East Plant Area TSCA Vault Annual Report Calendar Year 2014

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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
GHD	formerly Conestoga-Rovers & Associates, Inc.
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
SES	Sevenson Environmental Services
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

1. Introduction

This Annual Monitoring Report (Report) summarizes data from the calendar year of 2014 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 GHD (formerly Conestoga-Rovers and Associates, Inc. [CRA], which became GHD effective July 1, 2015) on behalf of GM in accordance with the Resource Conservation and Recovery Act (RCRA) Administration Order on Consent effective August 4, 2014 (U.S. EPA Docket No. RCRA-05-2014-0011), and the East Plant Area Vault Post-Closure Plan (PCP) (CRA, 2012), as modified by the responses to U.S. EPA comments to the PCP submitted on September 18, 2014 and November 24, 2014. 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 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 weekly basis in 2014, and with daily records recorded electronically while automated systems were operational. Monitoring results, and issues encountered are discussed in the sections below for each collection system. 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 and the RCRA AOC, the next annual report covering post-closure monitoring data for the calendar year of 2015 will be submitted to U.S. EPA on or before July 15, 2016.

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 in 2014 from the LCS, LDS, and the GUS and quantity discharged from these systems to the 300 gallons per minute (gpm) design capacity WTP (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), and the Vault inspection log.

Section 3.0 – Analytical Results

This section provides all analytical results for 2014 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 (≥) 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 and depth 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.

2. Summary of Record Keeping Log

The following information was recorded as required by the PCP:

1) The quantity of liquid collected from the LCS
2) The quantity of liquid collected from the LDS
3) The quantity of liquid collected from the GUS
4) The 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 logs and maintenance activities

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

For the majority of 2014, the water level in each of the Vault systems was recorded on a weekly 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. For the month of January manual water level measurements were completed in the LCS, LDS and GUS sumps by Sevenson Environmental Services (SES) as part of their East Plant Area construction activities, and reported to CRA, including when manual pumping was being performed. In February 2014, CRA assumed the responsibilities for monthly monitoring as SES demobilized from Site activities. Field logs are presented in 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, calculations, 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 2014 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. Repairs to the Astrasand filter were completed in April 2014 and the SSC WTP was utilized, thereafter.

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 2014 is provided in

Table 2.6. Also presented in Table 2.6 is a summary of the water (from Vault Sumps, wet wells, and stormwater) treated in the 2,000 gpm treatment system for 2014.

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 2014.

SES completed weekly sediment and erosion control inspections of the Vault and East Plant Area Cover System between January 27 and December 15, 2014, which recorded satisfactory conditions requiring no further action. Copies of the SES inspection forms are included in Appendix B.

As reported in the Annual Monitoring Report for the Calendar Year 2013, the Vault cover system was inspected on September 5, 2013 by Cardno JF New, to provide 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. Subsequently, a maintenance approach was developed and implemented for 2014, which included weed control, fertilizer application and re-seeding, if needed. Informal inspections were completed throughout 2014 and it was noted that the herbicide application was generally successful at removing the weeds and native vegetation continued to populate the cover system. Furthermore, the inspection did not reveal any significant erosion. No erosion or ponding issues were noted by GM, CRA, and SES personnel located on-Site through the year.

Due to the limited need for operation of the two Flygt MP3085.172 submersible pumps in the LCS sump, service of the pumps was not necessary in 2014. The need to service the pumps is judged on the ability of the pumps to maintain the water levels in the sump. The Grundfos 40S submersible pump in the GUS did not require service, which was 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 4 ft (664.18 ft AMSL and 666.18 ft AMSL, respectively).

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 April 17, 2014 by Turnkey Instrument Solutions. FIT-Vault achieved test results to show that the instrument is functioning correctly and is within +/- 1 percent 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 C.

3. Analytical Results

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

3.1 Groundwater Monitoring Analytical Results

Groundwater sampling specific to the TSCA Vault or the GUS did not occur in 2014, although bi-annual Environmental Indicator (EI) CA750 groundwater samples were collected for the Facility, including samples downgradient from this area. The recharge rate of the LDS did not significantly change or approach the TSCA theoretical Leakage Action Rate and there is no evidence of a release from the Vault to the groundwater table based on changes in elevations to the LCS, LDS, and GUS sumps. Groundwater samples are collected at the perimeter of the Facility on a semi-annual basis under the EI CA750 monitoring program for the Facility. EI CA750 groundwater monitoring results for 2014 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. In accordance with the response to comments on the PCP completed in 2014, sampling of the GUS will be completed concurrently with EI CA750 groundwater sampling in 2015.

The first semi-annual EI CA750 groundwater sampling in 2014 was completed May 13 through 16, 2014, and the second semi-annual sampling event was completed November 10 through 13, 2014.

Analytical results for PCBs in the first semi-annual sampling event of 2014 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 2014.

No PCB detections were proximate to the Vault. PCBS were detected at sampling location CH-42 (0.096 µg/L), MW-X085Y070S-2 (1.5 µg/L), MW-X227Y054 (5.9 µg/L) and Tributary 3-3 (non-detect and 0.067 µg/L on duplicate). The monitoring wells are located south of the Vault and not downgradient from it; Tributary 3-3 is a surface water monitoring location. CH-42, had previous detections in June 2013, March 2011 and October 2013. MW-X085Y070S-2 and Tributary 3-3 had previous detections in July 2012 and October 2013. MW-X227Y054 had previous detections in July 2012, June and October 2013. Detections at other well with previous recent detections (CH-44, MW-X047Y236, MW-X060Y304, MW–X277Y100, and MW-X315Y150) were not observed during this event. With the exception of the total PCBs result from MW-X085Y070S-2 and MW-X227Y054, the concentrations of total PCBs during this sampling event were below the Maximum Contaminant Level (MCL) of 0.5 µg/L.

At MW-X169Y058S-1, located in the southeast corner of the West Plant to the south of the Vault, between Area of Interest (AOI) 8 and the rail tracks, vinyl chloride was detected at a concentration of 4.2 µg/L, which is consistent with previous analytical results.

Analytical results for PCBs for the second semi-annual sampling event of 2014 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 2014. No PCB detections were proximate to the Vault.

There were PCBs detected at three sampling locations at the Facility, not near the Vault; CH-42 (0.0.08 J μg/L), MW-X085Y070S-2 (0.18 J μg/L), and MW-X227Y054 (5.5 μg/L). 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 0.3 μg/L.

During the second semi-annual sampling at MW-X169Y058S-1, vinyl chloride was detected at a concentration of 2.7 μg/L, which exhibits a decrease from the first semi-annual sampling period.

Sample Quality

One sample from the first half 2014 sampling event exhibited data quality problems and the results were rejected during sample validation. The sample collected from location MW-X043Y186 was rejected for Aroclor-1254 (PCB-1254) and Aroclor-1260 (PCB 1260) due to surrogate non-compliance. The laboratory spiked the sample with a non-target compound (decachlorobiphenyl was used) prior to extracting to ensure that the sample was extracted without issues, and that any PCBs would be detected (should any be present). The surrogate recovery of only 8 percent was considered extremely low and is outside of the acceptable quality bounds, so the results for the associated heavier aroclors, Aroclor-1254 (PCB-1254) and Aroclor-1260 (PCB-1260), were rejected.

Furthermore, a sample collected from GW-111114-JL-012 was rejected from the second half sampling event for Aroclor-1254 and Aroclor-1260 due to surrogate non-compliance. DCB was used to spike the sample; however a recovery rate of 9 percent was outside the recovery limits and led to sample rejection. This effect is 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. This is not an exceptional occurrence, and samples are routinely qualified for surrogate non - compliance. A memorandum discussing laboratory analyses data quality evaluation was submitted to U.S. EPA on January 22, 2015. Additional information on laboratory procedures were provided to U.S. EPA on April 25, 2015. Final U.S. EPA review of these issues is pending.

Sampling during the first half of 2014 the field duplicate at Tributary 3-3 had a detection of PCBs (0.067 J μg/L), while the original sample did not have a detection. The concentration observed and reported in the field duplicate is very low, and close to the laboratory method detection limit (MDL of 0.058 μg/L for the Total PCBs of this sample). The original sample chromatogram also showed a similar pattern as the field duplicate, however, the peaks were below the laboratory's method detection limit, and therefore non-detect. Therefore, the concentration of PCBs was detected at such a low concentration in one of the samples and the difference observed between the investigative and field duplicate samples was attributed to the inherent statistical differences with field duplicates. The chromatograms for both the sample and field duplicate, compared to Aroclor-1242, are included in Appendix A. Both chromatograms show similar patterns, but one is just slightly less concentrated than the other, leading one sample to be just over the MDL and the other just under the MDL. Reasons for trace concentrations could include possible cross contamination in the field or at the lab during sample preparation, which could show effects at such low levels. During the second semi-annual sampling period, both the initial sample and the field duplicate did not have detection and further sampling was not required.

The significantly low recoveries (<10 percent) of the surrogate DCB in a few of the samples appear to be due to insolubility coupled with factors associated with the sample matrix. If 10 percent or more of the surrogate cannot be extracted out of a sample, then there is insufficient confidence that any non detects reported for A
In such cases,
there is no recourse the lab can take to improve analytical quality and PCB results for these samples are not attainable using the technology available. The positive results for these samples are likely biased very low for this same reason and would be qualified as estimated. A memorandum discussing laboratory analyses data quality evaluation was submitted to U.S. EPA on January 22, 2015. Additional information on laboratory procedures were provided to U.S. EPA on April 25, 2015. Final U.S. EPA review of these issues is pending.

In conducting a closer review of the data, it was discovered that the DCB results in the samples may not have been an accurate reflection of how the Aroclors would have recovered from the sample matrices. This is explained in the following description:

> Two surrogates are spiked into a sample based on methodology presented in SW-846-8082, tetrachloro-m-xylene (TCMX) and DCB. TCMX is more volatile than any of the Aroclors being analyzed, while DCB is the heaviest PCB congener. A review of matrix spike/matrix spike duplicate samples with very low DCB recoveries (<10 percent) had TCMX recoveries that were acceptable and also had spike recoveries (Aroclor-1016 and 1260) that were acceptable as well. These results would indicate that the inhibiting interferences in the sample matrices affected the DCB recovery the most significantly and did not significantly affect the recovery of TCMX or either the lighter or heavier Aroclors for these samples. In these cases, the TCMX results should have been used to assess extraction efficiency for all aroclors and the low DCB surrogate recoveries should have been discounted.

If future samples are identified that have low DCB results and acceptable TCMX results, an aliquot of the sample can be spiked with Aroclors-1016 and 1260 to demonstrate that Aroclors can be successfully recovered from the sample and that the recovery issues are isolated to the surrogate DCB only.

To investigate potential factors affecting DCB recovery, Test America analyzed two samples with low DCB recoveries at their Pittsburgh laboratory facility and the DCB recoveries were significantly higher. A comparison of sample preparation techniques between the two laboratories showed a few differences, including that the samples were allowed to adjust to room temperature before spiking with the surrogates, surrogate spikes were prepared in acetone instead of hexane, and the surrogate was spiked at a considerably lower concentration at the Pittsburgh location. Based on the promising results observed with the first set of samples, future samples will be sent to the Pittsburgh facility and the surrogate results will be monitored to see if the Pittsburgh laboratory's procedures yield better results going forward.

Questions from U.S. EPA regarding laboratory's procedures and the interpretation of matrix interference for the 2nd Half 2014 results and other water samples at the Site remain under discussion with U.S. EPA. A final follow-up of the results of these discussions will be included in the 2015 Annual Monitoring Report.

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 2014. All analytical data for samples collected from the LCS and LDS in 2014 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 ≥ 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 2014.

Sampling results for the LCS sump ranged from 2.0 µg/L to non-detect for PCBs, which is essentially the same as the 1.8 µg/L peak exhibited in 2013. The peak in 2012 was 15.3 µg/L. The lower concentration peaks over the last two years likely highlight a trend towards the stabilization of PCB concentrations. This is likely the result of more consistent pump operations through 2014 and a decrease in contact time within the sump. There were also some very low, estimated detections of benzene at 0.13 µg/L and 0.25 µg/L during January and June 2014. Similar detections were also previously present during April, July and August in 2013.

