	---	0.7	
11/28/13	--	--	--	---	---	---	0.7	
11/29/13	--	--	--	---	---	---	0.7	
11/30/13	--	--	--	---	---	---	0.7	
12/1/13	--	--	--	---	---	---	0.7	
12/2/13	9:30	70.7	1.94	---	---	---	0.7	
12/3/13	9:00	70.7	1.94	---	---	---	0.7	
12/4/13	--	--	--	---	---	---	0.7	
12/5/13	--	--	--	---	---	---	0.7	
12/6/13	--	--	--	---	---	---	0.7	
12/7/13	--	--	--	---	---	---	0.7	
12/8/13	--	--	--	---	---	---	0.7	
12/9/13	9:00	70.8	1.84	---	---	---	0.7	(a)
12/10/13	--	--	--	---	---	---	0.7	
12/11/13	--	--	--	---	---	---	0.7	
12/12/13	--	--	--	---	---	---	0.7	
12/13/13	--	--	--	---	---	---	0.7	
12/14/13	--	--	--	---	---	---	0.7	
12/15/13	--	--	--	---	---	---	0.7	
12/16/13	8:00	70.8	1.84	---	---	---	0.7	
12/17/13	--	--	--	---	---	---	0.7	
12/18/13	--	--	--	---	---	---	0.7	It was noted on the field form that CRA pumped with 2" pump on 12/18/13 but should have be written for 12/19/13. Pumped to the LCS and measured the volume removed using a temporary flow meter (no water level measurements).
12/19/13	--	--	--	--	--	454	0.7	
12/20/13	--	--	--	---	---	---	1.2	
12/21/13	--	--	--	---	---	---	1.2	
12/22/13	--	--	--	---	---	---	1.2	

TABLE 2.2

2013 SUMMARY OF DAILY LEAK DETECTION SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

Date	Time of Measurement (hh:mm)	Water Level ^(b) (feet BTOS)	Water Depth ^(b) (feet AFOS)	Water Depth	Water Depth	Volume	Average Daily Flow	Comments	
				After Pumping (feet BTOS)	Removed (feet)	Removed ^(b) (gallons)	Rate ^(c) (gallons/day/acre)		
12/23/13	9:45	71.3	1.34	---	---	---	1.2	^(a) This water level has been determined to be erroneous as no pumping occurred and it is not consistent with the water level measurements collected on 1/7/14 and 1/13/14.	
12/24/13	--	--	--	---	---	---	1.2		
12/25/13	--	--	--	---	---	---	1.2		
12/26/13	--	--	--	---	---	---	1.2		
12/27/13	--	--	--	---	---	---	1.2		
12/28/13	--	--	--	---	---	---	1.2		
12/29/13	--	--	--	---	---	---	1.2		
12/30/13	--	--	--	---	---	---	1.2		
12/31/13	--	--	--	---	---	95	1.2		Due to inconsistencies between water level measurements on 12/23/13 and 1/1/14, the volume of accumulation in the sump on 12/31/13 since the last pumping event on 12/19/13 is estimated as the maximum volume that would have accumulated if the sump was pumped dry on 12/19/13 and the water level rose to 0.84 ft AFOS on 1/7/14 (approximately 178 gallons in 15 days). Therefore, approximately 95 gallons would have accumulated by 12/31/13 (assuming linear distribution in sump accumulation in 8 days).
1/1/14	--	--	--	---	---	---	1.2		
1/2/14	--	--	--	---	---	---	1.2		
1/3/14	--	--	--	---	---	---	1.2		
1/4/14	--	--	--	---	---	---	1.2		
1/5/14	--	--	--	---	---	---	1.2		
1/6/14	--	--	--	---	---	---	1.2		
1/7/14	10:00	71.8	0.84	---	---	---	1.2	^(a) Water level readings for the LDS sump were recorded on the LCS sump log form in January 2014.	
1/8/14	--	--	--	---	---	---	1.2		
1/9/14	--	--	--	---	---	---	1.2		
1/10/14	--	--	--	---	---	---	1.2		
1/11/14	--	--	--	---	---	---	1.2		
1/12/14	--	--	--	---	---	---	1.2		
1/13/14	9:00	71.5	1.14	---	---	---	1.2	^(a) Water level readings for the LDS sump were recorded on the LCS sump log form in January 2014.	
Minimum		70.50	0.34						
Maximum		72.30	2.14						
Mean		71.20	1.44						
Pumping Events					5				
⁽¹⁾ Total Volume Pumped to LCS in 2013 (gallons)						1,840			
⁽²⁾ Total Volume Accumulation carried forward from 2012 (gallons)						-106			
⁽³⁾ Total Volume Accumulation from last pumping event to end of 2013 (gallons)						95			
⁽¹⁾⁺⁽²⁾⁺⁽³⁾ Net 2013 LDS Accumulation Volume (gallons)						1,829			

2013 SUMMARY OF DAILY LEAK DETECTION SYSTEM LOG
 2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

<i>Date</i>	<i>Time of Measurement (hh:mm)</i>	<i>Water Level ^(b) (feet BTOS)</i>	<i>Water Depth ^(b) (feet AFOS)</i>	<i>Water Depth After Pumping (feet BTOS)</i>	<i>Water Depth Removed (feet)</i>	<i>Volume Removed ^(b) (gallons)</i>	<i>Average Daily Flow Rate ^(c) (gallons/day/acre)</i>	<i>Comments</i>
-------------	--	---	---	--	---	--	--	-----------------

Note:

(-) Measurements were not collected.

(--) Water was not removed from the sump.

^(a) Water level/water depth is either less/more than previous measurement due to human error while taking the measurement.

^(b) Recording of water level and volume of liquid removed required to be recorded on a monthly basis, consistent with the Post-Closure Plan, Bedford Plant Vault (CRA, February 2012).

^(c) Average daily flow rate calculated by dividing removed volume by the elapsed time from the prior pumping event and the area of the Vault footprint (7 acres).

TABLE 2.3

2013 SUMMARY OF DAILY GROUNDWATER UNDERDRAIN SYSTEM LOG
 2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

Monitoring Location Information

Top of sump (datum reference)	739.49	
Bottom of sump (feet BTOS)	77.31	77.1
Bottom of sump (datum reference)	662.18	
Diameter of sump (feet)	3	

Date	Time of Water Level Measurement (hh:mm)	Manually Measured Water Level (1) (feet BTOS)	Water Depth (1) (feet AFOS)	Volume Removed (recorded by PLC) (1,2) (gallons)	Comments
1/1/13	14:10	71.20	6.11	---	
1/2/13	14:28	71.20	6.11	---	
1/3/13	13:00	71.20	6.11	---	
1/4/13	10:30	71.20	6.11	---	
1/5/13	--	--	--	---	
1/6/13	--	--	--	---	
1/7/13	11:21	71.20	6.11	---	
1/8/13	13:12	71.20	6.11	---	
1/9/13	13:48	71.20	6.11	---	
1/10/13	8:12	71.15	6.16	---	
1/11/13	11:00	71.10	6.21	---	
1/12/13	--	--	--	---	
1/13/13	--	--	--	---	
1/14/13	10:00	71.10	6.21	---	
1/15/13	9:00	71.10	6.21	---	
1/16/13	8:19	71.10	6.21	---	
1/17/13	8:49	71.05	6.26	---	
1/18/13	14:22	71.05	6.26	---	
1/19/13	--	--	--	---	
1/20/13	--	--	--	---	
1/21/13	8:24	71.00	6.31	---	
1/22/13	11:22	71.00	6.31	---	
1/23/13	14:20	71.00	6.31	---	
1/24/13	10:42	71.00	6.31	---	
1/25/13	9:27	71.00	6.31	---	
1/26/13	--	--	--	---	
1/27/13	--	--	--	---	
1/28/13	8:34	70.95	6.36	---	
1/29/13	8:22	70.95	6.36	---	
1/30/13	--	--	--	---	
1/31/13	--	--	--	---	
2/1/13	9:00	70.90	6.41	---	
2/2/13	--	--	--	---	
2/3/13	--	--	--	---	

TABLE 2.3

2013 SUMMARY OF DAILY GROUNDWATER UNDERDRAIN SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

<i>Date</i>	<i>Time of Water Level Measurement</i>	<i>Manually Measured Water Level ⁽¹⁾</i>	<i>Water Depth ⁽¹⁾</i>	<i>Volume Removed (recorded by PLC) ^(1,2)</i>	<i>Comments</i>
	<i>(hh:mm)</i>	<i>(feet BTOS)</i>	<i>(feet AFOS)</i>	<i>(gallons)</i>	
2/4/13	11:14	70.90	6.41	---	
2/5/13	9:24	70.90	6.41	---	
2/6/13	13:34	70.90	6.41	---	
2/7/13	9:44	70.90	6.41	---	
2/8/13	10:36	70.90	6.41	---	
2/9/13	--	--	--	---	
2/10/13	--	--	--	---	
2/11/13	9:14	70.90	6.41	---	
2/12/13	9:36	70.90	6.41	---	
2/13/13	10:14	70.90	6.41	---	
2/14/13	9:24	70.85	6.46	---	
2/15/13	8:22	70.85	6.46	---	
2/16/13	--	--	--	---	
2/17/13	--	--	--	---	
2/18/13	9:04	70.85	6.46	---	
2/19/13	8:52	70.85	6.46	---	
2/20/13	10:02	70.85	6.46	---	
2/21/13	9:14	70.85	6.46	---	
2/22/13	10:22	70.85	6.46	---	
2/23/13	--	--	--	---	
2/24/13	--	--	--	---	
2/25/13	8:44	70.85	6.46	---	
2/26/13	9:34	70.85	6.46	---	
2/27/13	9:06	70.80	6.51	---	
2/28/13	9:06	70.80	6.51	---	
3/1/13	8:52	70.80	6.51	---	
3/2/13	--	--	--	---	
3/3/13	--	--	--	---	
3/4/13	9:30	70.80	6.51	---	
3/5/13	9:06	70.80	6.51	---	
3/6/13	10:54	70.80	6.51	---	
3/7/13	10:34	70.80	6.51	---	
3/8/13	8:32	70.75	6.56	---	
3/9/13	--	--	--	---	
3/10/13	--	--	--	---	
3/11/13	9:00	70.75	6.56	---	
3/12/13	8:15	70.70	6.61	---	
3/13/13	10:15	70.70	6.61	---	
3/14/13	10:45	70.70	6.61	---	
3/15/13	10:20	70.70	6.61	---	
3/16/13	--	--	--	---	

TABLE 2.3

2013 SUMMARY OF DAILY GROUNDWATER UNDERDRAIN SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

<i>Date</i>	<i>Time of Water Level Measurement (hh:mm)</i>	<i>Manually Measured Water Level ⁽¹⁾ (feet BTOS)</i>	<i>Water Depth ⁽¹⁾ (feet AFOS)</i>	<i>Volume Removed (recorded by PLC) ^(1,2) (gallons)</i>	<i>Comments</i>
3/17/13	--	--	--	---	
3/18/13	11:22	70.70	6.61	---	
3/19/13	8:24	70.70	6.61	---	
3/20/13	9:24	70.70	6.61	---	
3/21/13	14:34	70.70	6.61	---	
3/22/13	8:54	70.70	6.61	---	
3/23/13	--	--	--	---	
3/24/13	--	--	--	---	
3/25/13	9:00	70.70	6.61	---	
3/26/13	9:00	70.70	6.61	---	
3/27/13	9:00	70.65	6.66	---	
3/28/13	8:00	70.60	6.71	---	
3/29/13	8:00	70.60	6.71	---	
3/30/13	--	--	--	---	
3/31/13	--	--	--	---	
4/1/13	8:45	70.60	6.71	---	
4/2/13	8:45	70.60	6.71	---	
4/3/13	8:50	70.60	6.71	---	
4/4/13	8:15	70.60	6.71	---	
4/5/13	8:10	70.60	6.71	---	
4/6/13	--	--	--	---	
4/7/13	--	--	--	---	
4/8/13	13:00	70.50	6.81	---	
4/9/13	10:30	70.55	6.76	---	(a)
4/10/13	14:15	70.55	6.76	---	
4/11/13	13:00	70.55	6.76	---	
4/12/13	14:45	70.55	6.76	---	
4/13/13	--	--	--	---	
4/14/13	--	--	--	---	
4/15/13	14:30	70.55	6.76	---	
4/16/13	9:00	70.55	6.76	---	
4/17/13	14:30	70.50	6.81	---	
4/18/13	11:00	70.55	6.76	---	(a)
4/19/13	9:00	70.50	6.81	---	
4/20/13	--	--	--	---	
4/21/13	--	--	--	---	
4/22/13	13:30	70.50	6.81	---	
4/23/13	13:15	70.50	6.81	---	
4/24/13	9:00	70.50	6.81	---	
4/25/13	9:00	70.50	6.81	---	

TABLE 2.3

2013 SUMMARY OF DAILY GROUNDWATER UNDERDRAIN SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

<i>Date</i>	<i>Time of Water Level Measurement</i>	<i>Manually Measured Water Level ⁽¹⁾</i>	<i>Water Depth ⁽¹⁾</i>	<i>Volume Removed (recorded by PLC) ^(1,2)</i>	<i>Comments</i>
	<i>(hh:mm)</i>	<i>(feet BTOS)</i>	<i>(feet AFOS)</i>	<i>(gallons)</i>	
4/26/13	7:40	70.50	6.81	---	
4/27/13	--	--	--	---	
4/28/13	--	--	--	---	
4/29/13	14:10	70.45	6.86	---	
4/30/13	11:20	70.45	6.86	---	
5/1/13	8:10	70.45	6.86	---	
5/2/13	7:40	70.45	6.86	---	
5/3/13	8:00	70.45	6.86	---	
5/4/13	--	--	--	---	
5/5/13	--	--	--	---	
5/6/13	10:30	70.40	6.91	---	
5/7/13	10:00	70.40	6.91	---	
5/8/13	10:30	70.40	6.91	---	
5/9/13	8:20	70.40	6.91	---	
5/10/13	8:00	70.40	6.91	---	
5/11/13	--	--	--	---	
5/12/13	--	--	--	---	
5/13/13	9:10	70.40	6.91	---	
5/14/13	8:00	70.40	6.91	---	
5/15/13	7:30	70.40	6.91	---	
5/16/13	8:30	70.40	6.91	---	
5/17/13	8:20	70.40	6.91	---	
5/18/13	--	--	--	---	
5/19/13	--	--	--	---	
5/20/13	9:10	70.40	6.91	---	
5/21/13	8:30	70.40	6.91	---	
5/22/13	8:20	70.35	6.96	---	
5/23/13	8:15	70.35	6.96	---	
5/24/13	8:20	70.35	6.96	---	
5/25/13	--	--	--	---	
5/26/13	--	--	--	---	
5/27/13	8:20	70.35	6.96	---	
5/28/13	8:10	70.35	6.96	---	
5/29/13	8:00	70.35	6.96	---	
5/30/13	11:00	70.35	6.96	---	
5/31/13	9:00	70.35	6.96	---	
6/1/13	--	--	--	---	
6/2/13	--	--	--	---	
6/3/13	8:20	70.35	6.96	---	
6/4/13	8:10	70.35	6.96	---	
6/5/13	10:15	70.30	7.01	---	

TABLE 2.3

2013 SUMMARY OF DAILY GROUNDWATER UNDERDRAIN SYSTEM LOG
 2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

<i>Date</i>	<i>Time of Water Level Measurement (hh:mm)</i>	<i>Manually Measured Water Level ⁽¹⁾ (feet BTOS)</i>	<i>Water Depth ⁽¹⁾ (feet AFOS)</i>	<i>Volume Removed (recorded by PLC) ^(1,2) (gallons)</i>	<i>Comments</i>
6/6/13	14:50	70.30	7.01	---	
6/7/13	10:30	70.30	7.01	---	
6/8/13	--	--	--	---	
6/9/13	--	--	--	---	
6/10/13	4:00	70.30	7.01	---	
6/11/13	8:15	70.30	7.01	---	
6/12/13	9:30	70.30	7.01	---	
6/13/13	8:20	70.30	7.01	---	
6/14/13	9:20	70.30	7.01	0	
6/15/13	--	--	--	0	
6/16/13	--	--	--	0	
6/17/13	13:20	70.30	7.01	0	
6/18/13	10:20	70.30	7.01	0	
6/19/13	9:15	70.30	7.01	0	
6/20/13	7:10	70.30	7.01	0	
6/21/13	13:30	71.90	5.41	36,055	Automated (PLC) pumping system commenced operation.
6/22/13	--	--	--	0	
6/23/13	--	--	--	0	
6/24/13	9:50	71.35	5.96	0	
6/25/13	10:00	71.35	5.96	0	
6/26/13	--	--	--	--	Water level readings not collected due to vacation of field staff.
6/27/13	--	--	--	--	Water level readings not collected due to vacation of field staff.
6/28/13	--	--	--	--	Water level readings not collected due to vacation of field staff.
6/29/13	--	--	--	--	Water level readings not collected due to vacation of field staff.
6/30/13	--	--	--	--	Water level readings not collected due to vacation of field staff.
7/1/13	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/2/13	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/3/13	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/4/13	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/5/13	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/6/13	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/7/13	--	--	--	0	Water level readings not collected due to vacation of field staff.
7/8/13	--	--	--	38,155	Manual water level readings not collected due to vacation of field staff.
7/9/13	--	--	--	62,910	Manual water level readings not collected due to vacation of field staff.
7/10/13	--	--	--	36,355	Manual water level readings not collected due to vacation of field staff.
7/11/13	--	--	--	9,080	Manual water level readings not collected due to vacation of field staff.
7/12/13	--	--	--	8,470	Manual water level readings not collected due to vacation of field staff.
7/13/13	--	--	--	8,210	Manual water level readings not collected due to vacation of field staff.
7/14/13	--	--	--	8,010	Manual water level readings not collected due to vacation of field staff.
7/15/13	--	--	--	7,855	Manual water level readings not collected due to vacation of field staff.

TABLE 2.3

2013 SUMMARY OF DAILY GROUNDWATER UNDERDRAIN SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

<i>Date</i>	<i>Time of Water Level Measurement</i> (hh:mm)	<i>Manually Measured Water Level</i> ⁽¹⁾ (feet BTOS)	<i>Water Depth</i> ⁽¹⁾ (feet AFOS)	<i>Volume Removed (recorded by PLC)</i> ^(1,2) (gallons)	<i>Comments</i>
7/16/13	6:00	75	2.31	7,715	
7/17/13	6:20	75	2.31	7,660	
7/18/13	6:15	75	2.31	7,700	
7/19/13	6:10	75	2.31	7,530	
7/20/13	--	--	--	7,445	
7/21/13	--	--	--	7,430	
7/22/13	8:15	75	2.31	7,400	
7/23/13	9:00	75	2.31	7,325	
7/24/13	6:15	75	2.31	7,105	
7/25/13	6:00	75	2.31	7,295	
7/26/13	6:00	75	2.31	7,105	
7/27/13	--	--	--	7,075	
7/28/13	--	--	--	6,980	
7/29/13	9:00	75	2.31	6,947	
7/30/13	6:00	75	2.31	6,945	
7/31/13	--	--	--	6,835	
8/1/13	8:30	75	2.31	6,830	
8/2/13	10:45	75	2.31	6,730	
8/3/13	--	--	--	6,725	
8/4/13	--	--	--	6,565	
8/5/13	14:15	75	2.31	6,606	
8/6/13	6:15	75	2.31	6,250	
8/7/13	9:45	75	2.31	6,360	
8/8/13	9:45	75	2.31	6,635	
8/9/13	8:15	75	2.31	6,360	
8/10/13	--	--	--	6,285	
8/11/13	--	--	--	6,165	
8/12/13	9:00	75	2.31	6,105	
8/13/13	10:45	75	2.31	6,005	
8/14/13	9:00	75	2.31	5,750	
8/15/13	9:00	75	2.31	6,020	
8/16/13	9:30	75	2.31	5,755	
8/17/13	--	--	--	5,760	
8/18/13	--	--	--	5,635	
8/19/13	15:30	75	2.31	5,580	
8/20/13	16:30	75	2.31	5,500	
8/21/13	8:00	75	2.31	5,395	
8/22/13	8:00	75	2.31	5,540	
8/23/13	8:00	75	2.31	5,250	
8/24/13	--	--	--	5,205	
8/25/13	--	--	--	5,170	

TABLE 2.3

2013 SUMMARY OF DAILY GROUNDWATER UNDERDRAIN SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

<i>Date</i>	<i>Time of Water Level Measurement</i>	<i>Manually Measured Water Level ⁽¹⁾</i>	<i>Water Depth ⁽¹⁾</i>	<i>Volume Removed (recorded by PLC) ^(1,2)</i>	<i>Comments</i>
	<i>(hh:mm)</i>	<i>(feet BTOS)</i>	<i>(feet AFOS)</i>	<i>(gallons)</i>	
8/26/13	8:15	75	2.31	5,155	
8/27/13	7:00	75	2.31	5,110	
8/28/13	10:00	75	2.31	5,060	
8/29/13	9:50	75	2.31	5,080	
8/30/13	9:00	75	2.31	4,980	
8/31/13	--	--	--	4,955	
9/1/13	--	--	--	4,960	
9/2/13	--	--	--	4,940	
9/3/13	11:00	75.00	2.31	4,870	
9/4/13	9:00	75.00	2.31	4,810	
9/5/13	9:00	75.00	2.31	4,770	
9/6/13	9:00	75.00	2.31	4,745	
9/7/13	--	--	--	4,710	
9/8/13	--	--	--	4,660	
9/9/13	13:00	75.00	2.31	4,535	
9/10/13	7:30	75.00	2.31	4,475	
9/11/13	8:00	75.00	2.31	4,415	
9/12/13	9:00	75.00	2.31	4,335	
9/13/13	13:00	75.00	2.31	4,245	
9/14/13	--	--	--	4,215	
9/15/13	--	--	--	4,140	
9/16/13	8:30	75.00	2.31	4,150	
9/17/13	7:30	75.00	2.31	4,075	
9/18/13	13:57	75.00	2.31	4,150	
9/19/13	13:32	75.00	2.31	4,275	
9/20/13	10:36	75.00	2.31	4,380	
9/21/13	--	--	--	4,495	
9/22/13	--	--	--	4,490	
9/23/13	9:56	75.00	2.31	4,555	
9/24/13	12:04	75.00	2.31	4,555	
9/25/13	10:00	75.00	2.31	4,505	
9/26/13	9:30	75.00	2.31	4,480	
9/27/13	9:15	75.00	2.31	4,520	
9/28/13	--	--	--	4,529	
9/29/13	--	--	--	4,535	
9/30/13	8:20	75.00	2.31	4,630	
10/1/13	13:30	75.10	2.21	4,625	
10/2/13	8:45	74.90	2.41	4,635	
10/3/13	14:00	75.00	2.31	4,665	
10/4/13	11:00	75.00	2.31	4,670	
10/5/13	--	--	--	4,675	

TABLE 2.3

2013 SUMMARY OF DAILY GROUNDWATER UNDERDRAIN SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

<i>Date</i>	<i>Time of Water Level Measurement (hh:mm)</i>	<i>Manually Measured Water Level (1) (feet BTOS)</i>	<i>Water Depth (1) (feet AFOS)</i>	<i>Volume Removed (recorded by PLC) (1,2) (gallons)</i>	<i>Comments</i>
10/6/13	--	--	--	4,890	
10/7/13	8:00	75.00	2.31	5,210	
10/8/13	9:00	75.00	2.31	5,395	
10/9/13	8:00	75.00	2.31	5,440	
10/10/13	8:00	75.00	2.31	5,395	
10/11/13	8:00	75.00	2.31	5,400	
10/12/13	--	--	--	5,295	
10/13/13	--	--	--	5,295	
10/14/13	9:00	75.00	2.31	5,320	
10/15/13	8:00	75.00	2.31	5,350	
10/16/13	8:00	75.00	2.31	5,370	
10/17/13	8:30	75.00	2.31	5,445	
10/18/13	9:00	75.00	2.31	5,215	
10/19/13	--	--	--	5,160	
10/20/13	--	--	--	5,220	
10/21/13	8:30	74.90	2.41	5,270	
10/22/13	8:30	74.90	2.41	5,095	
10/23/13	8:30	74.90	2.41	4,955	
10/24/13	13:00	75.00	2.31	4,905	
10/25/13	14:30	75.00	2.31	4,855	
10/26/13	--	--	--	4,925	
10/27/13	--	--	--	4,970	
10/28/13	15:30	75.00	2.31	4,665	
10/29/13	11:30	75.00	2.31	4,625	
10/30/13	11:00	75.00	2.31	4,650	
10/31/13	8:00	75.00	2.31	4,900	
11/1/13	16:00	75.00	2.31	5,045	
11/2/13	--	--	--	5,040	
11/3/13	--	--	--	5,085	
11/4/13	8:00	75.00	2.31	5,410	
11/5/13	7:30	75.00	2.31	5,325	
11/6/13	7:30	75.00	2.31	5,310	
11/7/13	10:00	75.00	2.31	5,205	
11/8/13	9:00	75.00	2.31	5,305	
11/9/13	--	--	--	5,495	
11/10/13	--	--	--	5,365	
11/11/13	8:00	75.20	2.11	5,485	
11/12/13	8:00	75.00	2.31	5,300	
11/13/13	15:00	75.00	2.31	5,370	
11/14/13	9:00	75.00	2.31	5,405	
11/15/13	9:00	75.00	2.31	5,380	

TABLE 2.3

2013 SUMMARY OF DAILY GROUNDWATER UNDERDRAIN SYSTEM LOG
 2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

<i>Date</i>	<i>Time of Water Level Measurement (hh:mm)</i>	<i>Manually Measured Water Level⁽¹⁾ (feet BTOS)</i>	<i>Water Depth⁽¹⁾ (feet AFOS)</i>	<i>Volume Removed (recorded by PLC)^(1,2) (gallons)</i>	<i>Comments</i>
11/16/13	--	--	--	5,355	
11/17/13	--	--	--	5,335	
11/18/13	8:00	74.90	2.41	5,360	
11/19/13	9:00	74.90	2.41	5,520	
11/20/13	14:00	74.70	2.61	0	
11/21/13	8:00	74.70	2.61	0	
11/22/13	10:00	74.70	2.61	0	
11/23/13	--	--	--	0	
11/24/13	--	--	--	0	
11/25/13	8:00	75.00	2.31	19,875	
11/26/13	9:00	75.00	2.31	18,985	
11/27/13	9:00	75.00	2.31	5,930	
11/28/13	--	--	--	6,000	
11/29/13	--	--	--	5,640	
11/30/13	--	--	--	5,625	
12/1/13	--	--	--	5,670	
12/2/13	9:30	75.1	2.21	5,705	
12/3/13	9:00	75.1	2.21	5,610	
12/4/13	--	--	--	5,680	
12/5/13	--	--	--	5,455	
12/6/13	--	--	--	5,445	
12/7/13	--	--	--	5,465	
12/8/13	--	--	--	5,605	
12/9/13	9:00	75.1	2.21	5,545	
12/10/13	--	--	--	3,720	PLC turned off for pump and flow meter testing
12/11/13	--	--	--	---	PLC off for pump and flow meter testing
12/12/13	--	--	--	---	PLC off for pump and flow meter testing
12/13/13	--	--	--	---	PLC off for pump and flow meter testing
12/14/13	--	--	--	---	PLC off for pump and flow meter testing
12/15/13	--	--	--	---	PLC off for pump and flow meter testing
12/16/13	8:00	72.8	4.51	---	PLC off for pump and flow meter testing
12/17/13	--	--	--	---	PLC off for pump and flow meter testing
12/18/13	--	--	--	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system
12/19/13	--	--	--	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system
12/20/13	--	--	--	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system
12/21/13	--	--	--	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system
12/22/13	--	--	--	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system
12/23/13	9:40	71.55	5.76	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system
12/24/13	--	--	--	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system
12/25/13	--	--	--	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system
12/26/13	--	--	--	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system

2013 SUMMARY OF DAILY GROUNDWATER UNDERDRAIN SYSTEM LOG
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

<i>Date</i>	<i>Time of Water Level Measurement (hh:mm)</i>	<i>Manually Measured Water Level ⁽¹⁾ (feet BTOS)</i>	<i>Water Depth ⁽¹⁾ (feet AFOS)</i>	<i>Volume Removed (recorded by PLC) ^(1,2) (gallons)</i>	<i>Comments</i>
12/27/13	--	--	--	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system
12/28/13	--	--	--	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system
12/29/13	--	--	--	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system
12/30/13	--	--	--	---	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system
12/31/13	--	--	--	--	PLC remaining off due to cold weather and difficulty with water line (frozen) and treatment system

Minimum	70.3	2.1	
Maximum	75.2	7.0	
Mean	72.6	4.7	
Total Volume Pumped in 2013 (gallons)			1,020,797

Notes:

- ⁽¹⁾ Recording of water level and volume of liquid removed required to be recorded on a monthly basis, consistent with the Post-Closure Plan, Bedford Plant Vault (CRA, February 2012).
- ⁽²⁾ Automated system controlled pumping of the GUS and calculate of liquid removed between 6/14/2013 and 12/10/2013.
- (--) Measurements were not collected.
- (---) Water was not removed from the sump.
- ⁽³⁾ Water level/water depth less than previous measurement due to human error while taking the measurement.

**SUMMARY OF 2013 WATER LEVEL ELEVATIONS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD PLANT
BEDFORD, INDIANA**

	<u>Sump</u>	<u>LCS</u>	<u>LDS</u>	<u>GUS</u>
	Top of sump (feet AMSL)	740.83	741.14	739.49
	Bottom of sump (ft AMSL)	671.00	668.50	662.18
	Bottom of sump (feet below top of sump [BTOS])	69.83	72.64	77.31
	Diameter of sump (feet)	6	6	3

Date (mm/dd/yy)	LCS Water Elevation (feet AMSL)	LDS Water Elevation (feet AMSL)	GUS Water Elevation (feet AMSL)
1/1/13	673.6	669.7	668.3
1/2/13	673.6	669.7	668.3
1/3/13	673.6	669.7	668.3
1/4/13	673.6	669.7	668.3
1/5/13	--	--	--
1/6/13	--	--	--
1/7/13	673.7	669.8	668.3
1/8/13	673.7	669.8	668.3
1/9/13	673.7	669.8	668.3
1/10/13	673.7	669.8	668.3
1/11/13	673.7	669.9	668.4
1/12/13	--	--	--
1/13/13	--	--	--
1/14/13	673.7	669.9	668.4
1/15/13	673.7	669.9	668.4
1/16/13	673.8	669.9	668.4
1/17/13	673.8	669.9	668.4
1/18/13	673.8	669.9	668.4
1/19/13	--	--	--
1/20/13	--	--	--
1/21/13	673.9	670.0	668.5
1/22/13	673.9	670.1	668.5
1/23/13	673.9	670.1	668.5
1/24/13	673.9	670.1	668.5
1/25/13	673.9	670.1	668.5
1/26/13	--	--	--
1/27/13	--	--	--
1/28/13	674.0	670.1	668.5
1/29/13	674.0	670.1	668.5
1/30/13	--	--	--
1/31/13	--	--	--
2/1/13	674.0	670.1	668.6
2/2/13	--	--	--
2/3/13	--	--	--
2/4/13	674.0	670.2	668.6
2/5/13	674.0	670.2	668.6
2/6/13	674.0	670.2	668.6
2/7/13	674.1	670.2	668.6
2/8/13	674.1	670.2	668.6
2/9/13	--	--	--
2/10/13	--	--	--
2/11/13	674.1	670.2	668.6
2/12/13	674.1	670.2	668.6
2/13/13	674.2	670.3	668.6

SUMMARY OF 2013 WATER LEVEL ELEVATIONS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD PLANT
BEDFORD, INDIANA

<i>Date (mm/dd/yy)</i>	<i>LCS Water Elevation (feet AMSL)</i>	<i>LDS Water Elevation (feet AMSL)</i>	<i>GUS Water Elevation (feet AMSL)</i>
2/14/13	674.2	670.3	668.6
2/15/13	674.2	670.3	668.6
2/16/13	--	--	--
2/17/13	--	--	--
2/18/13	674.2	670.3	668.6
2/19/13	674.2	670.3	668.6
2/20/13	674.2	670.3	668.6
2/21/13	674.2	670.3	668.6
2/22/13	674.2	670.4	668.6
2/23/13	--	--	--
2/24/13	--	--	--
2/25/13	674.3	670.4	668.6
2/26/13	674.3	670.4	668.6
2/27/13	674.3	670.4	668.7
2/28/13	674.2	668.8	668.7
3/1/13	674.2	668.8	668.7
3/2/13	--	--	--
3/3/13	--	--	--
3/4/13	674.2	668.8	668.7
3/5/13	674.2	668.8	668.7
3/6/13	674.2	668.8	668.7
3/7/13	674.4	668.9	668.7
3/8/13	674.5	668.9	668.7
3/9/13	--	--	--
3/10/13	--	--	--
3/11/13	674.2	669.0	668.7
3/12/13	674.2	669.0	668.8
3/13/13	674.2	669.0	668.8
3/14/13	674.2	669.0	668.8
3/15/13	674.2	669.0	668.8
3/16/13	--	--	--
3/17/13	--	--	--
3/18/13	674.3	669.1	668.8
3/19/13	674.3	669.1	668.8
3/20/13	674.3	669.1	668.8
3/21/13	674.3	669.1	668.8
3/22/13	674.3	669.2	668.8
3/23/13	--	--	--
3/24/13	--	--	--
3/25/13	674.4	669.3	668.8
3/26/13	674.4	669.4	668.8
3/27/13	674.4	669.5	668.8
3/28/13	674.4	669.5	668.9
3/29/13	674.4	669.6	668.9
3/30/13	--	--	--
3/31/13	--	--	--
4/1/13	674.4	669.7	668.9
4/2/13	674.4	669.7	668.9
4/3/13	674.4	669.8	668.9

SUMMARY OF 2013 WATER LEVEL ELEVATIONS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD PLANT
BEDFORD, INDIANA

<i>Date (mm/dd/yy)</i>	<i>LCS Water Elevation (feet AMSL)</i>	<i>LDS Water Elevation (feet AMSL)</i>	<i>GUS Water Elevation (feet AMSL)</i>
4/4/13	674.4	669.8	668.9
4/5/13	674.4	669.8	668.9
4/6/13	--	--	--
4/7/13	--	--	--
4/8/13	674.4	670.0	669.0
4/9/13	674.4	670.0	668.9
4/10/13	674.4	670.1	668.9
4/11/13	674.5	670.1	668.9
4/12/13	674.5	670.2	668.9
4/13/13	--	--	--
4/14/13	--	--	--
4/15/13	674.5	670.2	668.9
4/16/13	674.5	670.3	668.9
4/17/13	674.5	670.3	669.0
4/18/13	674.5	670.3	668.9
4/19/13	674.5	670.3	669.0
4/20/13	--	--	--
4/21/13	--	--	--
4/22/13	674.6	670.4	669.0
4/23/13	674.6	670.4	669.0
4/24/13	674.6	670.5	669.0
4/25/13	674.6	670.5	669.0
4/26/13	674.6	670.6	669.0
4/27/13	--	--	--
4/28/13	--	--	--
4/29/13	674.7	669.0	669.0
4/30/13	674.7	669.0	669.0
5/1/13	674.7	669.0	669.0
5/2/13	674.8	669.1	669.0
5/3/13	674.8	669.1	669.0
5/4/13	--	--	--
5/5/13	--	--	--
5/6/13	674.8	669.4	669.1
5/7/13	674.8	669.4	669.1
5/8/13	674.9	669.5	669.1
5/9/13	674.9	669.5	669.1
5/10/13	674.9	669.6	669.1
5/11/13	--	--	--
5/12/13	--	--	--
5/13/13	674.9	669.7	669.1
5/14/13	674.9	669.8	669.1
5/15/13	674.9	669.8	669.1
5/16/13	674.9	669.8	669.1
5/17/13	674.9	669.9	669.1
5/18/13	--	--	--
5/19/13	--	--	--
5/20/13	675.0	670.1	669.1
5/21/13	675.0	670.1	669.1

SUMMARY OF 2013 WATER LEVEL ELEVATIONS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD PLANT
BEDFORD, INDIANA

<i>Date (mm/dd/yy)</i>	<i>LCS Water Elevation (feet AMSL)</i>	<i>LDS Water Elevation (feet AMSL)</i>	<i>GUS Water Elevation (feet AMSL)</i>
5/22/13	675.0	670.2	669.1
5/23/13	675.0	670.2	669.1
5/24/13	675.0	670.2	669.1
5/25/13	--	--	--
5/26/13	--	--	--
5/27/13	675.0	670.4	669.1
5/28/13	675.0	670.4	669.1
5/29/13	675.0	670.4	669.1
5/30/13	675.0	670.4	669.1
5/31/13	675.0	670.4	669.1
6/1/13	--	--	--
6/2/13	--	--	--
6/3/13	675.0	670.5	669.1
6/4/13	675.0	670.6	669.1
6/5/13	675.0	670.6	669.2
6/6/13	675.2	669.2	669.2
6/7/13	675.2	669.3	669.2
6/8/13	--	--	--
6/9/13	--	--	--
6/10/13	675.2	669.5	669.2
6/11/13	675.2	669.5	669.2
6/12/13	675.2	669.6	669.2
6/13/13	675.2	669.6	669.2
6/14/13	675.2	669.7	669.2
6/15/13	--	--	--
6/16/13	--	--	--
6/17/13	675.2	669.9	669.2
6/18/13	675.2	669.9	669.2
6/19/13	675.2	669.9	669.2
6/20/13	675.3	669.9	669.2
6/21/13	672.3	670.0	667.6
6/22/13	--	--	--
6/23/13	--	--	--
6/24/13	672.3	670.0	668.1
6/25/13	672.3	670.0	668.1
6/26/13	--	--	--
6/27/13	--	--	--
6/28/13	--	--	--
6/29/13	--	--	--
6/30/13	--	--	--
7/1/13	--	--	--
7/2/13	--	--	--
7/3/13	--	--	--
7/4/13	--	--	--
7/5/13	--	--	--
7/6/13	--	--	--
7/7/13	--	--	--
7/8/13	--	--	--