Sampling results for the LDS sump ranged from 0.34 µg/L to non-detect for PCBs. The sampling results depict a significant decrease from the maximum PCB concentration of 13 µg/L in 2013. In particular, concentrations of 0.34 µg/L, 0.17 µg/L and 0.27 µg/L were the only recorded, positive PCB detections, which were sampled during July, August and September 2014. No sample was collected from the LDS sump in December 2014 as there was insufficient volume in the sump to collect a sample.

Sample Quality

There were no sample quality issues for the LCS and LDS sumps in 2014.

3.3 Underdrain Analytical Results

There were no samples collected from the GUS in 2014. 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 from those taken 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.

The East Plant Area Vault is located downgradient of Area of Interest 21 area 2 (AOI 21-2), a former fill area remediated as part of the West Plant Area Interim Measure (IM). Delineation of the fill in this area identified material that was impractical to remove due to proximity of the road (GM Drive) and 10-inch gas supply line (west of road) within the identified fill limits. As a result, and as

approved by U.S. EPA in the removal work plan for AOI 21-2, ≥50 mg/kg polychlorinated biphenyls (PCBs) fill material remains upgradient of the GUS west of GM Drive. Consequently, it is expected that water removed from the GUS sump may be impacted. Water pumped from the GUS is therefore treated at the on-Site water treatment plant (WTP). Further, portions of the East Plant Area Cover System surrounding the Vault, contain fill materials impacted by PCBs. Therefore the groundwater in the underdrain system is already contaminated and monitoring was not deemed a reliable way to check for changed conditions in the Vault.

Ultimately, the GUS sample would be expected to have low levels of PCBs, unrelated to the Vault. However, as per comments addressed by the U.S. EPA on the 2012 Annual Report, CRA has installed the equipment necessary to complete sampling of the GUS. As such, the GUS will be sampled during the bi-annual EI CA750 monitoring events in addition to downgradient monitoring well locations 9-4, CH-20 and CH-23 (Refer to comments regarding Post-Closure Plan for additional information).

With regards to operational measures, 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 to the stormwater pond for treatment at the 2,000 gpm treatment system starting mid-May 2013 for the remainder of the year until April 2014, as the Astrasand filter in the groundwater treatment system was down, waiting for parts on order to repair the system. Once Astrasand filter repairs were complete in April 2014, groundwater collecting in the sump was re-directed to the SSC WTP. 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 2014, water removed from the LCS and GUS was directed via permanent forcemain to the 2,000 gpm treatment system until mid-April, and then to treatment via the SSC WTP for the remainder of the year. Water removed in 2014 from the LDS was pumped via a temporary pump and temporary hoses to the LCS manhole. Following repair of the Astrasand filter, water removed from the Vault sumps was once again directed via permanent forcemain from the SSC WTP treatment system to the equalization tank (EQ tank) located south of the on-Facility SSC WTP. Here, the effluent is combined with water from three groundwater collection system wet wells prior to treatment in the WTP.

The on-Facility WTP is sampled monthly under the National Pollutant Discharge Elimination System (NPDES) permit (NPDES Permit No. IN0003573) to discharge at Outfall 003. Sampling results for the WWTP ranged from 0.45 µg/L (duplicate result 0.43 µg/L) to non-detect for PCBs and, in particular, detections were present during the February, March (two separate samples) and December sampling periods. It was noted that the maximum concentration of 0.45 µg/L was exhibited within the March 11, 2014, sample, but an additional sample obtained on March 25, 2014, exhibited a significant decrease to 0.13 µg/L and further reduction to non-detect on March 27, 2014 (both collected while the system discharged to the stormwater pond). Following the March 11 result, IDEM was notified of the result and from March 29 through April 1, 2014, GM expedited the change out of the carbon from the four stormwater treatment carbon vessels to ensure optimal performance of the treatment system. The system was not treating water at the time the 0.45 µg/L result was received. The system was left in stand-by mode and cycled water back into the stormwater pond

until the sampling results indicated the system was performing optimally again. Samples collected from the discharge on April 2, and April 3, 2014, were both non-detect for PCBs.

The analytical results for monthly samples collected from Outfall 003 in 2014 are presented in Table 3.5.

4. 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 ≥1 mg/L (ppm) PCBs for water samples collected from the LCS or LDS during the calendar year of 2014. All of the pumped leachate, leak detection liquid, and groundwater were treated by the on-Facility SSC WTP or 2,000 gpm treatment system.

5. 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 weekly basis throughout most of 2014, with the exception of a period from February 4 to February 27, 2014. During this period, all vault sump pumps were turned off due to cold weather and frozen discharge lines (see Table 2.4).

Throughout 2013, manual calculations were used to determine the volume removed from the LDS and LCS, which were based on sump volume calculations. In 2014, the previously utilized manual calculations were supplemented with flowmeter measurements to determine the accuracy of both methods and, subsequently, provide a basis for future monitoring procedures. Tables 2.1 and 2.2 present volumes based on both methods. Refer to Section 5.1 and 5.2 for further discussion regarding water levels in the LCS and LDS, respectively.

Accumulated water above the primary liner (i.e., in the LCS) and water 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 in the LCS sump, LDS sump, 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 (volume presented is the calculation method as used in prior years to allow for direct comparison).

There were periods in 2014 when the automated systems did not operate. During these periods, the elevations of the GUS, LDS and LCS did not coincide indicating no significant hydraulic connection between the systems.

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.

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). Manual water level measurements were collected generally on a weekly basis (in excess of the monthly monitoring required by the PCP). The automated system records the level and pumped quantities on a daily basis, however, the manual levels appear to be more reliable. It was noted throughout 2014, all LCS water elevations were maintained within the operating limits, with the elevation dropping below the lower limit following manual operation of the sump in February 2014. Augmented elevations, though still within allowable limits present in January and February 2014 and can be attributed to water accumulation allowed within the sump at the end of 2013.

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 PCP will be revised to reflect manual, direct pumping from the LDS to the forcemain and changes were made to the system to allow direct pumping to the forcemain to the treatment system. This work was initially completed in July 2014. However a check valve was installed backward, causing the LDS to continue to pump into the LCS sump through the end of 2014 and into the first half of 2015, because of issues scheduling confined space entry to repair the check valve. Pumping of the LDS has not been possible due to insufficient volume in the sump since December 2014. The check valve flow direction was corrected in May 26, 2015.

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 and early 2014 due to frozen lines. Manual water level measurements were collected weekly during this time and did not rise above 3 ft of water AFOS.

From March 1 to March 13, 2014 the automated pumping system was turned off to allow for general reprogramming of the controllers. However, the system remained off for an extended period from March 14 to March 28, 2014 due to an analytical result of the 2,000 gpm treatment system that exceeded NPDES discharge criteria. The system remained off until the issue could be addressed and the water was sent temporarily to the stormwater pond until treatment was back online. The 2,000 gpm treatment system was left in standby mode to perform testing of the treatment operations while effluent discharged back into the stormwater pond.

In addition, the LCS automated pumping system remained off from July 16 to August 1, 2014 due to a plugged intake line from the EQ tank and allow for installation of piping for direct pumping of the LDS to the forcemain (this was when the aforementioned check valve was installed in the wrong direction). On July 31, 2014 the plugged intake line in the EQ tank was resolved and the automated system returned to full operations on August 1 and for the remainder of 2014. The total amount of water removed in 2014 (approximately 700 gallons based on calculated levels removed, and 4,370 gallons based on flow meter readings) represents an increase from the amount pumped in 2013 (estimated 1,800 gallons), and is likely a result of pumping the water level below the normal operating threshold (approximately 2 inch depth) when the system was turned back on in April for testing.

5.2 Leak Detection System

Pumping at the LDS, via a temporary pump discharging to the LCS manhole, occurred on seven occasions in 2014 (March 17, May 27, July 24, August 26, September 23, October 29 and November 25). Pumping did not occur in January and February as the automated operations of the LCS was not functional. Pumping did not occur in December 2014 due to insufficient volume for pump removal of the sump.

The first two pumping events (March 17, 2014 and May 27, 2014) removed a total of 1.3 feet of water depth. That water removal constituted more than 50 percent of the total water pumped (2.2 feet) from the LDS for the remainder of the year. Using the change in water depth volume calculations, the total amount of water removed from the LDS during the 2014 calendar year was approximately 410 gallons, of which approximately 200 gallons were removed during the February 3 and March 17 pumping events. Based on the flow meter readings, approximately 750 gallons of accumulation were removed from the LDS. The large removal rates early in 2014 were due to the accumulation of water within the sump, as the pumps were turned off for seasonal restrictions. During the winter, the lay flat lines froze and the PLC remained off until the spring melt to protect the system from damage. The total amount of water removed in 2014 (approximately 410 gallons based on calculated levels removed, and 750 gallons based on flow meter readings) represents a significant decrease from the amount pumped in 2013 (estimated 1,800 gallons).

During 2014, the depth of water in the LDS was maintained between 0.12 ft and 1.44 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 1.44 ft AFOS measured in February 2014. Subsequently, measurements were taken over by CRA with the next measurement indicating a depth of just 1.04 without any pumping between measurements, with the difference in measurements attributed to human error.

In addition, an operational change was made at the LDS during 2014. It was identified that the cover to the manhole had been kept off the manhole for extended periods due to the ergonomic challenges of removing the conventional manhole cover and the piping that extends from the top. A light-weight aluminum cover with cutouts for the piping was installed in June 2014 and by December 2014 the volume of water in the LDS was too low to pump out (and remains so as of June 2015).

The pumping rate was determined using a flowmeter, which began its use during the last pumping event of 2013. The measured rate of pumping for the LDS ranged from 0.07 gallons/acre/day to 0.7 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 significantly lower than the theoretical rate.

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 maximum depth (i.e., pump turns on) has been reset to 4 ft (666.18 ft AMSL) to maintain a minimum distance of 15 inches between the upper operating range and the secondary liner.

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 layflat 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 stormwater 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 and into January 2014. Furthermore, treatment system issues related to the repair of the Astrasand filter in the SSC WTP, contributed to the extended restriction of pumping operations (Astrasand filter repairs resulted in the use of the 2,000 gpm treatment system and the use of layflat lines which then froze). All vault sump pumps were again turned off from February 14-28, 2014 to allow for frozen lines to thaw and to further assist with the re-programming of the automated system. In addition, the automated pumping system was turned off from March 14-28, 2014 in response to a receipt of analytical results, which exhibited an exceedance of NPDES permit discharge criteria. As discussed previously, an NPDES compliance monitoring sample for PCBs for the WTP exceeded criteria and all effluent was discharged to the stormwater Pond, until the issue could be fixed and the WTP could become operational again. The system required further repair from April 2 through 22, 2014 to allow for the replacement of activated carbon from four stormwater treatment vessels at the SSC WTP in response to the permit discharge criteria exceedence. The automated system became fully operational again on April 23, 2014 following further reprogramming and testing. The system required further maintenance and the automated system turned off from May 1-10, 2014. The SSC WTP was also not operational from July 16-30, 2014 due to a plugged intake line from the equalization tank (EQ). Consequently, the GUS automated pumping system remained off due to a hardware issue at the groundwater treatment plant. On July 31, 2014 the issue concerning the plugged intake line was resolved and the automated pumping system resumed operation without issue for the remainder of 2014.

The highest level of approximately 7.0 ft AFOS was recorded in April prior to the activation of the automated pumping system following the carbon changeout. 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 upward pressure on the secondary liner had no noted increase in accumulation in the LDS sump. The automated system recorded a total flow of 2.25 million gallons removed from the GUS in 2014, which, when compared to the approximate 1.0 million gallons removed in 2013, highlights a more consistent pumping schedule. The flow meter recorded a total of 2.26 million gallons removed from the GUS sump.