SUMMARY OF 2013 WATER LEVEL ELEVATIONS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD PLANT
BEDFORD, INDIANA

<i>Date (mm/dd/yy)</i>	<i>LCS Water Elevation (feet AMSL)</i>	<i>LDS Water Elevation (feet AMSL)</i>	<i>GUS Water Elevation (feet AMSL)</i>
7/9/13	--	--	--
7/10/13	--	--	--
7/11/13	--	--	--
7/12/13	--	--	--
7/13/13	--	--	--
7/14/13	--	--	--
7/15/13	--	--	--
7/16/13	672.5	670.1	664.5
7/17/13	672.5	670.1	664.5
7/18/13	672.6	670.1	664.5
7/19/13	672.6	670.1	664.5
7/20/13	--	--	--
7/21/13	--	--	--
7/22/13	672.6	670.2	664.5
7/23/13	672.6	670.2	664.5
7/24/13	672.6	670.2	664.5
7/25/13	672.6	670.2	664.5
7/26/13	672.6	670.2	664.5
7/27/13	--	--	--
7/28/13	--	--	--
7/29/13	672.7	670.2	664.5
7/30/13	672.7	670.2	664.5
7/31/13	--	--	--
8/1/13	672.7	670.2	664.5
8/2/13	672.7	670.2	664.5
8/3/13	--	--	--
8/4/13	--	--	--
8/5/13	672.7	670.2	664.5
8/6/13	672.7	670.2	664.5
8/7/13	672.7	670.2	664.5
8/8/13	672.7	670.2	664.5
8/9/13	672.7	670.2	664.5
8/10/13	--	--	--
8/11/13	--	--	--
8/12/13	672.8	670.2	664.5
8/13/13	672.8	670.2	664.5
8/14/13	672.8	670.2	664.5
8/15/13	672.8	670.2	664.5
8/16/13	672.8	670.2	664.5
8/17/13	--	--	--
8/18/13	--	--	--
8/19/13	672.8	670.2	664.5
8/20/13	672.8	670.2	664.5
8/21/13	672.8	670.2	664.5
8/22/13	672.8	670.2	664.5
8/23/13	672.8	670.2	664.5
8/24/13	--	--	--
8/25/13	--	--	--

SUMMARY OF 2013 WATER LEVEL ELEVATIONS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD PLANT
BEDFORD, INDIANA

<i>Date (mm/dd/yy)</i>	<i>LCS Water Elevation (feet AMSL)</i>	<i>LDS Water Elevation (feet AMSL)</i>	<i>GUS Water Elevation (feet AMSL)</i>
8/26/13	672.8	670.2	664.5
8/27/13	672.8	670.2	664.5
8/28/13	672.9	670.3	664.5
8/29/13	672.9	670.3	664.5
8/30/13	672.9	670.3	664.5
8/31/13	--	--	--
9/1/13	--	--	--
9/2/13	--	--	--
9/3/13	673.0	670.3	664.5
9/4/13	673.0	670.3	664.5
9/5/13	673.0	670.3	664.5
9/6/13	673.0	670.3	664.5
9/7/13	--	--	--
9/8/13	--	--	--
9/9/13	673.0	670.3	664.5
9/10/13	673.0	670.3	664.5
9/11/13	673.0	670.3	664.5
9/12/13	673.0	670.3	664.5
9/13/13	673.1	670.3	664.5
9/14/13	--	--	--
9/15/13	--	--	--
9/16/13	673.1	668.9	664.5
9/17/13	673.1	668.9	664.5
9/18/13	673.5	669.0	664.5
9/19/13	673.5	669.3	664.5
9/20/13	673.5	669.3	664.5
9/21/13	--	--	--
9/22/13	--	--	--
9/23/13	673.5	669.4	664.5
9/24/13	673.5	669.5	664.5
9/25/13	673.5	669.4	664.5
9/26/13	673.2	669.5	664.5
9/27/13	673.2	669.5	664.5
9/28/13	--	--	--
9/29/13	--	--	--
9/30/13	673.3	669.6	664.5
10/1/13	673.3	669.6	664.4
10/2/13	673.3	669.6	664.6
10/3/13	673.3	669.7	664.5
10/4/13	673.3	669.7	664.5
10/5/13	--	--	--
10/6/13	--	--	--
10/7/13	673.3	669.8	664.5
10/8/13	673.3	669.8	664.5
10/9/13	673.3	669.8	664.5
10/10/13	673.3	669.6	664.5
10/11/13	673.3	669.9	664.5
10/12/13	--	--	--

SUMMARY OF 2013 WATER LEVEL ELEVATIONS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD PLANT
BEDFORD, INDIANA

<i>Date (mm/dd/yy)</i>	<i>LCS Water Elevation (feet AMSL)</i>	<i>LDS Water Elevation (feet AMSL)</i>	<i>GUS Water Elevation (feet AMSL)</i>
10/13/13	--	--	--
10/14/13	673.5	670.0	664.5
10/15/13	673.5	669.9	664.5
10/16/13	673.5	669.9	664.5
10/17/13	673.4	669.8	664.5
10/18/13	673.5	670.0	664.5
10/19/13	--	--	--
10/20/13	--	--	--
10/21/13	673.6	669.9	664.6
10/22/13	673.6	669.9	664.6
10/23/13	673.6	669.9	664.6
10/24/13	673.5	669.9	664.5
10/25/13	673.5	669.9	664.5
10/26/13	--	--	--
10/27/13	--	--	--
10/28/13	673.5	670.1	664.5
10/29/13	673.5	670.1	664.5
10/30/13	673.5	670.1	664.5
10/31/13	673.5	670.2	664.5
11/1/13	673.6	670.2	664.5
11/2/13	--	--	--
11/3/13	--	--	--
11/4/13	673.6	670.2	664.5
11/5/13	673.6	670.2	664.5
11/6/13	673.6	670.2	664.5
11/7/13	673.6	670.2	664.5
11/8/13	673.6	670.1	664.5
11/9/13	--	--	--
11/10/13	--	--	--
11/11/13	673.6	670.0	664.3
11/12/13	673.6	670.0	664.5
11/13/13	673.6	670.0	664.5
11/14/13	673.6	670.0	664.5
11/15/13	673.6	670.0	664.5
11/16/13	--	--	--
11/17/13	--	--	--
11/18/13	673.7	670.4	664.6
11/19/13	673.7	670.4	664.6
11/20/13	672.7	670.4	664.8
11/21/13	672.7	670.4	664.8
11/22/13	672.7	670.4	664.8
11/23/13	--	--	--
11/24/13	--	--	--
11/25/13	672.8	670.3	664.5
11/26/13	672.8	670.4	664.5
11/27/13	672.8	670.4	664.5
11/28/13	--	--	--
11/29/13	--	--	--

**SUMMARY OF 2013 WATER LEVEL ELEVATIONS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD PLANT
BEDFORD, INDIANA**

<i>Date (mm/dd/yy)</i>	<i>LCS Water Elevation (feet AMSL)</i>	<i>LDS Water Elevation (feet AMSL)</i>	<i>GUS Water Elevation (feet AMSL)</i>
11/30/13	--	--	--
12/1/13	--	--	--
12/2/13	672.9	670.4	664.4
12/3/13	672.9	670.4	664.4
12/4/13	--	--	--
12/5/13	--	--	--
12/6/13	--	--	--
12/7/13	--	--	--
12/8/13	--	--	--
12/9/13	672.8	670.3	664.4
12/10/13	--	--	--
12/11/13	--	--	--
12/12/13	--	--	--
12/13/13	--	--	--
12/14/13	--	--	--
12/15/13	--	--	--
12/16/13	673.0	670.3	666.7
12/17/13	--	--	--
12/18/13	--	--	--
12/19/13	--	--	--
12/20/13	--	--	--
12/21/13	--	--	--
12/22/13	--	--	--
12/23/13	673.2	669.8	667.9
12/24/13	--	--	--
12/25/13	--	--	--
12/26/13	--	--	--
12/27/13	--	--	--
12/28/13	--	--	--
12/29/13	--	--	--
12/30/13	--	--	--
12/31/13	--	--	--

TABLE 2.5

2013 LCS, LDS, AND UNDERDRAIN MAXIMUM WATER ELEVATION SUMMARY
 2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
 GM CET BEDFORD PLANT
 BEDFORD, INDIANA

Date	Maximum Water Level, measured in feet									Remarks
	LCS ¹			LDS ²			Underdrain System ³			
	BTOS (ft)	AFOS (ft)	Water Surface Elev. (ft AMSL)	BTOS (ft)	AFOS (ft)	Water Surface Elev. (ft AMSL)	BTOS (ft)	AFOS (ft)	Water Surface Elev. (ft AMSL)	
Jan-13	66.9	2.98	673.98	71.1	1.59	670.09	71.0	6.36	668.54	
Feb-13	66.6	3.28	674.28	70.7	1.94	670.44	70.8	6.51	668.69	
Mar-13	66.3	3.53	674.53	71.6	1.09	669.59	70.6	6.71	668.89	
Apr-13	66.1	3.73	674.73	70.6	2.09	670.59	70.5	6.86	669.04	
May-13	65.8	4.03	675.03	70.7	1.94	670.44	70.4	6.96	669.14	
Jun-13	65.6	4.28	675.28	70.5	2.14	670.64	70.3	7.01	669.19	
Jul-13	68.2	1.68	672.68	71.0	1.69	670.19	75.0	2.31	664.49	
Aug-13	67.9	1.93	672.93	70.9	1.79	670.29	75.0	2.31	664.49	
Sep-13	67.3	2.53	673.53	70.8	1.84	670.34	75.0	2.31	664.49	
Oct-13	67.2	2.63	673.63	70.9	1.74	670.24	74.9	2.41	664.59	
Nov-13	67.1	2.73	673.73	70.7	1.94	670.44	74.7	2.61	664.79	
Dec-13	67.6	2.19	673.19	70.7	1.94	670.44	71.6	5.76	667.94	

Notes:

AMSL - Above mean sea level

BTOS - Below top of sump

AFOS - Above floor of sump

ft - feet

N/M - No measurements taken during period

Top of sump (datum reference) = 0.0

Diameter of LCS and LDS sumps = 6.0 feet

Diameter of Underdrain sump = 3 feet

¹ LCS bottom of sump (BTOS) = 69.83 ft (671 ft AMSL)

² LDS bottom of sump (BTOS) = 72.64 ft (668.5 ft AMSL)

³ Underdrain System bottom of sump (feet BTOS) = 77.31 ft (662.18 ft AMSL)

TABLE 2.6

**2013 SUMMARY OF MONTHLY TOTAL VOLUME OF WATER TREATED IN SSC WTP AND 2,000 GPM TREATMENT SYSTEM
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

<i>Month</i>	<i>SSC WTP Number of Operational Days</i>	<i>Volume of Water Treated/Discharged at SSC WTP (gallons x 10⁶)</i>	<i>Daily Average Water Treated/Discharged at the SSC WTP (gpm)</i>	<i>2,000 gpm Treatment System Number of Operational Days</i>	<i>Volume of Water Treated/Discharged at the 2,000 gpm Treatment System (gallons x 10⁶)</i>	<i>Daily Average Water Treated/Discharged at the 2,000 gpm Treatment System (gpm)</i>
Jan-13	18	1.279	49	10	14.503	1007
Feb-13	25	2.132	59	5	9.804	1362
Mar-13	29	2.324	56	3	1.749	405
Apr-13	30	2.628	61	0	0	0
May-13	11	0.147	9	0	0	0
Jun-13	0	0.000	0	10	11.053	768
Jul-13	0	0.000	0	7	5.313	527
Aug-13	0	0.000	0	0	0	0
Sep-13	0	0.000	0	3	3.221	746
Oct-13	0	0.000	0	7	5.33	529
Nov-13	0	0.000	0	8	5.103	443
Dec-13	0	0.000	0	11	14.822	936
Total	113	8.510		64	70.898	
Month Average	-	0.709		-	5.908	
Daily Average	-	0.075		-	1.108	

TABLE 3.1

**SUMMARY OF TOTAL PCBs ANALYTICAL RESULTS FOR EI CA750 2013 FIRST SEMI-ANNUAL GROUNDWATER SAMPLES
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

Area:		<i>EastPlantArea</i>	<i>EastPlantArea</i>	<i>EastPlantArea</i>	<i>EastPlantArea</i>	<i>Plant_property</i>	<i>Plant_property</i>
Sample Location:		<i>CH-42</i>	<i>CH-42A</i>	<i>CH-43</i>	<i>CH-44</i>	<i>MW-X047Y236</i>	<i>MW-X047Y236</i>
Sample Identification:		<i>GW-062613-SA-001</i>	<i>GW-062613-JH-002</i>	<i>GW-062613-JH-004</i>	<i>GW-062613-SA-003</i>	<i>GW-062613-JH-008</i>	<i>GW-062613-JH-010</i>
Sample Date:		<i>6/26/2013</i>	<i>6/26/2013</i>	<i>6/26/2013</i>	<i>6/26/2013</i>	<i>6/26/2013</i>	<i>6/26/2013</i>
Sample Type:							<i>Duplicate</i>
	<i>Units</i>						
PCBs							
Aroclor-1016 (PCB-1016)	ug/L	0.21 U	0.21 U	0.21 U	0.20 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.21 U	0.21 U	0.21 U	0.20 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.086 J	0.21 U	0.21 U	0.20 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.21 U	0.21 U	0.21 U	0.20 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.21 U	0.21 U	0.21 U	0.20 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.21 U	0.21 U	0.21 U	0.20 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.21 U	0.21 U	0.21 U	0.20 U	0.19 U	0.19 U
Total PCBs	ug/L	0.086 J	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.21 UJ	0.21 UJ	0.21 UJ	0.23 UJ	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.21 UJ	0.21 UJ	0.21 UJ	0.23 UJ	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.21 UJ	0.21 UJ	0.21 UJ	0.23 UJ	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.21 UJ	0.21 UJ	0.21 UJ	0.23 UJ	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.21 UJ	0.21 UJ	0.21 UJ	0.23 UJ	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.21 U	0.21 U	0.21 U	0.23 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.21 U	0.21 U	0.21 U	0.23 U	0.19 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND	ND	ND
Field Parameters							
Conductivity, field	mS/cm	0.9	0.595	1.071	1.064	0.69	0.69
Dissolved oxygen (DO), field	ug/L	1900	2910	3950	1890	1640	1640
Oxidation reduction potential (ORP), field	millivolts	239.2	1.3	9.3	-101.1	-9.7	-9.7
pH, field	s.u.	6.8	6.91	7.32	7.1	7.25	7.25
Temperature, field	Deg C	15.59	15.15	16.1	16.83	16.46	16.46
Turbidity, field	NTU	5.63	2.85	3.22	0.99	2.71	2.71

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 2013 FIRST SEMI-ANNUAL GROUNDWATER SAMPLES
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

Area:		P205	P209	P209
Sample Location:		MW-X277Y100	MW-X300Y199I-2	MW-X300Y199I-4
Sample Identification:		GW-062613-JH-006	GW-062613-SA-007	GW-062613-SA-005
Sample Date:		6/26/2013	6/26/2013	6/26/2013
Sample Type:				
	Units			
PCBs				
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.19 U	0.22 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.19 U	0.22 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.19 U	0.22 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.19 U	0.22 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.19 U	0.22 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.19 U	0.22 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.19 U	0.22 U
Total PCBs	ug/L	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.22 UJ	0.19 U	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.22 UJ	0.19 U	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.22 UJ	0.19 U	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.22 UJ	0.19 U	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.22 UJ	0.19 U	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.22 U	0.19 U	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.22 U	0.19 U	--
Total PCBs (dissolved)	ug/L	ND	ND	--
Field Parameters				
Conductivity, field	mS/cm	0.898	0.525	0.494
Dissolved oxygen (DO), field	ug/L	4690	2400	4470
Oxidation reduction potential (ORP), field	millivolts	96.6	-40.3	-76.3
pH, field	s.u.	6.83	7.15	8.01
Temperature, field	Deg C	14.7	17.06	16.23
Turbidity, field	NTU	4	1.13	3.41

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 2013 FIRST SEMI-ANNUAL GROUNDWATER SAMPLES
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

Area:	MonitoringWell_RFIBoundary_WestPlantArea	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea
Sample Location:	MW-X033Y147S	MW-X085Y070S-1	MW-X085Y070S-2
Sample Identification:	GW-062713-JH-012	GW-062713-SA-019	GW-062713-SA-017
Sample Date:	6/27/2013	6/27/2013	6/27/2013
Sample Type:			
	Units		
PCBs			
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	1.9 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	1.9 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	1.9 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	1.9 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	1.9 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	1.9 U
Total PCBs	ug/L	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.20 UJ
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.20 UJ
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.20 UJ
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.20 UJ
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.20 UJ
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	R
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	R
Total PCBs (dissolved)	ug/L	ND	ND
Field Parameters			
Conductivity, field	mS/cm	1.993	6.67
Dissolved oxygen (DO), field	ug/L	680	1320
Oxidation reduction potential (ORP), field	millivolts	-29.3	-187.4
pH, field	s.u.	6.96	6.99
Temperature, field	Deg C	16.72	19.77
Turbidity, field	NTU	0.44	16.8

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 2013 FIRST SEMI-ANNUAL GROUNDWATER SAMPLES
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

Area:	<i>RFIBoundary_P216West</i>	<i>P216GM_P216_east</i>	<i>P216GM_P216_east</i>	<i>P209</i>	<i>P006</i>
Sample Location:	<i>MW-X261Y356D-3</i>	<i>MW-X297Y305D-2</i>	<i>MW-X297Y305D-2</i>	<i>MW-X300Y199I-1</i>	<i>MW-X315Y115</i>
Sample Identification:	<i>GW-062713-SA-011</i>	<i>GW-062713-SA-013</i>	<i>GW-062713-SA-015</i>	<i>GW-062713-SA-009</i>	<i>GW-062713-JH-014</i>
Sample Date:	<i>6/27/2013</i>	<i>6/27/2013</i>	<i>6/27/2013</i>	<i>6/27/2013</i>	<i>6/27/2013</i>
Sample Type:			<i>Duplicate</i>		
	<i>Units</i>				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	0.20 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
Aroclor-1242 (PCB-1242)	ug/L	0.20 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
Aroclor-1232 (PCB-1232)	ug/L	0.20 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
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND
Field Parameters					
Conductivity, field	mS/cm	0.56	0.794	0.794	0.486
Dissolved oxygen (DO), field	ug/L	4440	4350	4350	5400
Oxidation reduction potential (ORP), field	millivolts	54.5	-135.9	-135.9	3.8
pH, field	s.u.	7.26	7.15	7.15	7.28
Temperature, field	Deg C	16.78	15.62	15.62	15.77
Turbidity, field	NTU	0.17	2.17	2.17	0.07

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 2013 FIRST SEMI-ANNUAL GROUNDWATER SAMPLES
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

<i>Area:</i>		<i>P006</i>	<i>Plant_property</i>	<i>Plant_Property</i>	<i>A001MonitoringWell_WestPlantArea</i>	<i>EastPlantArea</i>
<i>Sample Location:</i>		<i>MW-X315Y150</i>	<i>MW-X043Y176</i>	<i>MW-X043Y186</i>	<i>MW-X169Y058S-1</i>	<i>MW-X227Y054</i>
<i>Sample Identification:</i>		<i>GW-062713-JH-016</i>	<i>GW-062813-JH-018</i>	<i>GW-062813-JH-020</i>	<i>GW-062813-SA-021</i>	<i>GW-062813-SA-025</i>
<i>Sample Date:</i>		<i>6/27/2013</i>	<i>6/28/2013</i>	<i>6/28/2013</i>	<i>6/28/2013</i>	<i>6/28/2013</i>
<i>Sample Type:</i>						
	<i>Units</i>					
PCBs						
Aroclor-1016 (PCB-1016)	ug/L	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	0.95 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	5.4
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND	ND	ND	5.4
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
Field Parameters						
Conductivity, field	mS/cm	0.43	1.484	1.937	3.871	1.316
Dissolved oxygen (DO), field	ug/L	1620	1070	600	4110	5860
Oxidation reduction potential (ORP), field	millivolts	-52.1	-92.9	-81.8	-35.4	-142.9
pH, field	s.u.	7.42	6.96	7.1	6.99	7.51
Temperature, field	Deg C	18.85	14.22	14.99	16.01	17.18
Turbidity, field	NTU	32.4	17.3	18.7	10.24	74.2

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 2013 SECOND SEMI-ANNUAL GROUNDWATER SAMPLES
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

Area:		<i>EastPlantArea</i>	<i>EastPlantArea</i>	<i>EastPlantArea</i>	<i>EastPlantArea</i>
Sample Location:		<i>CH-42</i>	<i>CH-42A</i>	<i>CH-43</i>	<i>CH-44</i>
Sample Identification:		<i>GW-102813-JL-002</i>	<i>GW-102813-KC-001</i>	<i>GW-102813-JL-004</i>	<i>GW-102813-KC-003</i>
Sample Date:		<i>10/28/2013</i>	<i>10/28/2013</i>	<i>10/28/2013</i>	<i>10/28/2013</i>
Sample Type:					
	<i>Units</i>				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.19 U	0.20 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.19 U	0.20 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.12 J	0.19 U	0.20 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.19 U	0.20 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.19 U	0.20 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.19 U	0.20 U	0.056 J
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.19 U	0.20 U	0.19 U
Total PCBs	ug/L	0.12 J	ND	ND	0.056 J
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.21 U	0.19 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.21 U	0.19 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.21 U	0.19 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.21 U	0.19 U	0.19 U	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.21 U	0.19 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.21 U	0.19 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.21 U	0.19 U	0.19 U	0.20 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND
Field Parameters					
Conductivity, field	mS/cm	0.973	0.698	1.02	1.156
Dissolved oxygen (DO), field	ug/L	2860	4840	520	2500
Oxidation reduction potential (ORP), field	millivolts	197.2	180.7	-119.7	26.2
pH, field	s.u.	6.85	7.35	6.96	6.9
Temperature, field	Deg C	16.12	17.98	16.15	15.56
Turbidity, field	NTU	0.71	1.27	0.93	2.46

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected.

**SUMMARY OF TOTAL PCBs ANALYTICAL RESULTS FOR EI CA750 2013 SECOND SEMI-ANNUAL GROUNDWATER SAMPLES
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

Area:		MonitoringWell_RFIBoundary_WestPlantArea	Plant_property	EastPlantArea	P006
Sample Location:		MW-X033Y147S	MW-X047Y236	MW-X227Y054	MW-X315Y115
Sample Identification:		GW-102913-JL-006	GW-102913-KC-011	GW-102913-KC-005	GW-102913-KC-009
Sample Date:		10/29/2013	10/29/2013	10/29/2013	10/29/2013
Sample Type:					
	Units				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.19 U	0.95 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.19 U	0.95 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.19 U	6.5	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.19 U	0.95 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.19 U	0.95 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	R	0.19 U	0.95 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	R	0.19 U	0.95 U	0.19 U
Total PCBs	ug/L	ND	ND	6.5	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND
Field Parameters					
Conductivity, field	mS/cm	1.856	0.643	1.091	0.473
Dissolved oxygen (DO), field	ug/L	610	2760	2060	3050
Oxidation reduction potential (ORP), field	millivolts	-34.6	22.3	209.3	58.8
pH, field	s.u.	6.65	7.42	6.65	7.58
Temperature, field	Deg C	15.82	14.58	12.64	14.26
Turbidity, field	NTU	2.01	3.95	26.2	5.03

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected.

**SUMMARY OF TOTAL PCBs ANALYTICAL RESULTS FOR EI CA750 2013 SECOND SEMI-ANNUAL GROUNDWATER SAMPLES
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

Area:		P006	Plant_property	Plant_property	Plant_Property	RFIBoundary_P216West
Sample Location:		MW-X315Y150	MW-X043Y176	MW-X043Y176	MW-X043Y186	MW-X261Y356D-3
Sample Identification:		GW-102913-KC-007	GW-103013-KC-013	GW-103013-KC-015	GW-103013-KC-017	GW-103013-JL-008
Sample Date:		10/29/2013	10/30/2013	10/30/2013	10/30/2013	10/30/2013
Sample Type:				Duplicate		
	Units					
PCBs						
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 UJ	0.20 UJ	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 UJ	0.20 UJ	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 UJ	0.20 UJ	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 UJ	0.20 UJ	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 UJ	0.20 UJ	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 UJ	R	0.20 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 UJ	R	0.20 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
Field Parameters						
Conductivity, field	mS/cm	0.319	1.65	1.664	1.955	0.524
Dissolved oxygen (DO), field	ug/L	3530	2820	1700	5100	2170
Oxidation reduction potential (ORP), field	millivolts	37.5	90.4	32.5	53.5	-43.4
pH, field	s.u.	7.31	6.75	6.81	6.9	7.02
Temperature, field	Deg C	14.46	13.59	13.45	14.44	15.15
Turbidity, field	NTU	11.9	31	4.38	6.88	1.52

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 2013 SECOND SEMI-ANNUAL GROUNDWATER SAMPLES
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

<i>Area:</i>		<i>P205</i>	<i>P216GM_P216_east</i>	<i>P216GM_P216_east</i>	<i>A001MonitoringWell_WestPlantArea</i>
<i>Sample Location:</i>		<i>MW-X277Y100</i>	<i>MW-X297Y305D-2</i>	<i>MW-X297Y305D-2</i>	<i>MW-X085Y070S-1</i>
<i>Sample Identification:</i>		<i>GW-103013-KC-019</i>	<i>GW-103013-JL-010</i>	<i>GW-103013-JL-012</i>	<i>GW-103113-JL-016</i>
<i>Sample Date:</i>		<i>10/30/2013</i>	<i>10/30/2013</i>	<i>10/30/2013</i>	<i>10/31/2013</i>
<i>Sample Type:</i>				<i>Duplicate</i>	
	<i>Units</i>				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.20 U	0.20 U	0.20 UJ
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.20 U	0.20 U	0.20 UJ
Total PCBs	ug/L	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.20 U	0.20 U	0.20 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND
Field Parameters					
Conductivity, field	mS/cm	0.976	0.612	0.613	10.64
Dissolved oxygen (DO), field	ug/L	3200	730	640	560
Oxidation reduction potential (ORP), field	millivolts	48.1	-105.1	-99.3	-108.5
pH, field	s.u.	7.23	6.98	6.96	6.71
Temperature, field	Deg C	15.7	15.14	15.04	16.25
Turbidity, field	NTU	9.07	3.26	1.24	5.81

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected.

**SUMMARY OF TOTAL PCBs ANALYTICAL RESULTS FOR EI CA750 2013 SECOND SEMI-ANNUAL GROUNDWATER SAMPLES
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

Area:		A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	P209
Sample Location:		MW-X085Y070S-2	MW-X169Y058S-1	MW-X300Y199I-1
Sample Identification:		GW-103113-JL-014	GW-103113-KC-025	GW-103113-KC-029
Sample Date:		10/31/2013	10/31/2013	10/31/2013
Sample Type:				
	Units			
PCBs				
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.073 J	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.19 U	0.19 U
Total PCBs	ug/L	0.073 J	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	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
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	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
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	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
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND
Field Parameters				
Conductivity, field	mS/cm	7.141	3.634	0.512
Dissolved oxygen (DO), field	ug/L	380	2820	2900
Oxidation reduction potential (ORP), field	millivolts	-178.6	105.6	28.6
pH, field	s.u.	7.26	7.16	7.12
Temperature, field	Deg C	16.5	14.82	15.25
Turbidity, field	NTU	7.26	4.52	2.95

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected.

**SUMMARY OF TOTAL PCBs ANALYTICAL RESULTS FOR EI CA750 2013 SECOND SEMI-ANNUAL GROUNDWATER SAMPLES
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

Area: P209
Sample Location: MW-X300Y199I-2
Sample Identification: GW-103113-KC-027
Sample Date: 10/31/2013
Sample Type:

	<i>Units</i>	
PCBs		
Aroclor-1016 (PCB-1016)	ug/L	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U
Total PCBs	ug/L	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.15 J
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U
Total PCBs (dissolved)	ug/L	0.15 J
Field Parameters		
Conductivity, field	mS/cm	0.625
Dissolved oxygen (DO), field	ug/L	1800
Oxidation reduction potential (ORP), field	millivolts	18
pH, field	s.u.	7.23
Temperature, field	Deg C	15.76
Turbidity, field	NTU	0.79

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected.

TABLE 3.3

**2013 LEACHATE COLLECTION SYSTEM MONITORING ANALYTICAL RESULTS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

<i>Sample Location</i>		<i>EPA LCS</i>	<i>EPA LCS</i>	<i>EPA LCS</i>	<i>EPA LCS</i>
<i>Sample Identification</i>		<i>WL-AO17-012313-GS-39926</i>	<i>WL-AO17-022613-GS-39936</i>	<i>WL-AO17-031213-GS-39938</i>	<i>WL-AO17-042313-GS-39949</i>
<i>Sample Date</i>		<i>1/23/2013</i>	<i>2/26/2013</i>	<i>3/12/2013</i>	<i>4/23/2013</i>
<i>Sample Type</i>	<i>Units</i>				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	1.9 U	0.22 U	0.20 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	1.9 U	0.22 U	0.20 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	1.9 U	0.22 U	0.20 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	1.8 J	0.78	0.20 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	1.9 U	0.22 U	0.20 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	1.9 U	0.15 J	0.20 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	1.9 U	0.22 U	0.20 U	0.19 U
Total PCBs	ug/L	1.8 J	0.93 J	ND	ND
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1,2-Tetrachloroethane	ug/L	1.0 UJ	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
2-Chloroethyl vinyl ether	ug/L	10 U	10 U	10 U	10 U
Benzene	ug/L	1.0 U	0.14 J	1.0 U	0.18 J
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	1.0 U	1.0 U	1.0 U	1.0 UJ
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 UJ
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U

TABLE 3.3

**2013 LEACHATE COLLECTION SYSTEM MONITORING ANALYTICAL RESULTS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

<i>Sample Location</i>		<i>EPA LCS</i>	<i>EPA LCS</i>	<i>EPA LCS</i>	<i>EPA LCS</i>
<i>Sample Identification</i>		<i>WL-AO17-012313-GS-39926</i>	<i>WL-AO17-022613-GS-39936</i>	<i>WL-AO17-031213-GS-39938</i>	<i>WL-AO17-042313-GS-39949</i>
<i>Sample Date</i>		<i>1/23/2013</i>	<i>2/26/2013</i>	<i>3/12/2013</i>	<i>4/23/2013</i>
<i>Sample Type</i>	<i>Units</i>				
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 UJ	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	1.0 UJ	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Field Parameters					
Conductivity, field	mS/cm	--	--	--	--
pH, field	s.u.	--	--	--	--

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected.

TABLE 3.3

2013 LEACHATE COLLECTION SYSTEM MONITORING ANALYTICAL RESULTS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA

<i>Sample Location</i>		<i>EPA LCS</i>	<i>EPA LCS</i>	<i>EPA LCS</i>	<i>EPA LCS</i>
<i>Sample Identification</i>		WL-AO17-052213-GS-39954	WL-AO17-062513-GS-39964	WL-AO17-072413-GS-39967	WL-AO17-082813-GS-39970
<i>Sample Date</i>		5/22/2013	6/25/2013	7/24/2013	8/28/2013
<i>Sample Type</i>	<i>Units</i>				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	0.21 U	0.20 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.21 U	0.20 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.21 U	0.20 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	0.21 U	0.30	0.19 U	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.21 U	0.20 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.21 U	0.20 U	0.19 UJ	0.20 U
Aroclor-1260 (PCB-1260)	ug/L	0.21 U	0.20 U	0.19 UJ	0.20 U
Total PCBs	ug/L	ND	0.3	ND	ND
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
2-Chloroethyl vinyl ether	ug/L	10 U	10 UJ	10 U	10 U
Benzene	ug/L	1.0 U	1.0 U	0.22 J	0.16 J
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	1.0 UJ
Bromomethane (Methyl bromide)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	ug/L	1.0 U	1.0 UJ	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U

TABLE 3.3

**2013 LEACHATE COLLECTION SYSTEM MONITORING ANALYTICAL RESULTS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

<i>Sample Location</i>		<i>EPA LCS</i>	<i>EPA LCS</i>	<i>EPA LCS</i>	<i>EPA LCS</i>
<i>Sample Identification</i>		WL-AOI7-052213-GS-39954	WL-AOI7-062513-GS-39964	WL-AOI7-072413-GS-39967	WL-AOI7-082813-GS-39970
<i>Sample Date</i>		5/22/2013	6/25/2013	7/24/2013	8/28/2013
<i>Sample Type</i>	<i>Units</i>				
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 UJ	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Field Parameters					
Conductivity, field	mS/cm	2.361	--	--	--
pH, field	s.u.	7.37	--	--	--

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected.

TABLE 3.3

**2013 LEACHATE COLLECTION SYSTEM MONITORING ANALYTICAL RESULTS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

<i>Sample Location</i>		<i>EPA LCS</i>	<i>EPA LCS</i>	<i>EPA LCS</i>	<i>EPA LCS</i>
<i>Sample Identification</i>		<i>WL-AO17-092513-GS-39974</i>	<i>WL-AO17-101513-GS-39978</i>	<i>WL-AO17-112613-GS-39983</i>	<i>WL-AO17-121913-GS-39986</i>
<i>Sample Date</i>		<i>9/25/2013</i>	<i>10/15/2013</i>	<i>11/26/2013</i>	<i>12/19/2013</i>
<i>Sample Type</i>	<i>Units</i>				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.21 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.21 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.21 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.23	0.19 U	0.21 U	0.21
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.21 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.21 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.21 U	0.19 U
Total PCBs	ug/L	0.23	ND	ND	0.21
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
2-Chloroethyl vinyl ether	ug/L	10 U	10 UJ	10 U	10 U
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	1.0 U	1.0 UJ	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	ug/L	1.0 U	1.0 U	1.0 U	R
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U

TABLE 3.3

**2013 LEACHATE COLLECTION SYSTEM MONITORING ANALYTICAL RESULTS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

<i>Sample Location</i>		<i>EPA LCS</i>	<i>EPA LCS</i>	<i>EPA LCS</i>	<i>EPA LCS</i>
<i>Sample Identification</i>		<i>WL-AOI7-092513-GS-39974</i>	<i>WL-AOI7-101513-GS-39978</i>	<i>WL-AOI7-112613-GS-39983</i>	<i>WL-AOI7-121913-GS-39986</i>
<i>Sample Date</i>		<i>9/25/2013</i>	<i>10/15/2013</i>	<i>11/26/2013</i>	<i>12/19/2013</i>
<i>Sample Type</i>	<i>Units</i>				
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Field Parameters					
Conductivity, field	mS/cm	--	--	--	--
pH, field	s.u.	--	--	--	--

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

R - Rejected.

TABLE 3.4

**2013 LEAK DETECTION SYSTEM MONITORING ANALYTICAL RESULTS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

<i>Sample Location</i>		<i>EPA LDS</i>	<i>EPA LDS</i>	<i>EPA LDS</i>	<i>EPA LDS</i>	<i>EPA LDS</i>
<i>Sample Identification</i>		<i>WL-AOI7-012313-GS-39927</i>	<i>WL-AOI7-022613-GS-39937</i>	<i>WL-AOI7-031213-GS-39939</i>	<i>WL-AOI7-042313-GS-39950</i>	<i>WL-AOI7-042313-GS-39951</i>
<i>Sample Date</i>		<i>1/23/2013</i>	<i>2/26/2013</i>	<i>3/12/2013</i>	<i>4/23/2013</i>	<i>4/23/2013</i>
<i>Sample Type</i>						<i>Duplicate</i>
	<i>Units</i>					
PCBs						
Aroclor-1016 (PCB-1016)	ug/L	0.21 U	0.20 U	0.22 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.21 U	0.20 U	0.22 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.21 U	0.20 U	0.22 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	0.76	0.20 U	1.3	0.19 U	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.21 U	0.49	0.22 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	R	0.20 U	0.22 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260)	ug/L	0.079 J	0.20 U	0.22 U	0.19 U	0.20 U
Total PCBs	ug/L	0.839 J	0.49	1.3	ND	ND

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

R - Rejected.

TABLE 3.4

**2013 LEAK DETECTION SYSTEM MONITORING ANALYTICAL RESULTS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

<i>Sample Location</i>		<i>EPA LDS</i>	<i>EPA LDS</i>	<i>EPA LDS</i>	<i>EPA LDS</i>	<i>EPA LDS</i>
<i>Sample Identification</i>		<i>WL-AOI7-052213-GS-39955</i>	<i>WL-AOI7-062513-GS-39965</i>	<i>WL-AOI7-072413-GS-39968</i>	<i>WL-AOI7-082813-GS-39971</i>	<i>WL-AOI7-082813-GS-39972</i>
<i>Sample Date</i>		<i>5/22/2013</i>	<i>6/25/2013</i>	<i>7/24/2013</i>	<i>8/28/2013</i>	<i>8/28/2013</i>
<i>Sample Type</i>						<i>Duplicate</i>
	<i>Units</i>					
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	2.4	1.9	0.19 U	0.82	0.85
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U	0.68	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	R	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	R	0.19 U	0.19 U	0.036 J
Total PCBs	ug/L	2.4	1.9	0.68	0.82	0.886 J

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

R - Rejected.