6. Issues Encountered and Remedial Actions

The following is a list of issues, related to the Vault, encountered during the 2014 calendar year and actions taken to rectify the issues:

- Flowmeters were utilized in 2014 to supplement the manual calculations used to determine the total amount of water pumped from the GUS, LCS and LDS to the SSC WTP.
  - The old method of predicting volumes removed was conducted by measuring the change in head within the sumps. These calculations were performed again on the 2014 data but the flow meters present a more precise result and will be used for year to year comparison moving forward (e.g., 2014 to 2015). In general, the flowmeter resulted in a higher volume of water removed when compared to the change in water column calculations for the LCS and LDS which has been reported in the past.
  - The automated flow readings at the LCS have been unreliable other than giving some indication as to when the system has been operational but false positives have also been observed. The total discharge measured by the automated system did not correlate with the manual reading at the flow meter and so only the manual readout has been used to gage the total pumped volume for the 2014 year and the automated data have been ignored. As predicted in the September 2014 Response to U.S. EPA comments on the Vault reports, the method of calculating the pumped volume by change in water elevation under predicted the removed volumes from the flow meter.
  - The flow meter used at the LDS is a portable meter and is installed during pumping activities.
  - The automated flow readings from the GUS generally correspond well with manual readings at the flow meter. However, the total for the year is slightly under-predicted by the automated system, thus the manual flow meter reading has been used for the annual total. The PLC recorded 2.25 million gallons compared to the flow meter record of 2.26 million gallons.
  - Discrepancies between the automated readouts have been attributed to interference in the communications signal between the sump and the controllers at the water treatment facility.
- On August 22, 2014 the GUS was tested to account for persistent calibration issues:
  - Following a series of ongoing pumping activities, it became evident that the level sensor in the GUS required calibration to account for differences in water levels recorded by the PLC and manual water level measurement.
  - To test for calibration issues, 125 gallons of water were removed from the GUS on the morning of August 22, 2014. Subsequently, at 8:10 AM an initial, manual depth to water level was calculated to be 72.51 feet below the top of the sump, with the water level at the PLC reading 44".
  - A second depth was obtained the same day (August 22, 2014) at 4:12 PM. In this instance, the manual depth to water level was 72.46 feet, while the water level at the PLC was noted as 45", which mirrored the water level obtained in the morning. With negligible inputs over 8 hours, it was concluded that a 13" off-set was indeed present and could be responsible for the prior elevation exceedances exhibited in previous sump logs.

- Utilizing the calculated offset of 13", the elevations were corrected by this amount in the automated system programing in September 2014 and will continue to be monitored through 2015.

- 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 stormwater pond. This did cause levels in the GUS to rise above the normal operating levels required in the Approvals.
- The groundwater treatment system repairs to the Astrasand filters were completed in April 2014 and the use of lay flat hose is not anticipated for winter (2014-2015). On March 11, 2014 a compliance monitoring sample was found to be in excess of the NPDES Permit discharge criteria of 0.3 µg/L, with a reported PCB concentration of 0.43 µg/L.
  - In conformance with GM's NPDES Permit IN0003573 monthly compliance, samples are collected from the effluent of the 2,000 gpm treatment system located adjacent to the stormwater pond.
  - All stormwater collected within the lagoon is treated. However, on March 14, the analytical laboratory notified GM that the result for compliance was in excess of the NPDES Permit discharge.
  - It was noted that the WTP was not in operation at the time of the receipt of the result and GM, subsequently, left the treatment system in stand-by mode and performed additional testing, which discharging effluent to the stormwater pond. Additional test results of effluent from this testing were less than the discharge criteria.
- Following a PCB detections of 0.43 µg/L on March 11, 2014, the 2,000 gpm treatment system was shutdown. GM expedited the change out of the carbon from the four stormwater treatment carbon vessels to ensure optimal performance of the treatment system from March 29 through April 1, 2014. Samples collected from the discharge on April 2, and April 3, 2014, were both non-detect for PCBs.
- During a routine check in May 2014, an apparent obstruction was discovered within the GUS. Upon further investigation, a partial collapse of the sump was noted using a video cable. CRA continues to monitor the GUS issue.
  - CRA regularly checks the GUS on the TSCA Vault site to confirm the correct water level elevations are recorded by the pressure transducer within the underdrain sump.
  - During one such investigation it was noted that an obstruction was present within the GUS and, subsequently, a video cable was lowered into the GUS on May 14, 2014 to assess the issue.
  - Video recordings found the GUS had partially collapsed at a depth of ~52 ft. The specific point in question is the area where the 36" diameter pipe is in contact with the 6" steel casing, which ultimately houses the GUS pump.
  - The GUS pump continued to work without any issues and the water level within the sump were properly maintained for the rest of 2014.

- CRA continues to monitor the structural integrity of the GUS, along with the associated water levels within the sump. To date, general maintenance activities have continued without issue. GM and GHD are continuing to evaluate solutions to this issue.

- Pumping of the LCS and LDS to the equalization tank remained unseparated through 2014 due to issues related to improper installation of a check valve and scheduling repairs with the contractor.
  - A piping connection was installed at the LCS in July 2014 to facilitate the direct pumping of water from the LDS manhole to the existing forcemain within the LCS manhole.
  - Due to a temporary failure of direct discharge from the LDS to the piping system (due to incorrect installation of a check valve), the water was directed into the LCS sump and then to the equalization tank.
  - The local contractor identified the check valve was installed in the opposite direction, which prevented flow from the LDS entering the piping. Scheduling issues for confined space entry tempered efforts to correct pumping until May 26, 2015.
  - Monthly pumping from the LDS manhole in 2014 continued to be discharged directly to the LCS manhole, and then pumped to the equalization tank, when sufficient water was present to prime the pump and be directed to the LCS sump. Approximately 78 gallons were pumped in July 2014 with reductions in flow each month thereafter, resulting in zero gallons pumped in December 2014 through June 2015 as there was not enough volume to prime the pump.

7. Spill Cleanup Reports

There were no on-Facility PCB spills that occurred in this quarter 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.

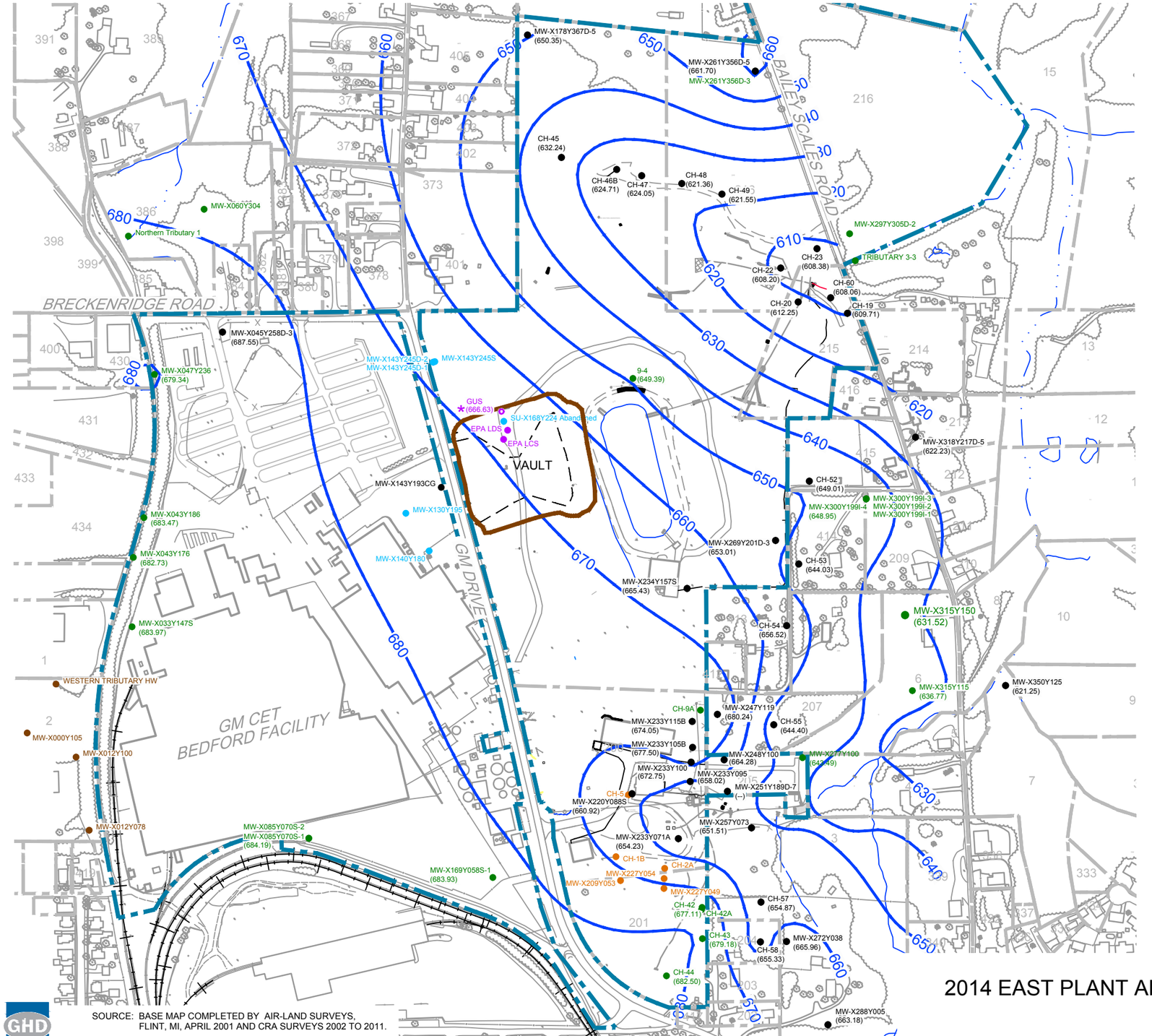
8. Financial Assurance

A 3008 (h) RCRA Administration Order on Consent for the facility was signed, effective August 4, 2014. A performance bond for approximately $7M was executed on August 18, 2014 to provide financial assurance to the Corrective Action tasks, including operation and maintenance related to the Vault, until the approval of the Corrective Measures Proposal (CMP), at which time costs to complete Corrective Action will be re-evaluated based on the requirements of the CMP. The Financial assurance is re-evaluated on an annual basis.

9. 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 FACILITY BOUNDARY
- VAULT FOOTPRINT
- 680 — GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (ft AMSL)
- (649.39) — GROUNDWATER ELEVATION (ft AMSL) (OCTOBER 29 TO 30, 2014)
- SUMP LOCATION
- GROUNDWATER LEVEL ON OCTOBER 27, 2014
- MONITORING WELL AND COREHOLE LOCATION
- HISTORICAL GROUNDWATER SAMPLE LOCATION PROXIMATE TO VAULT
- RACER TRUST LOCATION NOT SAMPLED, NO ACCESS
- LOCATION SAMPLED SEMI-ANNUALLY FOR PCBs UNDER EI CA750
- VAULT SUMP MONITORING WELL LOCATION
- EI CA750 MONITORING WELL LOCATION WITH NAPL SAMPLED PREVIOUSLY