TABLE 3.4

**2013 LEAK DETECTION SYSTEM MONITORING ANALYTICAL RESULTS
2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
BEDFORD, INDIANA**

<i>Sample Location</i>		<i>EPA LDS</i>	<i>EPA LDS</i>	<i>EPA LDS</i>	<i>EPA LDS</i>
<i>Sample Identification</i>		<i>WL-AOI7-092513-GS-39975</i>	<i>WL-AOI7-101513-GS-39979</i>	<i>WL-AOI7-112613-GS-39984</i>	<i>WL-AOI7-121913-GS-39987</i>
<i>Sample Date</i>		<i>9/25/2013</i>	<i>10/15/2013</i>	<i>11/26/2013</i>	<i>12/19/2013</i>
<i>Sample Type</i>					
	<i>Units</i>				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	1.9 U	0.19 U	1.9 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	1.9 U	0.19 U	1.9 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	1.9 U	0.19 U	1.9 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	13	0.57	1.9 U
Aroclor-1248 (PCB-1248)	ug/L	0.60	1.9 U	0.19 U	1.9 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	1.9 U	0.19 U	1.9 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	1.9 U	0.19 U	1.9 U
Total PCBs	ug/L	0.6	13	0.57	ND

Notes:

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

TABLE 3.5

2013 WATER TREATMENT PLANT (SSC WTP AND 2,000 gpm TREATMENT SYSTEM) MONITORING ANALYTICAL RESULTS
 2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

Sample Location		CRA WWTP Tag 66	CRA WWTP Tag 66	CRA WWTP Tag 66	CRA WWTP Tag 66	CRA WWTP Tag 66	CRA WWTP Tag 66	CRA WWTP Tag 66
Sample Identification		WW-AOI10-010813-GS-35582	WW-AOI10-010813-GS-35588	WW-AOI10-021213-GS-35589	WW-AOI10-031213-GS-35612	WW-AOI10-031813-GS-38619	WW-AOI10-031813-GS-38620	WW-AOI10-031813-GS-38620(FILTER)
Sample Date		1/8/2013	1/8/2013	2/12/2013	3/12/2013	3/18/2013	3/18/2013	3/18/2013
Sample Type	Units							
PCBs								
Aroclor-1016 (PCB-1016)	ug/wipe	--	--	--	--	--	--	2.0 U
Aroclor-1221 (PCB-1221)	ug/wipe	--	--	--	--	--	--	2.0 U
Aroclor-1232 (PCB-1232)	ug/wipe	--	--	--	--	--	--	2.0 U
Aroclor-1242 (PCB-1242)	ug/wipe	--	--	--	--	--	--	2.0 U
Aroclor-1248 (PCB-1248)	ug/wipe	--	--	--	--	--	--	2.0 U
Aroclor-1254 (PCB-1254)	ug/wipe	--	--	--	--	--	--	2.0 U
Aroclor-1260 (PCB-1260)	ug/wipe	--	--	--	--	--	--	2.0 U
Total PCBs	ug/wipe	--	--	--	--	--	--	ND
Aroclor-1016 (PCB-1016)	ug/L	--	0.21 U	0.19 U	0.19 U	0.19 U	0.19 U	--
Aroclor-1221 (PCB-1221)	ug/L	--	0.21 U	0.19 U	0.19 U	0.19 U	0.19 U	--
Aroclor-1232 (PCB-1232)	ug/L	--	0.21 U	0.19 U	0.19 U	0.19 U	0.19 U	--
Aroclor-1242 (PCB-1242)	ug/L	--	0.21 U	0.059 J	0.31	0.19 U	0.20	--
Aroclor-1248 (PCB-1248)	ug/L	--	0.21 U	0.19 U	0.19 U	0.19 U	0.19 U	--
Aroclor-1254 (PCB-1254)	ug/L	--	0.21 U	0.19 U	0.19 U	0.19 U	0.19 U	--
Aroclor-1260 (PCB-1260)	ug/L	--	0.21 U	0.19 U	0.19 U	0.19 U	0.19 U	--
Total PCBs	ug/L	--	ND	0.059 J	0.31	ND	0.2	--
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	0.20 U	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	0.20 U	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	0.20 U	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	0.088 J	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	0.20 U	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	0.20 U	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	0.20 U	--
Total PCBs (dissolved)	ug/L	--	--	--	--	--	0.088 J	--
Total Petroleum Hydrocarbons (TPH)								
Total Petroleum Hydrocarbons (C10-C20)	ug/L	--	--	--	--	--	490 U	--
Total Petroleum Hydrocarbons (C6-C10) GRO	ug/L	--	--	--	--	--	52 JB	--
General Chemistry								
Biochemical oxygen demand (carbonaceous)	ug/L	2000 U	--	--	--	--	--	--
Chemical oxygen demand (COD)	ug/L	10000 U	--	--	--	--	--	--
Nitrite/Nitrate	ug/L	620 B	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	5500 U	--	--	--	--	--	--
Phosphorus	ug/L	100 U	--	--	--	--	--	--
Total kjeldahl nitrogen (TKN)	ug/L	5000 U	--	--	--	--	--	--
Total suspended solids (TSS)	ug/L	4000 U	--	--	--	--	--	--

Notes:
 U - Not detected at the associated reporting limit.
 J - Estimated concentration.
 ND - Not detected.
 B - Result detected in associated method blank.

TABLE 3.5

2013 WATER TREATMENT PLANT (SSC WTP AND 2,000 gpm TREATMENT SYSTEM) MONITORING ANALYTICAL RESULTS
 2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

Sample Location		CRA WWTP Tag 66	CRA WWTP Tag 66	CRA WWTP Tag 66	CRA WWTP Tag 66	CRA WWTP Tag 66	CRA WWTP Tag 66	CRA WWTP Tag 66	
Sample Identification		WW-AOI10-041613-GS-38628	WW-AOI10-051513-GS-38643	WW-AOI10-053113-GS-38650	WW-AOI10-053113-GS-38651	WW-AOI10-060513-GS-38652	WW-AOI10-071113-GS-38659	WW-AOI10-091713-GS-38667	
Sample Date		4/16/2013	5/15/2013	5/31/2013	5/31/2013	6/5/2013	7/11/2013	9/17/2013	
Sample Type					Duplicate				
	Units								
PCBs									
Aroclor-1016 (PCB-1016)	ug/wipe	--	--	--	--	--	--	--	
Aroclor-1221 (PCB-1221)	ug/wipe	--	--	--	--	--	--	--	
Aroclor-1232 (PCB-1232)	ug/wipe	--	--	--	--	--	--	--	
Aroclor-1242 (PCB-1242)	ug/wipe	--	--	--	--	--	--	--	
Aroclor-1248 (PCB-1248)	ug/wipe	--	--	--	--	--	--	--	
Aroclor-1254 (PCB-1254)	ug/wipe	--	--	--	--	--	--	--	
Aroclor-1260 (PCB-1260)	ug/wipe	--	--	--	--	--	--	--	
Total PCBs	ug/wipe	--	--	--	--	--	--	--	
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.20 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	0.20 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	0.20 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	0.20 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	0.20 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	0.20 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	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	
Total PCBs	ug/L	ND	ND	ND	ND	ND	ND	ND	
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--	
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--	
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--	
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--	
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--	
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--	
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--	
Total PCBs (dissolved)	ug/L	--	--	--	--	--	--	--	
Total Petroleum Hydrocarbons (TPH)									
Total Petroleum Hydrocarbons (C10-C20)	ug/L	--	--	--	--	--	--	--	
Total Petroleum Hydrocarbons (C6-C10) GRO	ug/L	--	--	--	--	--	--	--	
General Chemistry									
Biochemical oxygen demand (carbonaceous)	ug/L	--	--	--	--	--	--	--	
Chemical oxygen demand (COD)	ug/L	--	--	--	--	--	--	--	
Nitrite/Nitrate	ug/L	--	--	--	--	--	--	--	
Oil and grease (HEM), polar	ug/L	--	--	--	--	--	--	--	
Phosphorus	ug/L	--	--	--	--	--	--	--	
Total kjeldahl nitrogen (TKN)	ug/L	--	--	--	--	--	--	--	
Total suspended solids (TSS)	ug/L	--	--	--	--	--	--	--	

Notes:
 U - Not detected at the associated reporting limit.
 J - Estimated concentration.
 ND - Not detected.
 B - Result detected in associated method blank.

TABLE 3.5

2013 WATER TREATMENT PLANT (SSC WTP AND 2,000 gpm TREATMENT SYSTEM) MONITORING ANALYTICAL RESULTS
 2013 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
 GM CET BEDFORD FACILITY
 BEDFORD, INDIANA

Sample Location		CRA WWTP Tag 66	CRA WWTP Tag 66	CRA WWTP Tag 66	CRA WWTP Tag 66
Sample Identification		WW-AOI10-100813-GS-38675	WW-AOI10-111913-GS-38690	WW-AOI10-111913-GS-38691	WW-AOI10-120513-GS-39985
Sample Date		10/8/2013	11/19/2013	11/19/2013	12/5/2013
Sample Type				Duplicate	
	Units				
PCBs					
Aroclor-1016 (PCB-1016)	ug/wipe	--	--	--	--
Aroclor-1221 (PCB-1221)	ug/wipe	--	--	--	--
Aroclor-1232 (PCB-1232)	ug/wipe	--	--	--	--
Aroclor-1242 (PCB-1242)	ug/wipe	--	--	--	--
Aroclor-1248 (PCB-1248)	ug/wipe	--	--	--	--
Aroclor-1254 (PCB-1254)	ug/wipe	--	--	--	--
Aroclor-1260 (PCB-1260)	ug/wipe	--	--	--	--
Total PCBs	ug/wipe	--	--	--	--
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.066 J	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	0.066 J	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--
Total PCBs (dissolved)	ug/L	--	--	--	--
Total Petroleum Hydrocarbons (TPH)					
Total Petroleum Hydrocarbons (C10-C20)	ug/L	--	--	--	--
Total Petroleum Hydrocarbons (C6-C10) GRO	ug/L	--	--	--	--
General Chemistry					
Biochemical oxygen demand (carbonaceous)	ug/L	--	--	--	--
Chemical oxygen demand (COD)	ug/L	--	--	--	--
Nitrite/Nitrate	ug/L	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	--
Phosphorus	ug/L	--	--	--	--
Total kjeldahl nitrogen (TKN)	ug/L	--	--	--	--
Total suspended solids (TSS)	ug/L	--	--	--	--

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

ND - Not detected.

B - Result detected in associated method blank.

Appendix A

- A.1 LCS Sump Field Logs**
- A.2 LDS Sump Field Logs**
- A.3 GUS Sump Field Logs**
- A.4 Automated Pumping System Logs**

Appendix A.1

LCS Sump Field Logs

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEACHATE COLLECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	Meter Reading	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc.)
				YES	NO	
01/01/13	2:00pm	67.2				
01/02/13	2:22pm	67.2				
01/03/13	1:00 PM	67.2				
01/04/13	10:30AM	67.2				
01/05/13						
01/06/13						
* 01/07/13	11:15 AM	67.15				
01/08/13	1:08pm	67.15				
01/09/13	1:40pm	67.15				
01/10/13	8:05 AM	67.1				
01/11/13	10:50 AM	67.1				
01/12/13						
01/13/13						
01/14/13	10:00 AM	67.1				
01/15/13	9:00 AM	67.1				
01/16/13	8:15 AM	67.85				
01/17/13	8:45 AM	67.00				
01/18/13	2:18 PM	67.00				
01/19/13						
01/20/13						
01/21/13	8:20 AM	66.95				
01/22/13	11:18 AM	66.95				
01/23/13	2:16 PM	66.95				
01/24/13	10:38 AM	66.9				
01/25/13	9:23 AM	66.9				
01/26/13						
01/27/13						
01/28/13	8:30 AM	66.85				
01/29/13	8:18 AM	66.85				
01/30/13	1:25 PM	66.80				
01/31/13	8:50 AM	66.80				

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEACHATE COLLECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	Meter Reading	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
				YES	NO	
02/01/13	9:00 AM	66.80				
02/02/13						
02/03/13						
02/04/13	11:10 AM	66.80				
02/05/13	9:20 AM	66.80				
02/06/13	1:30 PM	66.80				
02/07/13	9:40 AM	66.75				
02/08/13	10:30 AM	66.75				
02/09/13						
02/10/13						
02/11/13	9:10 AM	66.7				
02/12/13	9:32 AM	66.7				
02/13/13	10:10 AM	66.65				
02/14/13	9:20 AM	66.65				
02/15/13	8:18 AM	66.65				
02/16/13						
02/17/13						
02/18/13	9:00 AM	66.65				
02/19/13	8:48 AM	66.65				
02/20/13	9:58 AM	66.65				
02/21/13	9:10 AM	66.65				
02/22/13	10:18 AM	66.60				
02/23/13						
02/24/13						
02/25/13	8:40 AM	66.55				
02/26/13	9:30 AM	66.55				
02/27/13	7:15 AM	66.55				
02/28/13	9:00 AM	66.65				

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEACHATE COLLECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	Meter Reading	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
				YES	NO	
03/01/13	8:48 AM	66.65				
03/02/13						
03/03/13						
03/04/13	9:26 AM	66.6				
03/05/13	9:02 AM	66.6				
03/06/13	10:50 AM	66.6				
03/07/13	10:30	66.45				
03/08/13	8:28 AM	66.30				
03/09/13						
03/10/13						
03/11/13 ^x	9:00 AM	66.6				
03/12/13 ^x	8:13 AM	66.6				
03/13/13	10:15 AM	66.6				
03/14/13	10:15 AM	66.6				
03/15/13	10:20 AM	66.6				
03/16/13						
03/17/13						
03/18/13	11:18 AM	66.50				
03/19/13	8:20 AM	66.50				
03/20/13	9:20 AM	66.50				
03/21/13	2:30 PM	66.50				
03/22/13	8:50 AM	66.50				
03/23/13 ^y						
03/24/13 ^y						
03/25/13	9:00 AM	66.45				
03/26/13	9:00 AM	66.45				
03/27/13	9:00 AM	66.4				
03/28/13	8:00 AM	66.4				
03/29/13	8:00 AM	66.4				
03/30/13						
03/31/13						

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEACHATE COLLECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	Meter Reading	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
				YES	NO	
04/01/13	845 AM	66.4				
04/02/13	845 AM	66.4				
04/03/13	850 AM	66.4				
04/04/13	8:15 AM	66.4				
04/05/13	8:10 AM	66.4				
04/06/13						
04/07/13						
04/08/13	100 pm	66.4				
04/09/13	1030 AM	66.4				
04/10/13	215 pm	66.4				
04/11/13	100 pm	66.35				
04/12/13	245 pm	66.3				
04/13/13						
04/14/13						
04/15/13X	230 pm	66.3				
04/16/13	900 AM	66.3				
04/17/13	230 pm	66.3				
04/18/13	1100 AM	66.3				
04/19/13	900 am	66.3				
04/20/13						
04/21/13						
04/22/13	130 pm	66.25				
04/23/13	115 pm	66.2				
04/24/13						
04/25/13						
04/26/13						
04/27/13						
04/28/13						
04/29/13						
04/30/13						

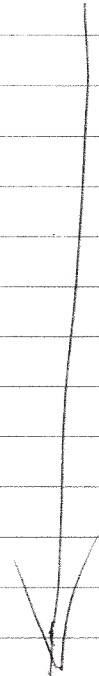
SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEACHATE COLLECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	Meter Reading	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
				YES	NO	
05/01/13	8:10 AM	66.10				
05/02/13	7:40 AM	66.05				
05/03/13	8:00 AM	66.05				
05/04/13						
05/05/13						
05/06/13	10:30 AM	66.00				
05/07/13	10:00 AM	66.00				
05/08/13	10:30 AM	65.95				
05/09/13	8:20 AM	65.95				
05/10/13	8:00 AM	65.95				
05/11/13						
05/12/13						
05/13/13	9:10 AM	65.95				
05/14/13	8:00 AM	65.90				
05/15/13	7:30 AM	65.90				
05/16/13	8:30 AM	65.90				
05/17/13	8:20 AM	65.90				
05/18/13						
05/19/13						
05/20/13	9:10 AM	65.85				
05/21/13	8:30 AM	65.85				
05/22/13	8:20 AM	65.85				
05/23/13	8:15 AM	65.85				
05/24/13	8:20 AM	65.85				
05/25/13						
05/26/13						
05/27/13	8:20 AM	65.85				
05/28/13	8:10 AM	65.80				
05/29/13	8:00 AM	65.80				
05/30/13	11:00 AM	65.80				
05/31/13	9:00 AM	65.80				

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEACHATE COLLECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	Meter Reading	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
				YES	NO	
06/01/13						
06/02/13						
06/03/13	8:20 AM	65.8				
06/04/13	8:10 AM	65.8				
06/05/13	10:15 AM	65.8				
06/06/13	2:50 PM	65.65				
06/07/13	10:30 AM	65.65				
06/08/13						
06/09/13						
06/10/13	4:00 PM	65.65				
06/11/13	8:15 AM	65.65				
06/12/13	9:30 AM	65.65				
06/13/13	8:20 AM	65.65				
06/14/13	9:20 AM	65.60				
06/15/13						
06/16/13						
06/17/13	1:20 PM	65.60				
06/18/13	10:20 AM	65.60				
06/19/13	9:15 AM	65.60				
06/20/13	8:10 AM	65.55				
06/21/13	1:30 PM	68.55				
06/22/13						
06/23/13						
06/24/13	9:50 AM	68.50				
06/25/13	10:00 AM	68.50				
06/26/13						UNABLE TO GET READINGS
06/27/13						
06/28/13						
06/29/13						
06/30/13						

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEACHATE COLLECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	Meter Reading	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
				YES	NO	
07/01/13						UNABLE TO GET READINGS 
07/02/13						
07/03/13						
07/04/13						
07/05/13						
07/06/13						
07/07/13						
07/08/13						
07/09/13						
07/10/13						
07/11/13						
07/12/13						
07/13/13						
07/14/13						
07/15/13						
07/16/13	600 AM	68.3				
07/17/13	620 AM	68.3				
07/18/13	615 AM	68.25				
07/19/13	610 AM	68.25				
07/20/13						
07/21/13						
07/22/13	815 AM	68.25				
07/23/13	900 AM	68.2				
07/24/13	615 AM	68.2				
07/25/13	600 AM	68.2				
07/26/13	600 AM	68.2				
07/27/13						
07/28/13						
07/29/13	900 AM	68.15				
07/30/13	600 AM	68.15				
07/31/13						

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEACHATE COLLECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	Meter Reading	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
				YES	NO	
08/01/13	830 AM	68.15				
08/02/13	1045 AM	68.15				
08/03/13						
08/04/13						
08/05/13	X 2:15 PM	68.1				
08/06/13	615 AM	68.1				
08/07/13	945 AM	68.1				
08/08/13	925 AM	68.1				
X 08/09/13	815 AM	68.1				
08/10/13						
08/11/13						
X 08/12/13	900 AM	68				
^ 08/13/13	1045 AM	68				
08/14/13	900 AM	68				
08/15/13	900 AM	68				
08/16/13	930 AM	68				
08/17/13						
08/18/13						
08/19/13	330 PM	68				
08/20/13	430 PM	68				
08/21/13	800 AM	68				
08/22/13	800 AM	68				
X 08/23/13	800 AM	68				
08/24/13						
08/25/13						
X 08/26/13	815 AM	68				
08/27/13	700 AM	68				
08/28/13	1000 AM	67.9				
08/29/13	950 AM	67.9				
08/30/13	900 AM	67.9				
08/31/13						