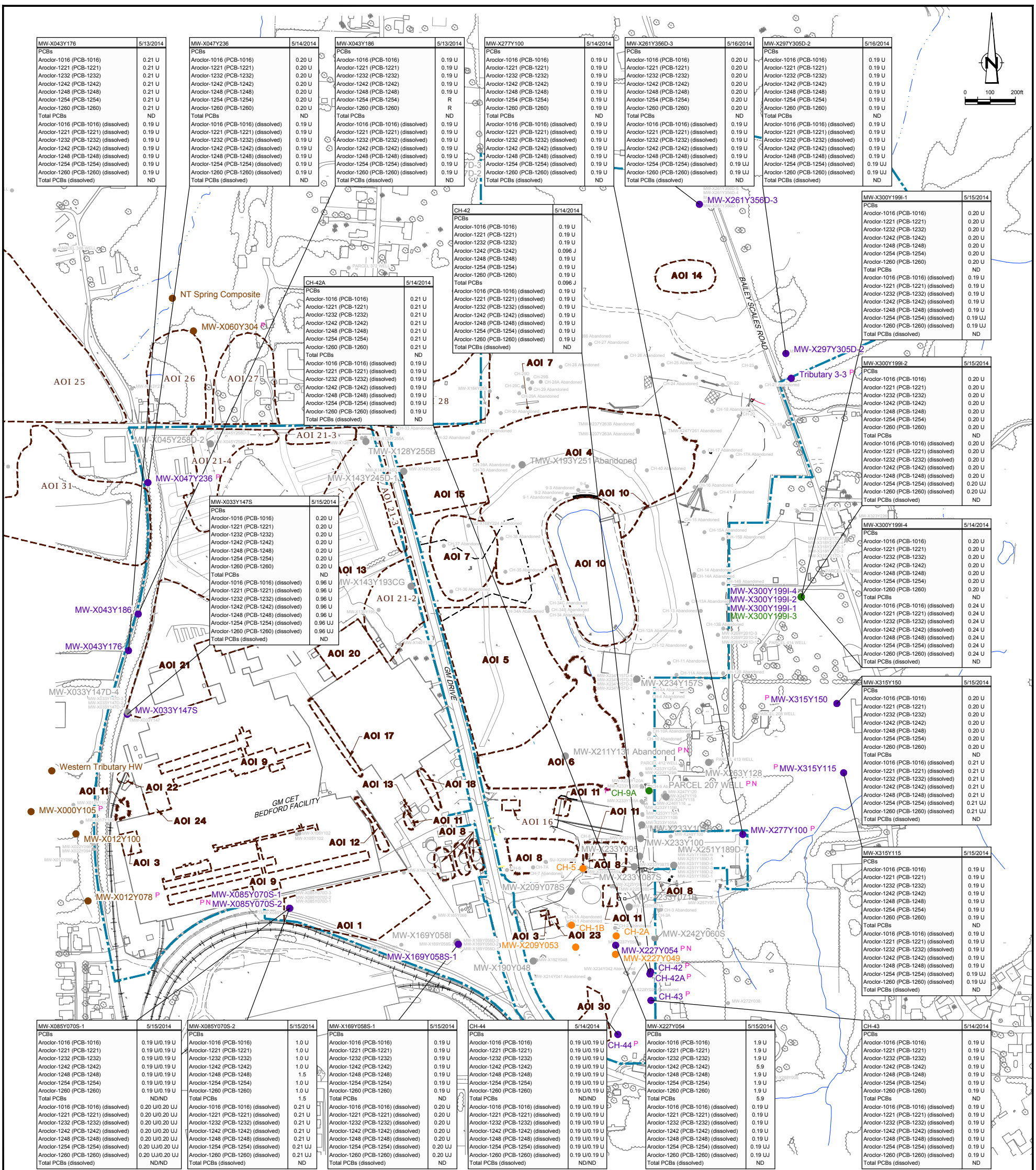
NOTES:

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.

SOURCE: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2011.

figure 2.1

GROUNDWATER SAMPLING LOCATIONS
2014 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
Bedford, Indiana



MW-X043Y176	5/13/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.21 U
Aroclor-1221 (PCB-1221)	0.21 U
Aroclor-1232 (PCB-1232)	0.21 U
Aroclor-1242 (PCB-1242)	0.21 U
Aroclor-1248 (PCB-1248)	0.21 U
Aroclor-1254 (PCB-1254)	0.21 U
Aroclor-1260 (PCB-1260)	0.21 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X047Y236	5/14/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X043Y186	5/13/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	R
Aroclor-1260 (PCB-1260)	R
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X277Y100	5/14/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X261Y356D-3	5/16/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 UJ
Aroclor-1260 (PCB-1260) (dissolved)	0.19 UJ
Total PCBs (dissolved)	ND

MW-X297Y305D-2	5/16/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1260 (PCB-1260)	0.20 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 UJ
Aroclor-1260 (PCB-1260) (dissolved)	0.19 UJ
Total PCBs (dissolved)	ND

CH-42	5/14/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1242 (PCB-1242)	0.096 J
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Total PCBs	0.096 J
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

CH-42A	5/14/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.21 U
Aroclor-1221 (PCB-1221)	0.21 U
Aroclor-1232 (PCB-1232)	0.21 U
Aroclor-1242 (PCB-1242)	0.21 U
Aroclor-1248 (PCB-1248)	0.21 U
Aroclor-1254 (PCB-1254)	0.21 U
Aroclor-1260 (PCB-1260)	0.21 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X300Y199I-1	5/15/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 UJ
Aroclor-1260 (PCB-1260) (dissolved)	0.19 UJ
Total PCBs (dissolved)	ND

MW-X300Y199I-2	5/15/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 UJ
Aroclor-1260 (PCB-1260) (dissolved)	0.20 UJ
Total PCBs (dissolved)	ND

MW-X033Y147S	5/15/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.96 U
Aroclor-1221 (PCB-1221) (dissolved)	0.96 U
Aroclor-1232 (PCB-1232) (dissolved)	0.96 U
Aroclor-1242 (PCB-1242) (dissolved)	0.96 U
Aroclor-1248 (PCB-1248) (dissolved)	0.96 U
Aroclor-1254 (PCB-1254) (dissolved)	0.96 UJ
Aroclor-1260 (PCB-1260) (dissolved)	0.96 UJ
Total PCBs (dissolved)	ND

MW-X315Y150	5/15/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.21 U
Aroclor-1221 (PCB-1221) (dissolved)	0.21 U
Aroclor-1232 (PCB-1232) (dissolved)	0.21 U
Aroclor-1242 (PCB-1242) (dissolved)	0.21 U
Aroclor-1248 (PCB-1248) (dissolved)	0.21 U
Aroclor-1254 (PCB-1254) (dissolved)	0.21 UJ
Aroclor-1260 (PCB-1260) (dissolved)	0.21 UJ
Total PCBs (dissolved)	ND

MW-X315Y115	5/15/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 UJ
Aroclor-1260 (PCB-1260) (dissolved)	0.19 UJ
Total PCBs (dissolved)	ND

MW-X085Y070S-1	5/15/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260)	0.19 U/0.19 U
Total PCBs	ND/ND
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U/0.20 UJ
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U/0.20 UJ
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U/0.20 UJ
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U/0.20 UJ
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U/0.20 UJ
Aroclor-1254 (PCB-1254) (dissolved)	0.20 UJ/0.20 UJ
Aroclor-1260 (PCB-1260) (dissolved)	0.20 UJ/0.20 UJ
Total PCBs (dissolved)	ND/ND

MW-X085Y070S-2	5/15/2014
PCBs	
Aroclor-1016 (PCB-1016)	1.0 U
Aroclor-1221 (PCB-1221)	1.0 U
Aroclor-1232 (PCB-1232)	1.0 U
Aroclor-1242 (PCB-1242)	1.0 U
Aroclor-1248 (PCB-1248)	1.5
Aroclor-1254 (PCB-1254)	1.0 U
Aroclor-1260 (PCB-1260)	1.0 U
Total PCBs	1.5
Aroclor-1016 (PCB-1016) (dissolved)	0.21 U
Aroclor-1221 (PCB-1221) (dissolved)	0.21 U
Aroclor-1232 (PCB-1232) (dissolved)	0.21 U
Aroclor-1242 (PCB-1242) (dissolved)	0.21 U
Aroclor-1248 (PCB-1248) (dissolved)	0.21 U
Aroclor-1254 (PCB-1254) (dissolved)	0.21 UJ
Aroclor-1260 (PCB-1260) (dissolved)	0.21 UJ
Total PCBs (dissolved)	ND

MW-X169Y058S-1	5/15/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 UJ
Aroclor-1260 (PCB-1260) (dissolved)	0.20 UJ
Total PCBs (dissolved)	ND

CH-44	5/14/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260)	0.19 U/0.19 U
Total PCBs	ND/ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U/0.19 U
Total PCBs (dissolved)	ND/ND

MW-X227Y054	5/15/2014
PCBs	
Aroclor-1016 (PCB-1016)	1.9 U
Aroclor-1221 (PCB-1221)	1.9 U
Aroclor-1232 (PCB-1232)	1.9 U
Aroclor-1242 (PCB-1242)	5.9
Aroclor-1248 (PCB-1248)	1.9 U
Aroclor-1254 (PCB-1254)	1.9 U
Aroclor-1260 (PCB-1260)	1.9 U
Total PCBs	5.9
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 UJ
Aroclor-1260 (PCB-1260) (dissolved)	0.19 UJ
Total PCBs (dissolved)	ND

CH-43	5/14/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

LEGEND

- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE SURFACE WATER LOCATION
- APPROXIMATE FACILITY BOUNDARY
- AOI BOUNDARY
- VAULT FOOTPRINT
- MW-X233Y095 — GROUNDWATER SAMPLE LOCATION
- GROUNDWATER SAMPLE LOCATION - HISTORICAL PCB DETECTION
- MAY 2014 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

MW-X033Y147S	5/15/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U

SAMPLE LOCATION IDENTIFIER; DATE SAMPLE TAKEN; CONCENTRATION IN MICROGRAMS PER LITER; CHEMICAL NAME

- 0.20 U/0.20 U — PARENT SAMPLE RESULT/DUPLICATE SAMPLE RESULT
- J — ESTIMATED CONCENTRATION
- ND — NOT DETECTED
- (np) — ZERO PURGE SAMPLE
- U — NOT PRESENT AT OR ABOVE THE ASSOCIATED VALUE
- UJ — ESTIMATED REPORTING LIMIT

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..

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

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 39
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

2014 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT

EI CA750 GROUNDWATER ANALYTICAL RESULTS FOR PCBS FOR FIRST SEMI-ANNUAL EVENT OF 2014

GHD

Source Reference: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT MI. APRIL 2001 AND CRA SURVEYS 2002 TO 2011.

Project Manager:	Reviewed By:	Date:	
J.M.	P.G.	JULY 2015	
Scale: AS SHOWN	Project Nº: 13968-00	Report Nº: 386	Drawing Nº: figure 3.1

13968-00(386)GN-WA002 JUL 15/2015

MW-X043Y176	11/11/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 UJ
Aroclor-1221 (PCB-1221)	0.19 UJ
Aroclor-1232 (PCB-1232)	0.19 UJ
Aroclor-1242 (PCB-1242)	0.19 UJ
Aroclor-1248 (PCB-1248)	0.19 UJ
Aroclor-1254 (PCB-1254)	0.19 UJ
Aroclor-1260 (PCB-1260)	0.19 UJ
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs (dissolved)	ND

MW-X047Y236	11/12/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X043Y186	11/11/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 UJ
Aroclor-1221 (PCB-1221)	0.19 UJ
Aroclor-1232 (PCB-1232)	0.19 UJ
Aroclor-1242 (PCB-1242)	0.19 UJ
Aroclor-1248 (PCB-1248)	0.19 UJ
Aroclor-1254 (PCB-1254)	R
Aroclor-1260 (PCB-1260)	R
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X277Y100	11/13/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X261Y356D-3	11/12/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U/0.20 U
Aroclor-1221 (PCB-1221)	0.19 U/0.20 U
Aroclor-1232 (PCB-1232)	0.19 U/0.20 U
Aroclor-1242 (PCB-1242)	0.19 U/0.20 U
Aroclor-1248 (PCB-1248)	0.20 U/0.19 U
Aroclor-1254 (PCB-1254)	0.19 U/0.20 U
Aroclor-1260 (PCB-1260)	0.19 U/0.20 U
Total PCBs	ND/ND
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U/0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U/0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U/0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U/0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U/0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U/0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U/0.20 U
Total PCBs (dissolved)	ND/ND

MW-X297Y305D-2	11/13/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

CH-42	11/10/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 UJ
Aroclor-1221 (PCB-1221)	0.19 UJ
Aroclor-1232 (PCB-1232)	0.19 UJ
Aroclor-1242 (PCB-1242)	0.080 J
Aroclor-1248 (PCB-1248)	0.19 UJ
Aroclor-1254 (PCB-1254)	0.19 UJ
Aroclor-1260 (PCB-1260)	0.19 UJ
Total PCBs	0.08 J
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X300Y199I-1	11/11/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 UJ
Aroclor-1221 (PCB-1221)	0.19 UJ
Aroclor-1232 (PCB-1232)	0.19 UJ
Aroclor-1242 (PCB-1242)	0.19 UJ
Aroclor-1248 (PCB-1248)	0.19 UJ
Aroclor-1254 (PCB-1254)	0.19 UJ
Aroclor-1260 (PCB-1260)	0.19 UJ
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