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEACHATE COLLECTION SYSTEM MANHOLE							
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	Meter Reading	PUMP OPERATIONAL		LEVEL AFTER PUMP	COMMENTS (weather, pump details, testing etc..)
				YES	NO		
09/01/13							
09/02/13							
09/03/13	1100 AM	67.85					
09/04/13	900 AM	67.85					
09/05/13	900 AM	67.85					
09/06/13	900 AM	67.85					
09/07/13							
09/08/13							
x 09/09/13	100 pm	67.8					
09/10/13	730 AM	67.8					
09/11/13	800 AM	67.8					
09/12/13	900 AM	67.8					
09/13/13	100 pm	67.75				67.7	
x 09/14/13							
x 09/15/13							
09/16/13	830 AM	67.7					
09/17/13	730 AM	67.7					
09/18/13	1351	67.35					
09/19/13	1335	67.35					
09/20/13	10:37	67.35					
09/21/13							
09/22/13							
09/23/13	1001	67.3					
09/24/13	1155	67.3					
09/25/13	10:00	67.3					
09/26/13	9:30	67.4					
09/27/13	9:15	67.6					
09/28/13							
09/29/13							
09/30/13	8:30	67.5					

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEACHATE COLLECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	Meter Reading	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
				YES	NO	
10/01/13	1:30	67.5				
10/02/13	8:45	67.5				
10/03/13	2:00	67.5				
10/04/13	11:00	67.5				
10/05/13						
10/06/13						
10/07/13	8:00	67.5				
10/08/13	9:00	67.5				
10/09/13	8:00	67.5				
10/10/13	8:00	67.5				
10/11/13	8:00	67.5				
10/12/13	9:00	67.3				
10/13/13						
10/14/13	9:00	67.3				
10/15/13	8:00	67.3				
10/16/13	8:00	67.3				
10/17/13	8:30	67.4				
10/18/13	9:00	67.3				
10/19/13						
10/20/13						
10/21/13	8:30	67.2				
10/22/13	8:30	67.2				
10/23/13	8:30	67.2				
10/24/13	8:00	67.3				
10/25/13	6:30	67.3				
10/26/13						
10/27/13						
10/28/13	3:30	67.3				
10/29/13	11:30	67.3				
10/30/13	11:00	67.3				
10/31/13	8:00	67.3				

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEACHATE COLLECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	Meter Reading	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
				YES	NO	
11/01/13	4:00	67.2				
11/02/13						
11/03/13						
11/04/13	8:00	67.2				
11/05/13	7:30	67.2				
11/06/13	7:30	67.2				
11/07/13	10:00	67.2				
11/08/13	9:00	67.2				
11/09/13						
11/10/13						
11/11/13	8:00	67.2				
11/12/13	8:00	67.2				
11/13/13	8:00	67.2				
11/14/13	9:00	67.2				
11/15/13	9:00	67.2				
11/16/13						
11/17/13						
11/18/13	8:00	67.1				
11/19/13	9:00	67.1				
11/20/13	2:00	68.1				
11/21/13	8:00	68.1				
11/22/13	10:00	68.1				
11/23/13						
11/24/13						
11/25/13	8:00	68.0				
11/26/13	9:00	68.0				
11/27/13	9:00	68.0				
11/28/13						
11/29/13						
11/30/13						

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEACHATE COLLECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	Meter Reading	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
				YES	NO	
12/01/13						
12/02/13	9:30	67.9				
12/03/13	9:00	67.9				
12/04/13						
12/05/13						
12/06/13						
12/07/13						
12/08/13						
12/09/13	9:00	68.0				
12/10/13						
12/11/13						
12/12/13						
12/13/13						
12/14/13						
12/15/13						
12/16/13	8:00	67.8				
12/17/13						
12/18/13						
12/19/13						
12/20/13						
12/21/13						
12/22/13						
12/23/13	09:47	67.64				
12/24/13						
12/25/13						
12/26/13						
12/27/13						
12/28/13						
12/29/13						
12/30/13						
12/31/13						

Appendix A.2

LDS Sump Field Logs

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEAK DETECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMPED YES/NO	PUMP SIZE	COMMENTS (weather, pump details, testing etc..)
01/01/13	2:05 PM	71.4	NO		
01/02/13	2:25 PM	71.4	NO		
01/03/13	1:00 PM	71.4	NO		
01/04/13	10:30 AM	71.4	NO		
01/05/13					
01/06/13					
01/07/13 ^k	11:18 AM	71.35	NO		
01/08/13	1:10 PM	71.35	NO		
01/09/13	11:44 PM	71.35	NO		
01/10/13	8:10 AM	71.35	NO		
01/11/13	11:05 AM	71.25	NO		
01/12/13					
01/13/13					
01/14/13	1:00 AM	71.2	NO		
01/15/13	9:00 AM	71.2	NO		
01/16/13	8:17 AM	71.2	NO		
01/17/13	8:47 AM	71.2	NO		
01/18/13	2:20 PM	71.2	NO		
01/19/13					
01/20/13					
01/21/13	8:22 AM	71.15	NO		
01/22/13	11:20 AM	71.05	NO		
01/23/13	2:18 PM	71.05	NO		
01/24/13	10:40 AM	71.05	NO		
01/25/13	9:25 AM	71.05	NO		
01/26/13					
01/27/13					
01/28/13	8:32 AM	71.05	NO		
01/29/13	8:20 AM	71.05	NO		
01/30/13	1:27 AM	71.05	NO		
01/31/13	8:52 AM	71.05	NO		

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEAK DETECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMPED YES/NO	PUMP SIZE	WATER LEVEL AFTR	COMMENTS (weather, pump details, testing etc..)
02/01/13	9:00AM	71.05	NO			
02/02/13						
02/03/13						
02/04/13	11:12	70.95	NO			
02/05/13	9:22	70.95	NO			
02/06/13	1:32	70.95	NO			
02/07/13	9:42AM	70.90	NO			
02/08/13	10:32AM	70.90	NO			
02/09/13						
02/10/13						
02/11/13	9:12AM	70.9	NO			
02/12/13	9:34AM	70.9	NO			
02/13/13	10:12AM	70.85	NO			
02/14/13	9:22AM	70.80	NO			
02/15/13	8:20AM	70.80	NO			
02/16/13						
02/17/13						
02/18/13	9:02AM	70.80	NO			
02/19/13	8:50AM	70.80	NO			
02/20/13	10:00AM	70.80	NO			
02/21/13	9:12AM	70.80	NO			
02/22/13	10:20AM	70.75	NO			
02/23/13						
02/24/13						
02/25/13	8:42AM	70.70	NO			
02/26/13	9:32AM	70.70	NO			
02/27/13	9:36AM	70.70	YES	2"	72.45	
02/28/13	9:02AM	72.3	NO			

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEAK DETECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMPED YES/NO	PUMP SIZE	COMMENTS (weather, pump details, testing etc.)
03/01/13	8:50 AM	72.30	NO		
03/02/13					
03/03/13					
03/04/13	9:28 AM	72.3	NO		
03/05/13	9:04 AM	72.3	NO		
03/06/13	10:52 AM	72.3	NO		
03/07/13	10:32 AM	72.25	NO		
03/08/13	8:30 AM	72.20	NO		
03/09/13					
03/10/13					
03/11/13	9:00 AM	72.15	NO		
03/12/13	8:15 AM	72.15	NO		
03/13/13	10:15 AM	72.15	NO		
03/14/13	10:46 AM	72.15	NO		
03/15/13	10:20 AM	72.15	NO		
03/16/13					
03/17/13					
03/18/13	11:20 AM	72.05	NO		
03/19/13	8:22 AM	72.05	NO		
03/20/13	9:22 AM	72.05	NO		
03/21/13	2:32 PM	72.00	NO		
03/22/13	8:52 AM	71.90	NO		
03/23/13					
03/24/13					
03/25/13	9:00 AM	71.8	NO		
03/26/13	9:00 AM	71.7	NO		
03/27/13	9:00 AM	71.65	NO		
03/28/13	8:00 AM	71.6	NO		
03/29/13	8:00 AM	71.55	NO		
03/30/13					
03/31/13					

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEAK DETECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMPED YES/NO	PUMP SIZE	COMMENTS (weather, pump details, testing etc..)
04/01/13	845 AM	71.45	NO		
04/02/13	845 AM	71.4	NO		
04/03/13	850 AM	71.35	NO		
04/04/13	8:15 AM	71.35	NO		
04/05/13	8:10 AM	71.30	NO		
04/06/13					
04/07/13					
04/08/13	100 PM	71.1	NO		
04/09/13	1030 AM	71.1	NO		
04/10/13	215 PM	71.05	NO		
04/11/13	100 PM	71	NO		
04/12/13	245 PM	70.95	NO		
04/13/13					
04/14/13					
04/15/13	230 PM	70.9	NO		
04/16/13	900 AM	70.85	NO		
04/17/13	230 PM	70.8	NO		
04/18/13	1100 AM	70.8	NO		
04/19/13	900 AM	70.8	NO		
04/20/13					
04/21/13					
04/22/13	130 PM	7.75	NO		
04/23/13	115 PM	7.70	NO		
04/24/13					
04/25/13					
04/26/13					
04/27/13					
04/28/13					
04/29/13					
04/30/13					


SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEAK DETECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMPED YES/NO	PUMP SIZE	COMMENTS (weather, pump details, testing etc..)
05/01/13	8:10 AM	72.10	NO		
05/02/13	7:40 AM	72.05	NO		
05/03/13	8:00 AM	72.05	NO		
05/04/13					
05/05/13					
05/06/13	10:30 AM	71.75	NO		
05/07/13	10:00 AM	71.75	NO		
05/08/13	10:30 AM	71.60	NO		
05/09/13	8:20 AM	71.60	NO		
05/10/13	8:00 AM	71.55	NO		
05/11/13					
05/12/13		7			
05/13/13	9:10 AM	71.40	NO		
05/14/13	8:00 AM	71.35	NO		
05/15/13	7:30 AM	71.30	NO		
05/16/13	8:30 AM	71.30	NO		
05/17/13	8:20 AM	71.20	NO		
05/18/13					
05/19/13					
05/20/13	9:10 AM	71.05	NO		
05/21/13	8:30 AM	71.05	NO		
05/22/13	8:20 AM	70.95	NO		
05/23/13	8:15 AM	70.95	NO		
05/24/13	8:20 AM	70.90	NO		
05/25/13					
05/26/13					
05/27/13	8:20 AM	70.75	NO		
05/28/13	8:10 AM	70.70	NO		
05/29/13	8:00 AM	70.70	NO		
05/30/13	11:00 AM	70.70	NO		
05/31/13	9:00 AM	70.70	NO		

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEAK DETECTION SYSTEM MANHOLE						
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMPED YES/NO	PUMP SIZE	AFTER Pump	COMMENTS (weather, pump details, testing etc..)
06/01/13						
06/02/13						
06/03/13	8:20 AM	70.6	N			
06/04/13	8:10 AM	70.55	NO			
06/05/13	10:15 AM	70.5	YES	2"	72.2	
06/06/13	2:50 PM	71.90	NO			
06/07/13	10:30 AM	71.80	NO			
06/08/13						
06/09/13						
06/10/13	4:00 PM	71.60	NO			
06/11/13	8:15 AM	71.60	N			
06/12/13	9:30 AM	71.55	N			
06/13/13	8:20 AM	71.55	NO			
06/14/13	9:20 AM	71.40	NO			
06/15/13						
06/16/13						
06/17/13	1:20 PM	71.25	NO			
06/18/13	10:20 AM	71.25	NO			
06/19/13	9:15 AM	71.20	NO			
06/20/13	8:10 AM	71.20	NO			
06/21/13	1:30 PM	71.15	NO			
06/22/13						
06/23/13						
06/24/13	9:50 AM	71.10	NO			
06/25/13	10:00 AM	71.10	NO			
06/26/13						UNABLE TO GET
06/27/13						READINGS
06/28/13						
06/29/13						
06/30/13						

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEAK DETECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMPED YES/NO	PUMP SIZE	COMMENTS (weather, pump details, testing etc..)
07/01/13					UNABLE TO GET READINGS 
07/02/13					
07/03/13					
07/04/13					
07/05/13					
07/06/13					
07/07/13					
07/08/13					
07/09/13					
07/10/13					
07/11/13					
07/12/13					
07/13/13					
07/14/13					
07/15/13					
07/16/13	600 AM	71	NO		
07/17/13	620 AM	71	NO		
07/18/13	615 AM	71	NO		
07/19/13	610 AM	71	NO		
07/20/13					
07/21/13					
07/22/13	815 AM	70.95	NO		
07/23/13	900 AM	70.95	NO		
07/24/13	615 AM	70.95	NO		
07/25/13	600 AM	70.95	NO		
07/26/13	611 AM	70.95	NO		
07/27/13					
07/28/13					
07/29/13	900 AM	70.95	NO		
07/30/13	600 AM	70.95	NO		
07/31/13					

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEAK DETECTION SYSTEM MANHOLE

DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMPED YES/NO	PUMP SIZE	COMMENTS (weather, pump details, testing etc..)
08/01/13	8:30 AM	70.95	NO		
08/02/13	10:45 AM	70.9	NO		
08/03/13					
08/04/13					
X 08/05/13	2:15 pm	70.9	NO		
08/06/13	6:15 AM	70.9	NO		
08/07/13	9:45 AM	70.9	NO		
08/08/13	9:45 AM	70.9	NO		
X 08/09/13	8:15 AM	70.9	NO		
08/10/13					
08/11/13					
X 08/12/13	9:00 AM	70.9	NO		
X 08/13/13	10:45 AM	70.9	NO		
08/14/13	9:00 AM	70.9	NO		
08/15/13	9:00 AM	70.9	NO		
08/16/13	9:30 AM	70.9	NO		
08/17/13					
08/18/13					
08/19/13	3:30 PM	70.9	NO		
08/20/13	4:30 PM	70.9	NO		
08/21/13	8:00 AM	70.9	NO		
08/22/13	8:00 AM	70.9	NO		
X 08/23/13	8:00 AM	70.9	NO		
08/24/13					
08/25/13					
X 08/26/13	8:15 AM	70.9	NO		
08/27/13	7:00 AM	70.9	NO		
08/28/13	10:00 AM	70.85	NO		
08/29/13	9:50 AM	70.85	NO		
08/30/13	9:00 AM	70.85	NO		
08/31/13					

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEAK DETECTION SYSTEM MANHOLE

DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMPED YES/NO	PUMP SIZE	LEVEL AFTER PUMP	COMMENTS (weather, pump details, testing etc..)
09/01/13						
09/02/13						
09/03/13	1100 AM	70.85	NO			
09/04/13	900 AM	70.85	NO			
09/05/13	900 AM	70.85	NO			
09/06/13	900 AM	70.85	NO			
09/07/13						
09/08/13						
X 09/09/13	100 PM	70.8	NO			
09/10/13	730 AM	70.8	NO			
09/11/13	800 AM	70.8	NO			
09/12/13	900 AM	70.8	NO			
09/13/13	100 PM	70.8	YES	2"	72.2	
09/14/13						
09/15/13						
09/16/13	830 AM	72.2	NO			
09/17/13	730 AM	72.2	NO			
09/18/13	1400	71.9	NO			
09/19/13	1339	71.8	NO			
09/20/13	1038	71.8	NO			
09/21/13	900 AM	71.7	NO			
09/22/13						
09/23/13	1005	71.7	NO			
09/24/13	1210	71.65	NO			
09/25/13	10:00	71.7	NO			
09/26/13	9:30	71.65	NO			
09/27/13	9:15	71.6	NO			
09/28/13						
09/29/13						
09/30/13	8:30	71.5	NO			

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEAK DETECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMPED YES/NO	PUMP SIZE	COMMENTS (weather, pump details, testing etc..)
10/01/13	1:30	71.5	NO		
10/02/13	8:45	71.5	NO		
10/03/13	2:00	71.4	NO		
10/04/13	11:00	71.4	NO		
10/05/13					
10/06/13					
10/07/13	8:00	71.3	NO		
10/08/13	9:00	71.3	NO		
10/09/13	8:00	71.3	NO		
10/10/13	8:00	71.5	NO		
10/11/13	8:00	71.2	NO		
10/12/13					
10/13/13					
10/14/13	9:00	71.1	NO		
10/15/13	8:00	71.2	NO		
10/16/13	8:00	71.2	NO		
10/17/13	8:30	71.3	NO		
10/18/13	9:00	71.1	NO		
10/19/13					
10/20/13					
10/21/13	8:30	71.2	NO		
10/22/13	8:30	71.2	NO		
10/23/13	8:30	71.2	NO		
10/24/13	1:00	71.2	NO		
10/25/13	2:30	71.2	NO		
10/26/13					
10/27/13					
10/28/13	3:30	71.0	NO		
10/29/13	11:30	71.0	NO		
10/30/13	11:00	71.0	NO		
10/31/13	8:00	70.9	NO		

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEAK DETECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMPED YES/NO	PUMP SIZE	COMMENTS (weather, pump details, testing etc..)
11/01/13	6:00	70.9	NO		
11/02/13					
11/03/13					
11/04/13	8:00	70.9	NO		
11/05/13	7:30	70.9	NO		
11/06/13	7:30	70.9	NO		
11/07/13	10:00	70.9	NO		
11/08/13	9:00	71.0	NO		
11/09/13					
11/10/13					
11/11/13	8:00	71.1	NO		
11/12/13	8:00	71.1	NO		
11/13/13	8:00	71.1	NO		
11/14/13	9:00	71.1	NO		
11/15/13	9:00	71.1	NO		
11/16/13					
11/17/13					
11/18/13	8:00	70.7	NO		
11/19/13	9:00	70.1	NO		
11/20/13	2:00	70.7	NO		
11/21/13	8:00	70.7	NO		
11/22/13	10:00	70.7	NO		
11/23/13		7			
11/24/13					
11/25/13	8:00	70.8	NO		
11/26/13	9:00	70.7	NO		
11/27/13	9:00	70.7	NO		
11/28/13					
11/29/13					
11/30/13					

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

LEAK DETECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMPED YES/NO	PUMP SIZE	COMMENTS (weather, pump details, testing etc..)
12/01/13					
12/02/13	9:30	70.7	NO		
12/03/13	9:00	70.7	NO		
12/04/13					
12/05/13					
12/06/13					
12/07/13					
12/08/13					
12/09/13	9:00	70.8	NO		
12/10/13					
12/11/13					
12/12/13					
12/13/13					
12/14/13					
12/15/13					
12/16/13	8:00	70.8	NO		
12/17/13					
12/18/13					
12/19/13					
12/20/13					
12/21/13					
12/22/13					
12/23/13	09:45	71.3	YES	2"	CRIT PUMPED ON 12/18/13
12/24/13					
12/25/13					
12/26/13					
12/27/13					
12/28/13					
12/29/13					
12/30/13					
12/31/13					

Appendix A.3

GUS Sump Field Logs

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

UNDER DRAIN COLLECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
			YES	NO	
01/01/13	2:10 pm	71.2			
01/02/13	2:28 pm	71.2			
01/03/13	1:00 pm	71.2			
01/04/13	10:30 AM	71.2			
01/05/13					
01/06/13					
^x 01/07/13	11:21 AM	71.2			
01/08/13	1:12 pm	71.2			
01/09/13	1:48 pm	71.2			
01/10/13	8:12 AM	71.15			
01/11/13	11:00 AM	71.1			
01/12/13					
01/13/13					
01/14/13 ^x	10:00 AM	71.1			
01/15/13	9:00 AM	71.1			
01/16/13	8:19 AM	71.1			
01/17/13	8:49 AM	71.05			
01/18/13	2:22 pm	71.05			
01/19/13	'				
01/20/13					
01/21/13	8:24 AM	71.0			
01/22/13	11:22 AM	71.0			
01/23/13	2:20 PM	71.0			
01/24/13	10:42 AM	71.0			
01/25/13	9:27 AM	71.0			
01/26/13					
01/27/13					
01/28/13	8:34 AM	70.95			
01/29/13	8:22 AM	70.95			
01/30/13	1:29 PM	70.90			
01/31/13	8:54 AM	70.90			