9-4	12/11/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1242 (PCB-1242)	0.089 J
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Total PCBs	0.089 J
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs (dissolved)	ND

CH-42A	11/10/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 UJ
Aroclor-1221 (PCB-1221)	0.19 UJ
Aroclor-1232 (PCB-1232)	0.19 UJ
Aroclor-1242 (PCB-1242)	0.19 UJ
Aroclor-1248 (PCB-1248)	0.19 UJ
Aroclor-1254 (PCB-1254)	0.19 UJ
Aroclor-1260 (PCB-1260)	0.19 UJ
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X033Y147S	11/12/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X300Y199I-4	11/11/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.21 UJ
Aroclor-1221 (PCB-1221)	0.21 UJ
Aroclor-1232 (PCB-1232)	0.21 UJ
Aroclor-1242 (PCB-1242)	0.21 UJ
Aroclor-1248 (PCB-1248)	0.21 UJ
Aroclor-1254 (PCB-1254)	0.21 UJ
Aroclor-1260 (PCB-1260)	0.21 UJ
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.21 U
Aroclor-1221 (PCB-1221) (dissolved)	0.21 U
Aroclor-1232 (PCB-1232) (dissolved)	0.21 U
Aroclor-1242 (PCB-1242) (dissolved)	0.21 U
Aroclor-1248 (PCB-1248) (dissolved)	0.21 U
Aroclor-1254 (PCB-1254) (dissolved)	0.21 U
Aroclor-1260 (PCB-1260) (dissolved)	0.21 U
Total PCBs (dissolved)	ND

MW-X315Y150	11/11/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 UJ
Aroclor-1221 (PCB-1221)	0.19 UJ
Aroclor-1232 (PCB-1232)	0.19 UJ
Aroclor-1242 (PCB-1242)	0.19 UJ
Aroclor-1248 (PCB-1248)	0.19 UJ
Aroclor-1254 (PCB-1254)	0.19 UJ
Aroclor-1260 (PCB-1260)	0.19 UJ
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs (dissolved)	ND

MW-X315Y115	11/11/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 UJ
Aroclor-1221 (PCB-1221)	0.19 UJ
Aroclor-1232 (PCB-1232)	0.19 UJ
Aroclor-1242 (PCB-1242)	0.19 UJ
Aroclor-1248 (PCB-1248)	0.19 UJ
Aroclor-1254 (PCB-1254)	0.19 UJ
Aroclor-1260 (PCB-1260)	0.19 UJ
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs (dissolved)	ND

MW-X085Y070S-1	11/12/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X085Y070S-2	11/12/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.21 U
Aroclor-1221 (PCB-1221)	0.21 U
Aroclor-1232 (PCB-1232)	0.21 U
Aroclor-1242 (PCB-1242)	0.21 U
Aroclor-1248 (PCB-1248)	0.18 J
Aroclor-1254 (PCB-1254)	0.21 U
Aroclor-1260 (PCB-1260)	0.21 U
Total PCBs	0.18 J
Aroclor-1016 (PCB-1016) (dissolved)	0.21 U
Aroclor-1221 (PCB-1221) (dissolved)	0.21 U
Aroclor-1232 (PCB-1232) (dissolved)	0.21 U
Aroclor-1242 (PCB-1242) (dissolved)	0.21 U
Aroclor-1248 (PCB-1248) (dissolved)	0.21 U
Aroclor-1254 (PCB-1254) (dissolved)	0.21 U
Aroclor-1260 (PCB-1260) (dissolved)	0.21 U
Total PCBs (dissolved)	ND

MW-X169Y058S-1	11/12/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

MW-X227Y054	11/12/2014
PCBs	
Aroclor-1016 (PCB-1016)	1.9 U
Aroclor-1221 (PCB-1221)	1.9 U
Aroclor-1232 (PCB-1232)	1.9 U
Aroclor-1242 (PCB-1242)	5.5 J
Aroclor-1248 (PCB-1248)	1.9 U
Aroclor-1254 (PCB-1254)	1.9 U
Aroclor-1260 (PCB-1260)	1.9 U
Total PCBs	5.5 J
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

CH-44	11/10/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.20 UJ/0.19 UJ
Aroclor-1221 (PCB-1221)	0.19 UJ/0.20 UJ
Aroclor-1232 (PCB-1232)	0.20 UJ/0.19 UJ
Aroclor-1242 (PCB-1242)	0.20 UJ/0.19 UJ
Aroclor-1248 (PCB-1248)	0.19 UJ/0.20 UJ
Aroclor-1254 (PCB-1254)	0.19 UJ/0.20 UJ
Aroclor-1260 (PCB-1260)	0.20 UJ/0.19 UJ
Total PCBs	ND/ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U/0.19 U
Total PCBs (dissolved)	ND/ND

CH-43	11/10/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.19 UJ
Aroclor-1221 (PCB-1221)	0.19 UJ
Aroclor-1232 (PCB-1232)	0.19 UJ
Aroclor-1242 (PCB-1242)	0.19 UJ
Aroclor-1248 (PCB-1248)	0.19 UJ
Aroclor-1254 (PCB-1254)	0.19 UJ
Aroclor-1260 (PCB-1260)	0.19 UJ
Total PCBs	ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs (dissolved)	ND

LEGEND

- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE SURFACE WATER LOCATION
- APPROXIMATE FACILITY BOUNDARY
- AOI BOUNDARY
- VAULT FOOTPRINT
- MW-X233Y095 — GROUNDWATER SAMPLE LOCATION
- GROUNDWATER SAMPLE LOCATION - HISTORICAL PCB DETECTION
- NOVEMBER/DECEMBER 2014 EI CA750 SAMPLING SUMMARY LOCATION
- RACER TRUST LOCATION NOT SAMPLED, NO ACCESS
- MONITORING WELL LOCATION WITH NAPL SAMPLED PREVIOUSLY
- MONITORING WELL LOCATION DRY OR HAS INSIGNIFICANT VOLUME FOR SAMPLING

P — PREVIOUS PCB GROUNDWATER DETECTION

N — HISTORICAL NAPL DETECTION

MW-X033Y147S	11/12/2014
PCBs	
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U

SAMPLE LOCATION IDENTIFIER; DATE SAMPLE TAKEN; CONCENTRATION IN MICROGRAMS PER LITER; CHEMICAL NAME

0.20 U/0.20 U	PARENT SAMPLE RESULT/DUPLICATE SAMPLE RESULT
J	ESTIMATED CONCENTRATION
ND	NOT DETECTED
(np)	ZERO PURGE SAMPLE
R	REJECTED
U	NOT PRESENT AT OR ABOVE THE ASSOCIATED VALUE
UJ	ESTIMATED REPORTING LIMIT

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.

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

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 39
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

2014 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT

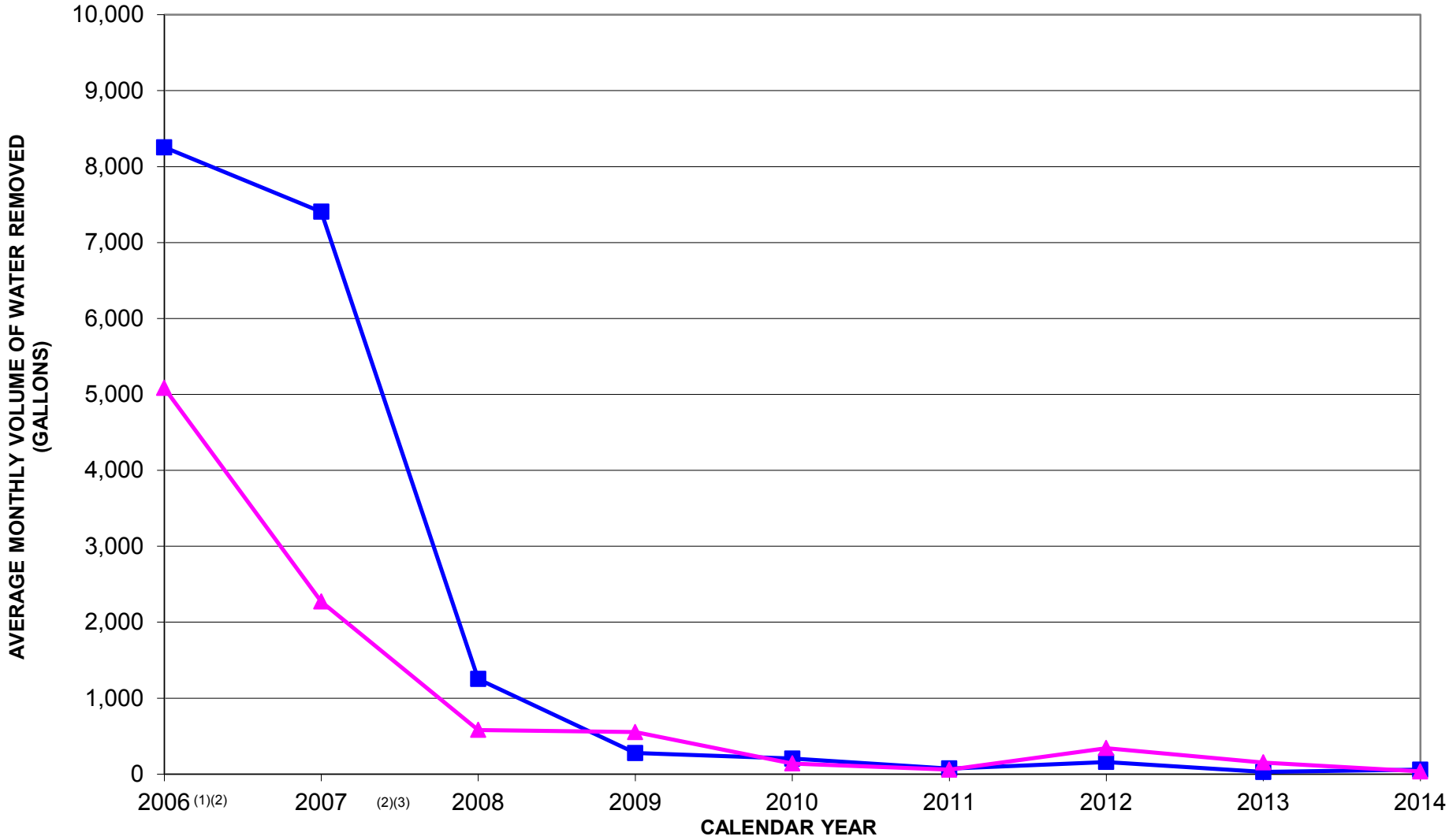
EI CA750 GROUNDWATER ANALYTICAL RESULTS FOR PCBS FOR SECOND SEMI-ANNUAL EVENT OF 2014

GHD

Source Reference: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT MI. APRIL 2001 AND CRA SURVEYS 2002 TO 2011.

Project Manager:	Reviewed By:	Date:	
J.M.	P.G.	JULY 2015	
Scale: AS SHOWN	Project Nº: 13968-00	Report Nº: 386	Drawing Nº: figure 3.2

13968-00(386)GN-WA003 JUL 15/2015



LEGEND

- eachate Collection System
- eak 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
2014 EAST PLANT AREA VAULT ANNUAL MONITORING REPORT
GM CET BEDFORD FACILITY
Bedford, Indiana

Table 2.1

Sump Monitoring Log - LCS
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

LEACHATE COLLECTION SYSTEM

DATE	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER DEPTH (feet AFOS)	WATER REMOVED (feet)	VOLUME REMOVED[e] (gallons)	MANUAL WATER LEVEL CONVERTED TO ELEVATION (ft AMSL)	PLC WATER LEVEL			WATER REMOVED			COMMENTS
							WATER LEVEL @ PLC [d] (inches)	CONVERTED TO ELEVATION [d] (ft AMSL)	EQUIVALENT DEPTH OVER PRIMARY LINER (inches)	QUANTITY PUMPED @ PLC (gallons removed)	LOCAL FLOW METER READING [c][f] (gallons removed)	BASED ON FLOW METER[f] (gallons)	
12/31/13	--	--	--	--	--	--	--	--	--	--	--	--	*7 gallons = Sump accumulation accounted for in 2013 that had not been pumped prior to 2014 new year*
1/1/14	--	--	--	--	--	--	32	673.67	0.476	0	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/2/14	--	--	--	--	--	--	36	674.00	0.629	0	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/3/14	--	--	--	--	--	--	36	674.00	0.629	0	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/4/14	--	--	--	--	--	--	38	674.17	0.629	0	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/5/14	--	--	--	--	--	--	38	674.17	0.629	0	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/6/14	--	--	--	--	--	--	36	674.00	0.629	0	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/7/14	10:00	67.60 [a]	2.23	--	--	673.2	36	674.00	0.629	0	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/8/14	--	--	--	--	--	--	36	674.00	0.629	0	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/9/14	--	--	--	--	--	--	37	674.08	0.629	0	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/10/14	--	--	--	--	--	--	38	674.17	0.629	0	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/11/14	--	--	--	--	--	--	38	674.17	0.629	0	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/12/14	--	--	--	--	--	--	38	674.17	0.629	0	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/13/14	9:00	67.40 [a]	2.43	--	--	673.4	38	674.17	0.629	0	--	--	PLC remaining off due to cold weather and difficulty with water line and treatment system
1/14/14	--	--	--	--	--	--	37	674.08	0.629	0	--	--	Automated pumping system turned on.
1/15/14	--	--	--	--	--	--	37	674.08	0.629	0	--	--	
1/16/14	--	--	--	--	--	--	37	674.08	0.629	0	--	--	
1/17/14	--	--	--	--	--	--	37	674.08	0.629	0	--	--	
1/18/14	--	--	--	--	--	--	39	674.25	0.629	0	--	--	
1/19/14	--	--	--	--	--	--	39	674.25	0.629	0	--	--	
1/20/14	9:00	67.50 [a]	2.33	--	--	673.3	39	674.25	0.629	0	--	--	[b]
1/21/14	--	--	--	--	--	--	39	674.25	0.629	0	--	--	Automated pumping system turned off due to extreme cold (resulting in frozen layflat lines).
1/22/14	--	--	--	--	--	--	39	674.25	0.629	0	--	--	Automated pumping system turned off due to extreme cold (resulting in frozen layflat lines).
1/23/14	--	--	--	--	--	--	39	674.25	0.629	0	--	--	Automated pumping system turned off due to extreme cold (resulting in frozen layflat lines).
1/24/14	--	--	--	--	--	--	40	674.33	0.629	0	--	--	Automated pumping system turned off due to extreme cold (resulting in frozen layflat lines).
1/25/14	--	--	--	--	--	--	40	674.33	0.629	0	--	--	Automated pumping system turned off due to extreme cold (resulting in frozen layflat lines).
1/26/14	--	--	--	--	--	--	39	674.25	0.629	0	--	--	Automated pumping system turned on.
1/27/14	11:00	67.60 [a]	2.23	--	--	673.2	38	674.17	0.629	0	--	--	[b]
1/28/14	--	--	--	--	--	--	38	674.17	0.629	0	--	--	
1/29/14	--	--	--	--	--	--	38	674.17	0.629	0	--	--	
1/30/14	--	--	--	--	--	--	38	674.17	0.629	0	--	--	
1/31/14	--	--	--	--	--	--	--	--	--	0	--	--	
2/1/14	--	--	--	--	--	--	38	674.17	0.629	0	--	--	
2/2/14	--	--	--	--	--	--	39	674.25	0.629	0	--	--	
2/3/14	8:00	67.40 [a]	2.43	2.30	486.50	673.4	--	--	--	0	--	486	System shut down for reprogramming due to transducer problems.
2/4/14	--	--	--	--	--	--	--	--	--	0	--	--	
2/5/14	--	--	--	--	--	--	--	--	--	0	--	--	
2/6/14	--	--	--	--	--	--	117	680.75	0.808	0	--	--	Manual pumping performed by CRA; however, volume removed was not recorded.
2/7/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	
2/8/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	
2/9/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	
2/10/14	--	--	--	--	--	--	10	671.83	0.090	15	--	--	Automated pumping system on and CRA performing testing pumps in manual mode.
2/11/14	--	--	--	--	--	--	10	671.83	0.090	5	--	--	Automated pumping system on and CRA performing testing pumps in manual mode.
2/12/14	--	--	--	--	--	--	10	671.83	0.090	25	--	--	Automated pumping system on and CRA performing testing pumps in manual mode.
2/13/14	--	--	--	--	--	--	10	671.83	0.090	135	--	--	Automated pumping system on and CRA performing testing pumps in manual mode.
2/14/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/15/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/16/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/17/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/18/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/19/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/20/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/21/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/22/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/23/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/24/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/25/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/26/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/27/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/28/14	10:00	69.70 [a]	0.13	--	--	671.1	11	671.92	0.090	0	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
3/1/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow for reprogramming.
3/2/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow for reprogramming.
3/3/14	15:00	69.6	0.23	--	--	671.2	--	--	0.037	0	--	--	Automated pumping system off to allow for reprogramming.
3/4/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow for reprogramming.
3/5/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow for reprogramming.
3/6/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow for reprogramming.
3/7/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow for reprogramming.
3/8/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow for reprogramming.
3/9/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow for reprogramming.
3/10/14	9:30	69.6	0.23	--	--	671.2	--	--	0.037	0	--	--	Automated pumping system off to allow for reprogramming.
3/11/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow for reprogramming.
3/12/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow for reprogramming.
3/13/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow for reprogramming.
3/14/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/15/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.

Table 2.1

Sump Monitoring Log - LCS
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

LEACHATE COLLECTION SYSTEM

DATE	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER DEPTH (feet AFOS)	WATER REMOVED (feet)	VOLUME REMOVED[e] (gallons)	MANUAL WATER LEVEL CONVERTED TO ELEVATION (ft AMSL)	PLC WATER LEVEL WATER LEVEL @ PLC [d] (inches)	PLC WATER LEVEL CONVERTED TO ELEVATION [d] (ft AMSL)	PLC WATER LEVEL EQUIVALENT DEPTH OVER PRIMARY LINER (inches)	WATER REMOVED QUANTITY PUMPED @ PLC (gallons removed)	WATER REMOVED LOCAL FLOW METER READING [c][f] (gallons removed)	WATER REMOVED BASED ON FLOW METER[f] (gallons)	COMMENTS
3/16/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/17/14	13:30	70.5	-0.67	--	--	670.3	--	--	0.000	0	--	--	[b] Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond. 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 3/10/14 and 3/18/14.
3/18/14	9:46	69.1	0.71	0.69	145.95	671.7	--	--	0.090	500	--	146	Automated pumping system on and CRA performing testing pumps in manual mode (included in the 500 gallons removed is 302 gallons of water received from the LDS).
3/19/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/20/14	--	--	--	--	--	--	13	672.08	0.159	2005	--	--	Automated pumping system on and CRA performing testing pumps in manual mode.
3/21/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/22/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/23/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/24/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/25/14	14:46	69.8	0.02	--	--	671.0	--	--	0.037	0	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/26/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/27/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/28/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/29/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow change out of the carbon from the four storm water treatment vessels at the WTP.
3/30/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow change out of the carbon from the four storm water treatment vessels at the WTP.
3/31/14	--	--	--	--	--	--	--	--	--	0	--	--	Automated pumping system off to allow change out of the carbon from the four storm water treatment vessels at the WTP.
4/1/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system off to allow change out of the carbon from the four storm water treatment vessels at the WTP.
4/2/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/3/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/4/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/5/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/6/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/7/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/8/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/9/14	13:50	69.7	0.14	--	--	671.1	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/10/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/11/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/12/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/13/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/14/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/15/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/16/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/17/14	14:22	69.6	0.27	--	--	671.3	9	671.75	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/18/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/19/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/20/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/21/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/22/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/23/14	9:43	69.6	0.24	0.17	35.96	671.2	11	671.92	0.090	45	130,896	36	Automated pumping system turned on and CRA performing testing pumps in manual mode.
4/24/14	--	69.6	0.23	--	--	671.2	7	671.58	0.090	2800	--	--	Automated pumping system turned on and CRA performing testing pumps in manual mode.
4/25/14	--	--	--	--	--	--	8	671.67	0.090	1800	--	--	Automated pumping system turned on and CRA performing testing pumps in manual mode.
4/26/14	--	--	--	--	--	--	8	671.67	0.090	50	--	--	Automated pumping system turned on and CRA performing testing pumps in manual mode.
4/27/14	--	--	--	--	--	--	8	671.67	0.090	5	--	--	Automated pumping system turned on and CRA performing testing pumps in manual mode.
4/28/14	--	--	--	--	--	--	8	671.67	0.090	5	--	--	Automated pumping system turned on and CRA performing testing pumps in manual mode.
4/29/14	15:03	69.8	0.07	--	--	671.1	9	671.75	0.090	5	--	--	Automated pumping system turned on and CRA performing testing pumps in manual mode.
4/30/14	--	--	--	--	--	--	9	671.75	0.090	5	--	--	Automated pumping system turned on and CRA performing testing pumps in manual mode.
5/1/14	--	--	--	--	--	--	9	671.75	0.090	5	--	--	Automated pumping system turned off.
5/2/14	--	--	--	--	--	--	9	671.75	0.090	5	--	--	Automated pumping system turned off.
5/3/14	--	--	--	--	--	--	9	671.75	0.090	5	--	--	Automated pumping system turned off.
5/4/14	--	--	--	--	--	--	9	671.75	0.090	5	--	--	Automated pumping system turned off.
5/5/14	--	--	--	--	--	--	9	671.75	0.090	5	--	--	Automated pumping system turned off.
5/6/14	15:46	69.71	0.12	--	--	671.1	9	671.75	0.090	0	134,408	3,512	Automated pumping system turned off.
5/7/14	--	--	--	--	--	--	9	671.75	0.090	5	--	--	Automated pumping system turned off.
5/8/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system turned off.
5/9/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	Automated pumping system turned off.
5/10/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system turned off.
5/11/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system turned on.
5/12/14	--	--	--	--	--	--	9	671.75	0.090	0	--	--	Automated pumping system turned on.
5/13/14	13:24	69.71	0.12	--	--	671.1	10	671.83	0.090	0	134,408	0	Automated pumping system turned on.
5/14/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	Automated pumping system turned on.
5/15/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	Automated pumping system turned on.
5/16/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	Automated pumping system turned on.
5/17/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	Automated pumping system turned on.
5/18/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	Automated pumping system turned on.
5/19/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	Automated pumping system turned on.