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

UNDER DRAIN COLLECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
			YES	NO	
02/01/13	9:00 AM	70.90			
02/02/13					
02/03/13					
02/04/13	11:14 AM	70.90			
02/05/13	9:24 AM	70.90			
02/06/13	1:34 PM	70.90			
02/07/13	9:44 AM	70.90			
02/08/13	10:36 AM	70.90			
02/09/13					
02/10/13					
02/11/13	9:14 AM	70.9			
02/12/13	9:36 AM	70.9			
02/13/13	10:14 AM	70.9			
02/14/13	9:24 AM	70.85			
02/15/13	8:22 AM	70.85			
02/16/13					
02/17/13					
02/18/13	9:04 AM	70.85			
02/19/13	8:52 AM	70.85			
02/20/13	10:02 AM	70.85			
02/21/13	9:14 AM	70.85			
02/22/13	10:22 AM	70.85			
02/23/13					
02/24/13					
02/25/13	8:44 AM	70.85			
02/26/13	9:34 AM	70.85			
02/27/13	9:06	70.80			
02/28/13	9:06	70.80			

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

UNDER DRAIN COLLECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
			YES	NO	
03/01/13	8:52 AM	70.80			
03/02/13					
03/03/13					
03/04/13	9:30 AM	70.8			
03/05/13	9:06 AM	70.8			
03/06/13	10:54 AM	70.8			
03/07/13	10:34 AM	70.8			
03/08/13	8:32 AM	70.75			
03/09/13					
03/10/13					
03/11/13 ⁴	9:00 AM	70.75			
03/12/13 ⁴	8:15 AM	70.7			
03/13/13	10:15 AM	70.7			
03/14/13	10:45 AM	70.7			
03/15/13	10:20 AM	70.7			
03/16/13					
03/17/13					
03/18/13	11:22 AM	70.70			
03/19/13	8:24 AM	70.70			
03/20/13	9:24 AM	70.70			
03/21/13	2:34 PM	70.70			
03/22/13	8:54 AM	70.70			
03/23/13					
03/24/13					
03/25/13	9:00 AM	70.7			
03/26/13	7:02 AM	70.7			
03/27/13	9:00 AM	70.65			
03/28/13	8:00 AM	70.6			
03/29/13	8:00 AM	70.6			
03/30/13					
03/31/13					

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

UNDER DRAIN COLLECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
			YES	NO	
04/01/13	845 AM	70.6			
04/02/13	845 AM	70.6			
04/03/13	850 AM	70.6			
04/04/13	8:15 AM	70.6			
04/05/13	8:10 AM	70.6			
04/06/13					
04/07/13					
04/08/13	100 PM	70.5			
04/09/13	1030 AM	70.55			
04/10/13	215 PM	70.55			
04/11/13	100 PM	70.55			
04/12/13	245 PM	70.55			
04/13/13					
04/14/13					
04/15/13 ^X	230 PM	70.55			
04/16/13	900 AM	70.55			
04/17/13	230 PM	70.5			
04/18/13	1100 AM	70.55			
04/19/13	900 AM	70.5			
04/20/13 ^X					
04/21/13 ⁵					
04/22/13	130 PM	70.5			
04/23/13	115 PM	70.5			
04/24/13					
04/25/13					
04/26/13					
04/27/13					
04/28/13					
04/29/13					
04/30/13					

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

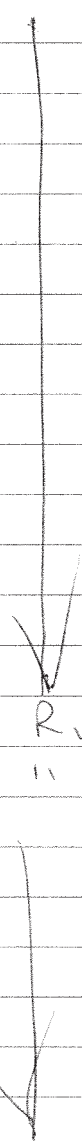
UNDER DRAIN COLLECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
			YES	NO	
05/01/13	8:10 AM	70.45			
05/02/13	7:40 AM	70.45			
05/03/13	8:00 AM	70.45			
05/04/13					
05/05/13					
05/06/13	10:30 AM	70.40			
05/07/13	10:00 AM	70.40			
05/08/13	10:30 AM	70.40			
05/09/13	8:20 AM	70.40			
05/10/13	8:00 AM	70.40			
05/11/13					
05/12/13					
05/13/13	9:10 AM	70.40			
05/14/13	8:00 AM	70.40			
05/15/13	7:30 AM	70.40			
05/16/13	8:30 AM	70.40			
05/17/13	8:20 AM	70.40			
05/18/13					
05/19/13					
05/20/13	9:10 AM	70.40			
05/21/13	8:30 AM	70.40			
05/22/13	8:20 AM	70.35			
05/23/13	8:15 AM	70.35			
05/24/13	8:20 AM	70.35			
05/25/13					
05/26/13					
05/27/13	8:20 AM	70.35			
05/28/13	8:10 AM	70.35			
05/29/13	8:00 AM	70.35			
05/30/13	11:00 AM	70.35			
05/31/13	9:00 AM	70.35			

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

UNDER DRAIN COLLECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
			YES	NO	
06/01/13					
06/02/13					
06/03/13	8:20 AM	70.35			
06/04/13	8:10 AM	70.35			
06/05/13	10:15 AM	70.3			
06/06/13	2:50 PM	70.3			
06/07/13	10:30 AM	70.3			
06/08/13					
06/09/13					
06/10/13	4:00 PM	70.30			
06/11/13	8:15 AM	70.30			
06/12/13	9:30 AM	70.30			
06/13/13	8:20 AM	70.30			
06/14/13	9:20 AM	70.30			
06/15/13					
06/16/13					
06/17/13	1:20 PM	70.30			
06/18/13	10:20 AM	70.30			
06/19/13	9:15 AM	70.30			
06/20/13	8:10 AM	70.30			
06/21/13	1:30 PM	71.90			
06/22/13					
06/23/13					
06/24/13	9:50 AM	71.35			
06/25/13	10:00 AM	71.35			
06/26/13					UNABLE TO GET READINGS
06/27/13					
06/28/13					
06/29/13					
06/30/13					

V

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

UNDER DRAIN COLLECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
			YES	NO	
07/01/13					UNABLE TO GET READINGS 
07/02/13					
07/03/13					
07/04/13					
07/05/13					
07/06/13					
07/07/13					
07/08/13					
07/09/13					
07/10/13					
07/11/13					
07/12/13					
07/13/13					
07/14/13					
07/15/13					
07/16/13	6:00 AM	75			Pump Running
07/17/13	6:20 AM	75			" " "
07/18/13	6:15 AM	75			
07/19/13	6:10	75			
07/20/13					
07/21/13					
07/22/13	8:15 AM	75			
07/23/13	9:00 AM	75			
07/24/13	6:15 AM	75			
07/25/13	6:00 AM	75			
07/26/13	6:00 AM	75			Pump Running
07/27/13					
07/28/13					
07/29/13	9:00 AM	75			
07/30/13	6:00 AM	75			
07/31/13					

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

UNDER DRAIN COLLECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc.)
			YES	NO	
08/01/13	830 AM	75			
08/02/13	1045AM	75			
08/03/13					
08/04/13					
K 08/05/13	215 PM	75			
08/06/13	615AM	75			
08/07/13	945AM	75			
08/08/13	945AM	75			
08/09/13	815AM	75			
08/10/13					
08/11/13					
↑ 08/12/13	900AM	75			
08/13/13	10.45AM	75			
08/14/13	900AM	75			
08/15/13	900AM	75			
08/16/13	930AM	75			
08/17/13					
08/18/13					
08/19/13	330PM	75			
08/20/13	430 PM	75			
08/21/13	800AM	75			
08/22/13	800AM	75			
08/23/13	800AM	75			
08/24/13					
08/25/13					
K 08/26/13	815 AM	75			
08/27/13	700AM	75			
08/28/13	1000AM	75			
08/29/13	950AM	75			
08/30/13	900AM	75			
08/31/13					

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

UNDER DRAIN COLLECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
			YES	NO	
09/01/13					
09/02/13					
X 09/03/13	1100AM	75			
09/04/13	900AM	75			
09/05/13	900AM	75			
09/06/13	900AM	75			
09/07/13					
09/08/13					
X 09/09/13	100pm	75			
09/10/13	730AM	75			
09/11/13	800AM	75			
09/12/13	900AM	75			
09/13/13	100pm	75			
09/14/13					
09/15/13					
09/16/13	830AM	75			
09/17/13	730AM	75			
09/18/13	1357	75			
09/19/13	1332	75			
09/20/13	1036	75			
09/21/13	0956	75			
09/22/13					
09/23/13	0956	75			
09/24/13	1204	75			
09/25/13	10:00	75			
09/26/13	9:30	75			
09/27/13	9:15	75			
09/28/13	061530	75			
09/29/13					
09/30/13	8:30	75			

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

UNDER DRAIN COLLECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
			YES	NO	
10/01/13	1:30	75.1			
10/02/13	8:45	74.9			
10/03/13	2:00	75.0			
10/04/13	11:00	75.0			
10/05/13					
10/06/13					
10/07/13	8:00	75.0			
10/08/13	9:00	75.0			
10/09/13	8:00	75.0			
10/10/13	8:00	75.0			
10/11/13	8:00	75.0			
10/12/13					
10/13/13					
10/14/13	9:00	75.0			
10/15/13	8:00	75.0			
10/16/13	8:00	75.0			
10/17/13	8:30	75.0			
10/18/13	9:00	75.0			
10/19/13					
10/20/13					
10/21/13	8:30	74.9			
10/22/13	8:30	74.9			
10/23/13	8:30	74.9			
10/24/13	1:00	75.0			
10/25/13	2:30	75.0			
10/26/13					
10/27/13					
10/28/13	3:30	75.0			
10/29/13	11:30	75.0			
10/30/13	11:00	75.0			
10/31/13	8:00	75.0			

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

UNDER DRAIN COLLECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
			YES	NO	
11/01/13	4:00	75.0			
11/02/13					
11/03/13					
11/04/13	8:15	75.0			
11/05/13	7:30	75.0			
11/06/13	7:30	75.0			
11/07/13	10:00	75.0			
11/08/13	9:00	75.0			
11/09/13					
11/10/13					
11/11/13	8:00	75.2			
11/12/13	8:00	75.0			
11/13/13	3:00	75.0			
11/14/13	9:00	75.0			
11/15/13	9:00	75.0			
11/16/13					
11/17/13					
11/18/13	8:00	74.9			
11/19/13	9:00	74.9			
11/20/13	2:00	74.7			
11/21/13	8:00	74.7			
11/22/13	10:00	74.7			
11/23/13					
11/24/13					
11/25/13	8:00	75.1			
11/26/13	9:00	75.0			
11/27/13	9:00	75.0			
11/28/13					
11/29/13					
11/30/13					

SUMP MONITORING
 EAST PLANT AREA VAULT
 GENERAL MOTORS POWERTRAIN
 BEDFORD FACILITY - BEDFORD, INDIANA

UNDER DRAIN COLLECTION SYSTEM MANHOLE					
DATE (mm/dd/yy)	Time (hh:mm)	Water Level	PUMP OPERATIONAL		COMMENTS (weather, pump details, testing etc..)
			YES	NO	
12/01/13					
12/02/13	9:30	75.1			
12/03/13	9:00	75.1			
12/04/13					
12/05/13					
12/06/13					
12/07/13					
12/08/13					
12/09/13	9:00	75.1			
12/10/13					
12/11/13					
12/12/13					
12/13/13					
12/14/13					
12/15/13					
12/16/13	8:00	72.8			
12/17/13					
12/18/13					
12/19/13					
12/20/13					
12/21/13					
12/22/13					
12/23/13	09:40	71.55			
12/24/13					
12/25/13					
12/26/13					
12/27/13					
12/28/13					
12/29/13					
12/30/13					
12/31/13					

Appendix A.4

Automated Pumping System Logs

**DAILY VAULT READINGS
WATER PUMPED AND WATER LEVELS
GM CETC - BEDFORD, IN**

Month / Year		June 2013					
Day	Leachate Collection (LCS)		Gravel Underdrain (GUS)		Leak Detection (LDS) ¹		
	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level ² (in)	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14	0	60	0	100			
15	0	60	0	100			
16	0	60	0	100			
17	0	60	0	100			
18	0	60	0	100			
19	0	60	0	100			
20	0	60	56199	100			
21	3600B	26	0	100			
22	0	26	0	100			
23	0	27	0	100			
24	0	27	0	101			
25	0	27	0	101			
26							
27							
28							
29							
30							
31							
TOTAL	0		0		0		

Notes: 1 - Leak Detection Gallons is calculated by taking water levels of both LCS and LDS prior to and following pumping the LDS.
2 - Water levels are only recorded monthly when checking LDS water level and/or prior to/following pumping to the LCS.

**DAILY VAULT READINGS
WATER PUMPED AND WATER LEVELS
GM CETC - BEDFORD, IN**

Month / Year		Leachate Collection (LCS)		Gravel Underdrain (GUS)		Leak Detection (LDS) ¹	
Day	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level ² (in)	
1	0	27	0	102			
2	0	27	0	101			
3	0	28	0	101			
4	0	28	0	101			
5	0	28	0	101			
6	0	28	0	101			
7	0	28	0	101			
8	0	28	38155	101			
9	0	28	62910	102			
10	0	28	38355	103			
11	0	27	9080	103			
12	0	29	8470	103			
13	0	29	8210	104			
14	0	29	8010	103			
15	0	29	7855	103			
16	0	29	7715	106			
17	0	29	7660	107			
18	0	29	7400	108			
19	0	27	7530	109			
20	0	29	7445	110			
21	0	30	7430	110			
22	0	30	7400	111			
23	0	30	7325	112			
24	0	30	7105	112			
25	0	30	7295	112			
26	0	30	7105	112			
27	0	30	7075	113			
28	0	30	6980	113			
29	0	30	6947	113			
30	0	30	6945	113			
31	0	2	6855	114			
TOTAL	0		0		0		

Notes: 1 - Leak Detection Gallons is calculated by taking water levels of both LCS and LDS prior to and following pumping the LDS.
2 - Water levels are only recorded monthly when checking LDS water level and/or prior to/following pumping to the LCS.

**DAILY VAULT READINGS
WATER PUMPED AND WATER LEVELS
GM CETC - BEDFORD, IN**

Month / Year		August 2013					
Day	Leachate Collection (LCS)		Gravel Underdrain (GUS)		Leak Detection (LDS) ¹		
	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level ² (in)	
1	0	31	6830	114			
2	0	31	6730	115			
3	0	30	6725	115			
4	0	31	6565	115			
5	0	31	6606	115			
6	0	31	6250	116			
7	0	31	6360	116			
8	0	31	6535	117			
9	0	31	6360	117			
10	0	31	6285	118			
11	0	31	6165	118			
12	0	32	6105	119			
13	0	32	6005	119			
14	0	32	5750	119			
15	0	32	6090	120			
16	0	32	5755	120			
17	0	32	5760	120			
18	0	32	5635	120			
19	0	32	5580	120			
20	0	32	5500	121			
21	0	32	5395	121			
22	0	32.53	5540	122			
23	0	33	5250	122			
24	0	33	5205	122			
25	0	33	5170	123			
26	0	33	5165	123			
27	0	33	5110	124			
28	0	33	5060	124			
29	0	33	5080	125			
30	0	33	4980	126			
31	0	33	4955	126			
TOTAL	0		0		0		

Notes: 1 - Leak Detection Gallons is calculated by taking water levels of both LCS and LDS prior to and following pumping the LDS.
2 - Water levels are only recorded monthly when checking LDS water level and/or prior to/following pumping to the LCS.

**DAILY VAULT READINGS
WATER PUMPED AND WATER LEVELS
GM CETC - BEDFORD, IN**

Month / Year		Leachate Collection (LCS)		Gravel Underdrain (GUS)		Leak Detection (LDS) ¹	
Day	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level ² (in)	
1	0	33	4960	127			
2	0	33	4940	127			
3	0	34	4870	128			
4	0	34	4810	128			
5	0	34	4770	129			
6	0	34	4745	129			
7	0	34	4710	129			
8	0	34	4680	130			
9	0	34	4535	130			
10	0	34	4475	131			
11	0	34	4415	132			
12	0	35	4335	131			
13	0	35	4245	132			
14	0	35	4215	132			
15	0	35	4140	131			
16	0	35	4150	132			
17	0	35	4075	132			
18	0	36	4150	132			
19	0	36	4275	132			
20	0	36	4380	132			
21	0	36	4495	132			
22	0	36	4490	132			
23	0	36	4535	132			
24	0	36	4535	132			
25	0	36	4525	132			
26	0	36	4480	132			
27	0	36	4520	132			
28	0	36	4529	132			
29	0	36	4535	132			
30	0	36	4630	133			
31							
TOTAL	0		0		0		

Notes: 1 - Leak Detection Gallons is calculated by taking water levels of both LCS and LDS prior to and following pumping the LDS.
2 - Water levels are only recorded monthly when checking LDS water level and/or prior to/following pumping to the LCS.

**DAILY VAULT READINGS
WATER PUMPED AND WATER LEVELS
GM CETC - BEDFORD, IN**

Month / Year		October 2013					
Day	Leachate Collection (LCS)		Gravel Underdrain (GUS)		Leak Detection (LDS) ¹		
	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level ² (in)	
1	0	36	4625	133			
2	0	37	4635	133			
3	0	37	4665	133			
4	0	37	4670	133			
5	0	37	4675	134			
6	0	37	4890	134			
7	0	37	5210	134			
8	0	34	5395	134			
9	0	27	5440	134			
10	0	0	5395	134			
11	0	0	5400	134			
12	0	0	5275	134			
13	0	0	5295	134			
14	0	0	5320	134			
15	0	0	5350	134			
16	0	0	5370	135			
17	0	0	5445	134			
18	0	38	5215	134			
19	0	38	5160	134			
20	0	38	5220	134			
21	0	39	5270	134			
22	0	39	5095	134			
23	0	39	4955	135			
24	0	39	4905	135			
25	0	39	4855	134			
26	0	39	4925	134			
27	0	39	4970	134			
28	0	39	4665	135			
29	0	37	4625	134			
30	0	39	4650	134			
31	0	39	4900	134			
TOTAL	0		0		0		

Notes: 1 - Leak Detection Gallons is calculated by taking water levels of both LCS and LDS prior to and following pumping the LDS.
2 - Water levels are only recorded monthly when checking LDS water level and/or prior to/following pumping to the LCS.