Table 2.1

Sump Monitoring Log - LCS
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

LEACHATE COLLECTION SYSTEM

DATE	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER DEPTH (feet AFOS)	WATER REMOVED (feet)	VOLUME REMOVED[e] (gallons)	MANUAL WATER LEVEL CONVERTED TO ELEVATION (ft AMSL)	PLC WATER LEVEL			WATER REMOVED			COMMENTS
							WATER LEVEL @ PLC [d] (inches)	CONVERTED TO ELEVATION [d] (ft AMSL)	EQUIVALENT DEPTH OVER PRIMARY LINER (inches)	QUANTITY PUMPED @ PLC (gallons removed)	LOCAL FLOW METER READING [c][f] (gallons removed)	BASED ON FLOW METER[f] (gallons)	
5/20/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	Automated pumping system turned on.
5/21/14	--	--	--	--	--	--	10	671.83	0.090	0	134,408	0	Automated pumping system turned on.
5/22/14	15:25	69.64	0.19	--	--	671.2	10	671.83	0.090	0	--	--	Automated pumping system turned on.
5/23/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	Automated pumping system turned on.
5/24/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	Automated pumping system turned on.
5/25/14	--	--	--	--	--	--	10	671.83	0.090	0	--	--	Automated pumping system turned on.
5/26/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	Automated pumping system turned on.
5/27/14	9:00	69.6	0.23	--	--	671.2	11	671.92	0.090	345	--	--	Automated pumping system turned on. CRA sampled. Received water from LDS (1,097 gallons). Assume that the 345 gallons of water removed from the LCS sump was a portion of the water received from the LDS pumping, therefore, 752 gallons of water received from the LDS were not removed from the LCS sump.
5/28/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	Automated pumping system turned on.
5/29/14	--	--	--	--	--	--	11	671.92	0.090	100	--	--	Automated pumping system turned on.
5/30/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	Automated pumping system turned on.
5/31/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	Automated pumping system turned on.
6/1/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	
6/2/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	
6/3/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	
6/4/14	--	--	--	--	--	--	11	671.92	0.090	0	--	--	
6/5/14	12:51	69.51	0.32	--	--	671.3	11	671.92	0.090	436	134,844	436	The 445 gallons removed as recorded by the PLC, 436 gallons removed as recorded by the local flow meter.
6/6/14	--	--	--	--	--	--	12	672.00	0.159	0	--	--	
6/7/14	--	--	--	--	--	--		671.00	0.037	0	--	--	
6/8/14	--	--	--	--	--	--		671.00	0.037	0	--	--	
6/9/14	--	--	--	--	--	--		671.00	0.037	0	--	--	
6/10/14	13:28	69.47	0.36	--	--	671.4	12	672.00	0.159	0	134,844	0	
6/11/14	--	--	--	--	--	--	12	672.00	0.159	0	--	--	
6/12/14	--	--	--	--	--	--	12	672.00	0.159	0	--	--	
6/13/14	--	--	--	--	--	--	12	672.00	0.159	0	--	--	
6/14/14	--	--	--	--	--	--	12	672.00	0.159	0	--	--	
6/15/14	--	--	--	--	--	--	12	672.00	0.159	0	--	--	
6/16/14	--	--	--	--	--	--	12	672.00	0.159	0	--	--	
6/17/14	14:10	69.42	0.41	--	--	671.4	12	672.00	0.159	0	134,844	0	
6/18/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	
6/19/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	
6/20/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	
6/21/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	
6/22/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	
6/23/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	
6/24/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	CRA sampled.
6/25/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	
6/26/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	
6/27/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	
6/28/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	
6/29/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	
6/30/14	--	--	--	--	--	--	13	672.08	0.159	0	--	--	
7/1/14	9:06	69.39	0.44	--	--	671.4	14	672.17	0.159	0	134,844	--	
7/2/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/3/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/4/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/5/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/6/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/7/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/8/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/9/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/10/14	13:01	69.36	0.47	--	--	671.5	14	672.17	0.159	0	134,844	0	
7/11/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/12/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/13/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/14/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/15/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	
7/16/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. A connection to the LCS pipe was made to connect the temporary hose from the LDS pump directly into the discharge pipe in the LCS running to the EQ tank, eliminating the need to run the LCS pumps when water is pumped from the LDS sump.
7/17/14	--	--	--	--	--	--	14	672.17	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. The LCS automated pumping system was turned off due to problems at the groundwater treatment plant. A connection to the LCS pipe was made to connect the temporary hose from the LDS pump directly into the discharge pipe in the LCS running to the EQ tank, eliminating the need to run the LCS pumps.
7/18/14	--	--	--	--	--	--	15	672.25	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/19/14	--	--	--	--	--	--	15	672.25	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/20/14	--	--	--	--	--	--	15	672.25	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/21/14	7:41	69.19	0.64	--	--	671.6	15	672.25	0.159	0	134,844	0	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/22/14	--	--	--	--	--	--	15	672.25	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/23/14	--	--	--	--	--	--	15	672.25	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/24/14	11:16	69.19	0.64	--	--	671.6	15	672.25	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant. CRA sampled.

Table 2.1

Sump Monitoring Log - LCS
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

LEACHATE COLLECTION SYSTEM

DATE	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER DEPTH (feet AFOS)	WATER REMOVED (feet)	VOLUME REMOVED[e] (gallons)	MANUAL WATER LEVEL CONVERTED TO ELEVATION (ft AMSL)	PLC WATER LEVEL WATER LEVEL @ PLC [d] (inches)	PLC WATER LEVEL CONVERTED TO ELEVATION [d] (ft AMSL)	PLC WATER LEVEL EQUIVALENT DEPTH OVER PRIMARY LINER (inches)	WATER REMOVED QUANTITY PUMPED @ PLC (gallons removed)	WATER REMOVED LOCAL FLOW METER READING [c][f] (gallons removed)	WATER REMOVED BASED ON FLOW METER[f] (gallons)	COMMENTS
7/25/14	--	--	--	--	--	--	15	672.25	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/26/14	--	--	--	--	--	--	15	672.25	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/27/14	--	--	--	--	--	--	15	672.25	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/28/14	--	--	--	--	--	--	15	672.25	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/29/14	--	--	--	--	--	--	15	672.25	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/30/14	--	--	--	--	--	--	15	672.25	0.159	0	--	--	SSC WTP down due to plugged intake line from the EQ tank. LCS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/31/14	--	--	--	--	--	--	15	672.25	0.159	0	--	--	Plugged intake line in the EQ tank resolved and the SSC WTP re-started.
8/1/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	Automated pumping system turned on.
8/2/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/3/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/4/14	8:55	69.09	0.74	--	--	671.7	16	672.33	0.159	0	--	--	
8/5/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/6/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/7/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/8/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/9/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/10/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/11/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/12/14	9:10	69.03	0.80	--	--	671.8	16	672.33	0.159	53	134,897	53	Total of 53 Gallons pumped since July 12 based on local flow meter readings.
8/13/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/14/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/15/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/16/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/17/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/18/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/19/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/20/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/21/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/22/14	8:00	68.97	0.86	--	--	671.9	16	672.33	0.159	86	134,983	86	Total of 86 Gallons pumped since August 12 based on local flow meter readings.
8/23/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/24/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/25/14	--	--	--	--	--	--	16	672.33	0.159	0	--	--	
8/26/14	9:30	68.94	0.89	--	--	671.9	16	672.33	0.159	0	134,983	0	Samples collected, pump run in hand operation
8/27/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
8/28/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
8/29/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
8/30/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
8/31/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/1/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/2/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/3/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/4/14	16:50	68.88	0.95	--	--	672.0	17	672.42	0.159	131	135,114	131	Total of 131 Gallons pumped since August 22 based on local flow meter readings.
9/5/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/6/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/7/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/8/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/9/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/10/14	9:38	68.85	0.98	--	--	672.0	17	672.42	0.159	0	135,115	1	
9/11/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/12/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/13/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/14/14	--	--	--	--	--	--	17	672.42	0.159	0	--	--	
9/15/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/16/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/17/14	13:10	68.79	1.04	--	--	672.0	18	672.50	0.244	0	135,115	0	
9/18/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/19/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/20/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/21/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/22/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/23/14	8:45	68.77	1.06	--	--	672.1	18	672.50	0.244	0	135,116	1	
9/24/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/25/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/26/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/27/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/28/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/29/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
9/30/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
10/1/14	--	--	--	--	--	--	18	672.50	0.244	0	--	--	
10/2/14	13:20	68.67	1.16	--	--	672.2	19	672.58	0.244	0	135188	72	
10/3/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/4/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/5/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	

Table 2.1

Sump Monitoring Log - LCS
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

LEACHATE COLLECTION SYSTEM

DATE	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER DEPTH (feet AFOS)	WATER REMOVED (feet)	VOLUME REMOVED[e] (gallons)	MANUAL WATER LEVEL CONVERTED TO ELEVATION (ft AMSL)	PLC WATER LEVEL WATER LEVEL @ PLC [d] (inches)	PLC WATER LEVEL CONVERTED TO ELEVATION [d] (ft AMSL)	PLC WATER LEVEL EQUIVALENT DEPTH OVER PRIMARY LINER (inches)	WATER REMOVED QUANTITY PUMPED @ PLC (gallons removed)	WATER REMOVED LOCAL FLOW METER READING [c][f] (gallons removed)	WATER REMOVED BASED ON FLOW METER[f] (gallons)	COMMENTS
10/6/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/7/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/8/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/9/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/10/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/11/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/12/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/13/14	11:30	68.61	1.22	--	--	672.2	19	672.58	0.244	0	135188	0	
10/14/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/15/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/16/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/17/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/18/14	--	--	--	--	--	--	19	672.58	0.244	0	--	--	
10/19/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
10/20/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
10/21/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
10/22/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
10/23/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
10/24/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
10/25/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
10/26/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
10/27/14	1:00	68.51	1.32	--	--	672.3	20	672.67	0.244	0	135188	0	
10/28/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
10/29/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	sampled. ran pump in manual
10/30/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
10/31/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
11/1/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
11/2/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
11/3/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
11/4/14	--	--	--	--	--	--	20	672.67	0.244	0	--	--	
11/5/14	13:20	68.46	1.37	--	--	672.4	21	672.75	0.244	0	135,249	61	
11/6/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/7/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/8/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/9/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/10/14	13:25	68.43	1.40	--	--	672.4	21	672.75	0.244	0	135,249	0	
11/11/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/12/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/13/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/14/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/15/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/16/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/17/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/18/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/19/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/20/14	--	--	--	--	--	--	21	672.75	0.244	0	--	--	
11/21/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
11/22/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
11/23/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
11/24/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
11/25/14	9:10	68.36	1.47	--	--	672.5	21	672.75	0.244	0	135,249	0	sampled
11/26/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
11/27/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
11/28/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
11/29/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
11/30/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
12/1/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
12/2/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
12/3/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
12/4/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
12/5/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
12/6/14	--	--	--	--	--	--	22	672.83	0.244	0	--	--	
12/7/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/8/14	13:00	68.23	1.60	--	--	672.6	23	672.92	0.244	0	135,345	96	
12/9/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/10/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/11/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/12/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/13/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/14/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/15/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/16/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/17/14	9:40	68.23	1.60	0.13	23.49	672.6	23	672.92	0.244	0	135,345	0	sampled
12/18/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/19/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/20/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/21/14	--	--	--	--	--	--	23	672.92	0.244	0	--	--	
12/22/14	--	--	--	--	--	--	24	673.00	0.349	0	--	--	
12/23/14	--	--	--	--	--	--	24	673.00	0.349	0	--	--	

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Sump Monitoring Log - LCS
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

LEACHATE COLLECTION SYSTEM

DATE	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER DEPTH (feet AFOS)	WATER REMOVED (feet)	VOLUME REMOVED[e] (gallons)	MANUAL WATER LEVEL CONVERTED TO ELEVATION (ft AMSL)	PLC WATER LEVEL WATER LEVEL @ PLC [d] (inches)	PLC WATER LEVEL CONVERTED TO ELEVATION [d] (ft AMSL)	PLC WATER LEVEL EQUIVALENT DEPTH OVER PRIMARY LINER (inches)	QUANTITY PUMPED @ PLC (gallons removed)	WATER REMOVED LOCAL FLOW METER READING [c][f] (gallons removed)	WATER REMOVED BASED ON FLOW METER[f] (gallons)	COMMENTS
12/24/14	--	--	--	--	--	--	24	673.00	0.349	0	--	--	
12/25/14	--	--	--	--	--	--	24	673.00	0.349	0	--	--	
12/26/14	--	--	--	--	--	--	24	673.00	0.349	0	--	--	
12/27/14	--	--	--	--	--	--	24	673.00	0.349	0	--	--	
12/28/14	--	--	--	--	--	--	24	673.00	0.349	0	--	--	
12/29/14	--	--	--	--	--	--	24	673.00	0.349	0	--	--	
12/30/14	--	--	--	--	--	--	24	673.00	0.349	0	--	--	
12/31/14	--	--	--	--	--	--	24	673.00	0.349	0	--	--	
Total					692					8,581		5,117	

Notes:

ft AMSL - feet above mean sea level
Top of sump [top of concrete manhole] (feet A 740.83
Bottom of sump (feet AMSL): 671
Total depth of sump manhole (feet): 69.83
Inside diameter of sump (feet): 6
(--) Measurements were not collected.