DAILY VAULT READINGS
WATER PUMPED AND WATER LEVELS
GM CETC - BEDFORD, IN

Month / Year		Leachate Collection (LCS)		Gravel Underdrain (GUS)		Leak Detection (LDS) ¹	
Day	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level ² (in)	
1	0	40	5045	134			
2	0	40	5040	134			
3	0	40	5085	134			
4	0	40	5410	134			
5	0	40	5325	134			
6	0	40	5310	135			
7	0	40	5208	138			
8	0	40	5305	135			
9	0	40	5495	134			
10	0	40	5365	134			
11	0	40	5485	134			
12	0	40	5300	134			
13	0	40	5370	134			
14	0	40	5405	134			
15	0	41	5380	134			
16	0	41	5355	134			
17	0	41	5335	134			
18	0	41	5360	134			
19	0	41	5520	134	gas-off	Leachate	
20	0	41	8995	134			
21	0	30	0	134			
22	0	30	0	134			
23	0	20	0	134			
24	0	30	0	134			
25	0	30	19875	134			
26	0	31	18985	134			
27	0	32	5930	134			
28	0	31	6000	134			
29	0	31	5640	134			
30	0	32	5625	134			
31							
TOTAL	0		0		0		

Notes: 1 - Leak Detection Gallons is calculated by taking water levels of both LCS and LDS prior to and following pumping the LDS.
2 - Water levels are only recorded monthly when checking LDS water level and/or prior to/following pumping to the LCS.

**DAILY VAULT READINGS
WATER PUMPED AND WATER LEVELS
GM CETC - BEDFORD, IN**

Month / Year		Dec 2013					
Day	Leachate Collection (LCS)		Gravel Underdrain (GUS)		Leak Detection (LDS) ¹		
	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level ² (in)	
1	0	32	5670	134			
2	0	32	5705	134			
3	0	32	5610	134			
4	10	32	5680	134			
5	0	31	5453	134			
6	0	31	5445	134			
7	0	32	5465	134			
8	0	34	5605	134			
9	0	32	5545	134			
10	0	32	3720	134	Gus and Leachate "off"		
11	0	32	0	134	for pump and flow		
12	0	33	0	134	meter testing		
13	0	33	0	133			
14	0	33	0	134			
15	0	32	0	134			
16	0	32	0	134			
17	0	32	0	134			
18	0	34	250	134	Vault raising off		
19	0	35	0	133	due to cold weather		
20	0	33	0	133	and difficulties		
21	0	36	0	133	with water line		
22	0	36	0	133	and treatment system		
23	0	36	0	133			
24	0	36	0	133			
25	0	36	0	133			
26	0	36	0	133			
27	0	35	0	133			
28	0	36	0	133			
29	0	35	0	135			
30	0	36	0	135			
31							
TOTAL	0		0		0		

Notes: 1 - Leak Detection Gallons is calculated by taking water levels of both LCS and LDS prior to and following pumping the LDS.
2 - Water levels are only recorded monthly when checking LDS water level and/or prior to/following pumping to the LCS.

Appendix B

Sediment and Erosion Control Inspection Forms – Severson Environmental Services

Sevenson Environmental Services, Inc.
Daily Sediment and Erosion Control Inspection Form

ITEM	Parcel 201	AOI - 8	AOI -11	AOI -4	AOI -5	AOI -6	AOI -10	AOI -15	Vault	East AOI 4	Spring 18	Parcel 35
Silt Fence	NA				X	X	X	NA	NA	X	NA	NA
Safety Fence	X	X	X	X	X	X	X	X	X	X	NA	
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	
Tarp Cover	NA											
Dams	NA									→	X	
Pumps	NA										X	
Hoses	NA											Y

Comments:

- Inspection Requirements:**
1. To be performed daily
 2. Answer all items on Checklist (use checklist codes)
 3. Add remarks for items that are checked (U/R U+R or QMR)
 4. If answer is X, NA or ANA; no remarks needed

Checklist Codes

- X Satisfactory (Good Condition)
- U Unsatisfactory (needs removal and replaced within a week)
- R Repaired/ Replaced (to be used when code U is completed)
- U/R Unsatisfactory and Repaired (work was completed by day end)
- QMR Questionable - Made minor repairs (1 or 2 hrs work)
- NA Doesn't Apply to Area (Does not apply to area)

Inspector: *Steve McDonald* Date Performed:

4-24-13

Sevenson Environmental Services, Inc.
Daily Sediment and Erosion Control Inspection Form

ITEM	Parcel 201	AOI - 8	AOI -11	AOI -4	AOI - 5	AOI - 6	AOI - 10	AOI - 15	Vault	East AOI 4	Spring 18	Parcel 36
Silt Fence	NA				X	X	X	NA	NA	X	NA	NA
Safety Fence	X	X	X	X	X	X	X	X	X	X	NA	
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	
Tarp Cover	NA											
Dams	NA											
Pumps	NA										X	
Hoses	NA											V

Comments:

- Inspection Requirements:**
- To be performed daily
 - Answer all items on Checklist (use checklist codes)
 - Add remarks for items that are checked (U/R U+R or QMR)
 - If answer is X, NA or ANA; no remarks needed

Checklist Codes

- X Satisfactory/ Good Condition
- U Unsatisfactory (needs removal and replaced within a week)
- R Repaired/ Replaced (to be used when code U is completed)
- U/R Unsatisfactory and Repaired (work was completed by days end)
- QMR Questionable - Made minor repairs (1 or 2 hrs work)
- NA Doesn't Apply to Area (Does not apply to area)

Inspector: George McDaniel

Date Performed: 4-25-13

Sevenson Environmental Services, Inc.
Daily Sediment and Erosion Control Inspection Form

ITEM	Parcel 201	AOI - 8	AOI - 11	AOI - 4	AOI - 5	AOI - 6	AOI - 10	AOI - 15	Vault	East AOI 4	Spring 18	Parcel 36
Silt Fence	NA										NA	NA
Safety Fence	X	X	X	X	X	X	X	X	X	X	NA	
Soil Cover	X		X									
Tarp Cover	NA											
Dams	NA											
Pumps	NA										X	
Hoses	NA											

Comments:

- Inspection Requirements:
1. To be performed daily
 2. Answer all items on Checklist (use checklist codes)
 3. Add remarks for items that are checked (U/R U+R or QMR)
 4. If answer is X, NA or ANA; no remarks needed

Checklist Codes

- X Satisfactory (Good Condition)
- U Unsatisfactory (needs removal and replaced within a week)
- R Repaired/ Replaced (to be used when code U is completed)
- U/R Unsatisfactory and Repaired(work was completed by days end)
- QMR Questionable - Made minor repairs (1 or 2 hrs work)
- NA Doesn't Apply to Area (Does not apply to area)

Inspector: *Jerry M. Deard*

Date Performed: 4-26-13

Sevenson Environmental Services, Inc.
Daily Sediment and Erosion Control Inspection Form

ITEM	Parcel 201	AOI - 8	AOI -11	AOI -4	AOI -5	AOI -6	AOI -10	AOI -15	Vault	East AOI 4	Spring 18	Parcel 36
Silt Fence	NA											NA
Safety Fence	X	X	X	X	X	X	X	X	X	X	NA	
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	
Tarp Cover	NA											
Dams	NA											
Pumps	NA											
Hoses	NA											

Comments:

- Inspection Requirements:**
- To be performed daily
 - Answer all items on Checklist (use checklist codes)
 - Add remarks for items that are checked (U/R U+R or QMR)
 - If answer is X, NA or ANA; no remarks needed

Checklist Codes

- X Satisfactory/ Good Condition
- U Unsatisfactory (needs removal and replaced within a week)
- R Repaired/ Replaced (to be used when code U is completed)
- U/R Unsatisfactory and Repaired(work was completed by days end)
- QMR Questionable - Made minor repairs (1 or 2 hrs work)
- NA Doesn't Apply to Area (Does not apply to area)

Inspector:

Jorge M. David

Date Performed:

4-29-13

Sevenson Environmental Services, Inc.
Daily Sediment and Erosion Control Inspection Form

ITEM	Parcel 201	AOI - 8	AOI -11	AOI -4	AOI -5	AOI -6	AOI -10	AOI -15	Vault	East AOI 4	Spring 18	Parcel 36
Silt Fence	NA											NA
Safety Fence	X	X	X	X	X	X	X	NA	NA	X	NA	
Soil Cover	X	X	X	X	X	X	X	X	X	X	X	
Tarp Cover	NA											
Dams	NA											
Pumps	NA										X	
Hoses	NA											

Comments:

- Inspection Requirements:
- To be performed daily
 - Answer all items on Checklist (use checklist codes)
 - Add remarks for items that are checked (U/R U+R or QMR)
 - If answer is X, NA or ANA; no remarks needed

Checklist Codes

- X Satisfactory (Good Condition)
- U Unsatisfactory (needs removal and replaced within a week)
- R Repaired/ Replaced (to be used when code U is completed)
- U/R Unsatisfactory and Repaired(work was completed by days end)
- QMR Questionable - Made minor repairs (1 or 2 hrs work)
- NA Doesn't Apply to Area (Does not apply to area)

Inspector:

Jorge M. D. [Signature]

Date Performed:

4-30-13

Appendix C

Inspection Report – Cardno JF New, September 5, 2013

September 16, 2013

Ms. Katie Kamm
Conestoga Rovers & Associates
8615 West Bryn Mawr Ave.
Chicago, Illinois 60631-3501

**Subject: Site Assessment
 GM Landfill Site
 Lawrence County, Indiana**

Cardno JFNew

3901 Industrial Blvd.
Indianapolis, Indiana 46254
USA

Phone 317 388 1982
Fax 317 388 1986
www.cardno.com

www.cardnojfnew.com

Dear Ms. Kamm

The following summarizes the findings from our recent assessment of the GM Landfill Site, located at the GM Plant in Bedford, Lawrence County, Indiana. The purpose of the investigation was to provide a qualitative analysis of the progress of native grass and wildflower plantings at the site.

Introduction / Background

The site consists of seven areas including Areas 1 through 5, Wildflower Area and West Plant (Figure 1). In addition, within the site are several swales (indicated as “proposed drainage ditches” on Figure 1). There are also a series of berms with an average slope of 4 to 1 located within a majority of the seven areas. The overall orientation of the site is north-south, with the berms running in a general north-south or east-west direction. Due to the steepness of the slopes throughout most of the site, precipitation tends to run off before it has a chance to penetrate the ground. This condition is enhanced by the soils, which appear to contain sufficient clay to reduce permeability to precipitation. Additionally, most of the site experiences direct, intense exposure to the sun. These conditions cause the site to be prone to drought. The site was planted in 2011, with drought occurring in the second half of that year, followed by severe drought in 2012. Precipitation for 2013 has been closer to normal; however no significant rainfall occurred during the month prior to the site investigation. Additionally, several of the areas investigated had been mowed in the month prior to the site visit.

At the time of the initial planting in 2011, fescue was added by the contractor to the original seed mix received from the Cardno JFNew Nursery to increase coverage and provide initial ground cover.

Methodology

The assessment was conducted on September 5, 2013. The site was walked with George Seng of Conestoga Rovers and Associates and Shane Reynolds of Severson Environmental. Each of the seven areas, including the swales and associated berms

were examined through the use of meandering pedestrian transects. As each area was walked, the following elements were observed and documented:

- Estimates of percent overall vegetation cover,
- Percent cover by planted species,
- Inventory of planted species encountered,
- Dominant plant species, and
- General condition of the soil.

Results

Area 1 (Parcel 201)

This area is located at the extreme southern portion of the site. Overall vegetation cover was approximately 80%. Cover by planted vegetation was 0%. No planted species were observed in this area. Dominant vegetation consisted of non-native vegetation including fescues (*Festuca* spp.) and clovers (*Trifolium* spp.). There was no significant erosion in this area.

Area 1 (Parcel 205)

This area is located to the northwest of Parcel 201. Terrain in this area was overall less steep than the rest of the site, in addition to being more shaded. Overall vegetation cover was approximately 90%. No planted species were observed in this area. Dominant vegetation consisted of fescues, clovers and Johnson grass (*Sorghum halepense*) (non-native species). There was no significant erosion in this area.

Area 2

This area is located to the north of Area 1. The southwestern part of Area 2 is relatively flat, with the rest of the area consisting of 4:1 slopes. Overall vegetation cover was approximately 80%. Cover by planted species was less than 5% and included Indian grass (*Sorghastrum nutans*) and side-oats grama (*Bouteloua curtipendula*). Dominant vegetation consisted of fescues and clovers (non-native species). There was no significant erosion in this area.

Area 3

This area is located to the north of Area 2 and east of the detention pond, Overall vegetation cover was approximately 70%. Cover by planted species was less than 5% and included the following species: Indian grass, side-oats grama, wild senna (*Senna hebecarpa*), Canada wild rye (*Elymus canadensis*) and big bluestem (*Andropogon gerardii*). Dominant vegetation consisted of fescues and clovers (non-native species). There was no significant erosion in this area.

Area 4

This area is located to the north of Area 2, and west of the detention pond. Overall vegetation cover was approximately 80%. Cover by planted species in this area was less than 10% and was represented by Indian grass, side-oats grama and wild senna. Dominant vegetation consisted of fescues (non-native species). There was no significant erosion in this area.

Area 5

This area is located on the northern portion of the site detention pond. Overall vegetation cover was approximately 80%. Cover by planted species in this area was less than 10% and included Indian grass, side-oats grama and wild senna. There was no significant erosion in this area.

Wildflower Area

This area is located on the northwest corner of the site. Overall vegetation cover was approximately 90%. Cover by planted species was approximately 80%. Indian grass, side-oats grama, wild senna, Canada wild rye, big bluestem and lance-leaf coreopsis (*Coreopsis lanceolata*) represented planted species in the Wildflower Area. Dominant vegetation was side-oats grama and wild senna. There was no significant erosion in this area.

West Plant

The West Plant area is located west of GM Drive, immediately north and west of Area 2. The West Plant area was planted with a variety of lawn turf species, and at the time of the site investigation, no identifiable planted species were present. Dominant vegetation consisted of fescues and clovers (non-native species) .

Swales

Several swales located at the site showed overall vegetation cover of approximately 90%. No planted species were observed in the swales. Dominant vegetation consisted of fescues (non-native species). There was no significant erosion in these areas.

Wildflower Area

This area is located on the northwest corner of the site. Overall vegetation cover was approximately 90%. Cover by planted species within this area was approximately 80% and consisted of Indian grass, side-oats grama, wild senna, Canada wild rye, big bluestem and lance-leaf coreopsis (*Coreopsis lanceolata*). Dominant vegetation observed in this area was side-oats grama and wild senna (native species). There was no significant erosion in this area.

Conclusions

Areas 1 through 5, West Plant and swales

Overall these areas site were not meeting the goal of providing a sustaining cover of native grasses. These areas demonstrated dominance of fescues and clovers (non-native species), with few or none of the planted species in evidence. The reasons for this may be due to the difficult growing conditions at the site, with its steep slopes, clay soils and full exposure to sun. These conditions were likely exacerbated by lack of precipitation after planting in 2011 and the drought conditions of 2012. The addition of fescues to the original seed mix may have also played a role by creating an aggressive, perennial ground cover that tends to outcompete native vegetation.

Wildflower Area

The wildflower area demonstrated a greater survival of planted species, which were dominant in the area. The reasons for greater success in this area may have been the shallower slopes over much of the area, and its position on the northwest corner of the site, on slopes facing northwest, where sunlight is less intense. Also, no fescues were added to the original wildflower mix, eliminating a source of competition.



If you have any questions pertaining to the results of this study, please feel free to contact me to discuss. I can be reached at 317-388-1982 or sean.clauson@cardno.com.

Sincerely,

A handwritten signature in blue ink that reads "Sean Clauson".

Sean Clauson
Operations Manager
for Cardno JFNew
Cell: 574 229 8780
Email: sean.clauson@cardno.com

Enclosure

File: 1308045.00



PP 1 Area 1 (Parcel 201) View East September 5, 2013



PP 2 Area 1 (Parcel 201) View Northeast , September 5, 2013



PP3 Area 1 (Parcel 205) East, September 5, 2013



PP4 Area 1 (Parcel 205) East, September 5, 2013



PP 5 Area 2 View Northeast, September 5, 2013



PP 6 Area 2 View West, September 5, 2013



PP7 Area 3 North, September 5, 2013



PP8 Area 3 North, September 5, 2013



PP 9 Area 4 View South, September 5, 2013



PP 10 Area 5 View West, September 5, 2013



PP11 Area 5 View South, September 5, 2013



PP12 Wildflower Area View Northeast, September 5, 2013



PP 13 West Plant View North, September 5, 2013

Appendix D

Mag Meter Verification Certification Report

Plant Documentation

13.03.2013 12:21:55

! = out of range

= not read or communication error

* = parameter changed

Flowmeter Verification Certificate Transmitter

GM/Conestoga

Customer

Order code

PROMAG 50 W DN40

Device type

F1095B16000

Serial number

V2.04.00

Software Version Transmitter

03/13/2013

Verification date

Bedford, IN

Plant

FIT-LCS

Tag Name

0.7115 - 0.7115

K-Factor

0

Zero point

V1.04.10

Software Version I/O-Module

10:01 AM

Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	1.50 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Passed	1 P
Test Sensor	Passed	

FieldCheck Details

500170

Production number

Test510

Software Version

04/2012

Last Calibration Date

Simubox Details

8702791

Production number

1.00.01

Software Version

04/2012

Last Calibration Date

Date

Operator's Sign

Inspector's Sign

Overall results:

The achieved test results show that the instrument is completely functional, and the measuring results lie within +/- 1% of the original calibration. ¹⁾

The calibration of the Fieldcheck test system is fully traceable to national standards.

1) Prerequisite is an additional proof of electrode integrity with a high voltage test.

FieldCheck - Result Tab Transmitter

Customer	GM/Conestoga	Plant	Bedford, IN
Order code		Tag Name	FIT-LCS
Device type	PROMAG 50 W DN40	K-Factor	0.7115 - 0.7115
Serial number	F1095B16000	Zero point	0
Software Version Transmitter	V2.04.00	Software Version I/O-Module	V1.04.10
Verification date	03/13/2013	Verification time	10:01 AM

Verification Flow end value (100 %): 79.672 gal/m
 Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	3.984 gal/m (5%)	1.50 %	0.46 %
✓		7.967 gal/m (10.0%)	1.50 %	0.04 %
✓		39.836 gal/m (50.0%)	1.50 %	-0.00 %
✓		79.672 gal/m (100%)	1.50 %	-0.00 %
	Current Output 1			
✓		4.000 mA (0%)	0.05 mA	-0.000 mA
✓		4.800 mA (5%)	0.05 mA	-0.000 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.000 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.009 mA
✓		20.000 mA (100%)	0.05 mA	0.003 mA
	Pulse Output 1			
✓		125 P	1 P	0 P
		Start value	Limits range	Measured value
	Test Sensor			
✓	Coil Curr. Rise	3.200 ms	0.000..10.200 ms	3.872 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..170.325 mV	0.657 mV

Legend of symbols

✓	✗	—	?	!
Passed	Failed	not tested	not testable	Attention

FieldCheck: Parameters Transmitter

Customer	GM/Conestoga	Plant	Bedford, IN
Order code		Tag Name	FIT-LCS
Device type	PROMAG 50 W DN40	K-Factor	0.7115 - 0.7115
Serial number	F1095B16000	Zero point	0
Software Version Transmitter	V2.04.00	Software Version I/O-Module	V1.04.10
Verification date	03/13/2013	Verification time	10:01 AM

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA active	0.0 gal/m	150.01 gal/m		
Pulse Output	Assign	Pulse Value	Output signal	Pulse width		
Terminal 24/25	VOLUME FLOW	5.000 gal/P	Passive/Positive	100.01 ms		

Actual System Ident.

119.0