(1) Pump operating level between 1 ft (672.00 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.
(2) LCS pump to be manually turned on (to prevent an increase in the water elevation) while water removed from LDS sump is being pumped into the LCS manhole, if the water depth in the LCS is greater than 1 ft (672.00 ft AMSL or 68.83 ft below the top of sump). All associated information to be recorded on log sheet to indicate this activity.
(3) Equivalent depth over primary liner based on volume of water at given depth divided by the area of the Vault (7 acres).
[a] Water level readings for the LCS sump were recorded on the LDS sump log form between January 1, 2014 and February 28, 2014
[b] Water level/water depth less than previous measurement due to human error while taking the measurement.
[c] Flow meter readings (displayed on mag meter serial number F1095C16000) are cumulative unless noted otherwise.
[d] PLC records the maximum water level observed each day (midnight to midnight). Therefore, the manual water level/elevation will not match the water level/elevation recorded by the PLC.
(e) Total volume calculation based on flow meter readings is based on the direct read out of the flow meter. Reading is given as an absolute value and the difference between events gives the events total. Volumes given prior to May 2014 based on volume calcs as no meter readings were taken during this time period.
(f) Total volume removed based on pumping is calculation based on change in head. This is the calculation completed in prior years and is used for comparison to prior year calculations

Minimum	67.40	0.07
Maximum	70.50	2.43
Mean	69.00	0.83

	Total Volume Accumulation for 2014 based on Flow Meter Readings (gallons) [e]	5,117
	Total Volume Accumulation for 2014 originating in the LDS based on flow meter (gallons)	753
	Total Volume Accumulation Originating in the LCS in 2014 based on flow meter (gallons)	4,365
(1)	**Total Volume Accumulation in LCS carried forward from 2013 (gallons)**	7
(2)	**Total Volume Accumulation in LCS from last pumping event to end of 2014 (gallons)**	0
(3)	**Total Volume Pumped from the LCS in 2014 (gallons)**	692
(4)=(3)+(2)-(1)	**Total Volume Accumulation Originating in the LCS in 2014 (gallons)**	699
(5)	**Total Volume Pumped to LCS from LDS in 2014 (gallons)**	465
(4)+(5)	**Net Volume Removed from the LCS in 2014 including volume from LDS (gallons)**	1,157

Table 2.2

Sump Monitoring Log - LDS
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

LEAK DETECTION SYSTEM														
DATE	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	WATER DEPTH (ft AFOS)	WATER DEPTH AFTER PUMPING (feet BTOS)	WATER DEPTH REMOVED (feet)	VOLUME REMOVED BASED ON PUPMING (gallons)	WATER LEVEL BEFORE PUMPING CONVERTED TO ELEVATION (ft AMSL)	FLOW METER READING [c] (gallons)	WATER REMOVED BASED ON FLOW METER (gallons)	TIME OF MEASUREMENT #2 (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	WATER LEVEL AFTER PUMPING CONVERTED TO ELEVATION (ft AMSL)	AVERAGE DAILY FLOW RATE [d] (gallons/acre/day)	COMMENTS
12/31/13	--	--	--	--	--	--	--	---	549	---	---	---	0.5	*95 gallons = Sump accumulation accounted for in 2013 that had not yet been pumped prior to 2014 new year*
1/1/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/2/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/3/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/4/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/5/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/6/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/7/14	10:00	71.80 [b]	0.84	--	--	--	669.34	---	--	---	---	---	0.5	
1/8/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/9/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/10/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/11/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/12/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/13/14	9:00	71.50 [b]	1.14	--	--	--	669.64	---	--	---	---	---	0.5	
1/14/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/15/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/16/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/17/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/18/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/19/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/20/14	9:00	71.40 [b]	1.24	--	--	--	669.74	---	--	---	---	---	0.5	
1/21/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/22/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/23/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/24/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/25/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/26/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/27/14	11:00	71.40 [b]	1.24	--	--	--	669.74	---	--	---	---	---	0.5	
1/28/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/29/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/30/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
1/31/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/1/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/2/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/3/14	8:00	71.20 [b]	1.44	--	--	--	669.94	---	--	---	---	---	0.5	[a]
2/4/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/5/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/6/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/7/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/8/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/9/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/10/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/11/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/12/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/13/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/14/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/15/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/16/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/17/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/18/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/19/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/20/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/21/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/22/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/23/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/24/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/25/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/26/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/27/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
2/28/14	10:00	71.60 [b]	1.04	--	--	--	669.54	---	--	---	---	---	0.5	
3/1/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/2/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/3/14	15:00	71.6	1.04	--	--	--	669.54	---	--	---	---	---	0.5	
3/4/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/5/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/6/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/7/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/8/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/9/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/10/14	9:30	71.6	1.04	72.50	0.90	190.36	669.54	---	--	---	---	---	0.5	

Table 2.2

Sump Monitoring Log - LDS
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

LEAK DETECTION SYSTEM														
DATE	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	WATER DEPTH (ft AFOS)	WATER DEPTH AFTER PUMPING (feet BTOS)	WATER DEPTH REMOVED (feet)	VOLUME REMOVED BASED ON PUPMING (gallons)	WATER LEVEL BEFORE PUMPING CONVERTED TO ELEVATION (ft AMSL)	FLOW METER READING [c] (gallons)	WATER REMOVED BASED ON FLOW METER (gallons)	TIME OF MEASUREMENT #2 (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	WATER LEVEL AFTER PUMPING CONVERTED TO ELEVATION (ft AMSL)	AVERAGE DAILY FLOW RATE [d] (gallons/acre/day)	COMMENTS
3/11/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/12/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/13/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/14/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/15/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/16/14	--	--	--	--	--	--	--	---	--	---	---	---	0.5	
3/17/14	13:30	72.5	0.14	--	--	--	668.64	---	--	---	---	---	0.5	[a]
3/18/14	--	--	--	--	--	--	--	756.5	207.5	--	72.16	669.0	0.5	Pumped into the LCS. Volume of water removed measured using a temporary flow meter.
3/19/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
3/20/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
3/21/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
3/22/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
3/23/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
3/24/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
3/25/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
3/26/14	NR	72.0	0.64	--	--	--	669.14	---	--	---	---	---	0.7	
3/27/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
3/28/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
3/29/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
3/30/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
3/31/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/1/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/2/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/3/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/4/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/5/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/6/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/7/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/8/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/9/14	13:40	72.10	0.54	--	--	--	669.04	---	--	---	---	---	0.7	[a]
4/10/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/11/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/12/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/13/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/14/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/15/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/16/14	16:52	72.04	0.60	--	--	--	669.10	---	--	---	---	---	0.7	[a]
4/17/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/18/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/19/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/20/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/21/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/22/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/23/14	14:10	71.98	0.66	--	--	--	669.16	---	--	---	---	---	0.7	
4/24/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/25/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/26/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/27/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/28/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
4/29/14	13:56	72.00	0.64	--	--	--	669.14	---	--	---	---	---	0.7	[a]
4/30/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/1/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/2/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/3/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/4/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/5/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/6/14	15:52	71.99	0.65	72.20	0.21	44.42	669.15	---	--	---	---	---	0.7	
5/7/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/8/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/9/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/10/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/11/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/12/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/13/14	13:27	72.2	0.44	--	--	--	668.94	---	--	---	---	---	0.7	
5/14/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/15/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/16/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/17/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/18/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/19/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/20/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	

Table 2.2

Sump Monitoring Log - LDS
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

LEAK DETECTION SYSTEM														
DATE	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	WATER DEPTH (ft AFOS)	WATER DEPTH AFTER PUMPING (feet BTOS)	WATER DEPTH REMOVED (feet)	VOLUME REMOVED BASED ON PUPMING (gallons)	WATER LEVEL BEFORE PUMPING CONVERTED TO ELEVATION (ft AMSL)	FLOW METER READING [c] (gallons)	WATER REMOVED BASED ON FLOW METER (gallons)	TIME OF MEASUREMENT #2 (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	WATER LEVEL AFTER PUMPING CONVERTED TO ELEVATION (ft AMSL)	AVERAGE DAILY FLOW RATE [d] (gallons/acre/day)	COMMENTS
5/21/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/22/14	15:30	71.99	0.65	--	--	--	669.15	---	--	---	---	---	0.7	
5/23/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/24/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/25/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/26/14	--	--	--	--	--	--	--	---	--	---	---	---	0.7	
5/27/14	9:58	71.99	0.65	72.38	0.39	82.49	669.15	1,097.0	340.5	--	72.38	668.8	0.7	Pumped into the LCS. CRA sampled.
5/28/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
5/29/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
5/30/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
5/31/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/1/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/2/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/3/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/4/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/5/14	12:57	72.36	0.28	--	--	--	668.78	---	--	---	---	---	0.2	
6/6/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/7/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/8/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/9/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/10/14	13:36	72.33	0.31	--	--	--	668.81	---	--	---	---	---	0.2	
6/11/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/12/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/13/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/14/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/15/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/16/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/17/14	14:12	72.31	0.33	--	--	--	668.83	---	--	---	---	---	0.2	
6/18/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/19/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/20/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/21/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/22/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/23/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/24/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	CRA sampled (no water transferred to LCS). A cover was placed on the top of the LDS sump. Prior to today, the LDS sump was left open.
6/25/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/26/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/27/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/28/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/29/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
6/30/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/1/14	9:15	72.31	0.33	--	--	--	668.83	---	--	---	---	---	0.2	
7/2/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/3/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/4/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/5/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/6/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/7/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/8/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/9/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/10/14	13:07	72.29	0.35	--	--	--	668.85	---	--	---	---	---	0.2	
7/11/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/12/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/13/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/14/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/15/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/16/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	A connection to the LCS pipe was made to connect the temporary hose from the LDS pump directly into the discharge pipe in the LCS running to the EQ tank, eliminating the need to run the LCS pumps when water is pumped from the LDS sump.
7/17/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/18/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/19/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/20/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/21/14	7:50	72.3	0.34	--	--	--	668.84	---	--	---	---	---	0.2	
7/22/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/23/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/24/14	11:25	72.28	0.36	72.36	0.08	16.92	668.86	1,174.7	77.7	---	72.36	668.8	0.2	CRA sampled.
7/25/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/26/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/27/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	

Table 2.2

Sump Monitoring Log - LDS
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

LEAK DETECTION SYSTEM														
DATE	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	WATER DEPTH (ft AFOS)	WATER DEPTH AFTER PUMPING (feet BTOS)	WATER DEPTH REMOVED (feet)	VOLUME REMOVED BASED ON PUPMING (gallons)	WATER LEVEL BEFORE PUMPING CONVERTED TO ELEVATION (ft AMSL)	FLOW METER READING [c] (gallons)	WATER REMOVED BASED ON FLOW METER (gallons)	TIME OF MEASUREMENT #2 (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	WATER LEVEL AFTER PUMPING CONVERTED TO ELEVATION (ft AMSL)	AVERAGE DAILY FLOW RATE [d] (gallons/acre/day)	COMMENTS
7/28/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/29/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/30/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
7/31/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/1/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/2/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/3/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/4/14	9:43	72.35	0.29	--	--	--	668.79	---	--	---	---	---	0.2	
8/5/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/6/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/7/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/8/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/9/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/10/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/11/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/12/14	10:05	72.34	0.30	--	--	--	668.80	---	--	---	---	---	0.2	
8/13/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/14/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/15/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/16/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/17/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/18/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/19/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/20/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/21/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/22/14	8:05	72.36	0.28	--	--	--	668.78	---	--	---	---	---	0.2	
8/23/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/24/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/25/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/26/14	9:50	72.36	0.28	72.55	0.19	40.19	668.78	1,231.3	56.6	10:20	72.55	668.6	0.2	Samples collected, pumped to LCS
8/27/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/28/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/29/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/30/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
8/31/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/1/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/2/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/3/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/4/14	16:42	72.46	0.18	--	--	--	668.68	---	--	---	---	---	0.2	
9/5/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/6/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/7/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/8/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/9/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/10/14	9:41	72.41	0.23	--	--	--	668.73	---	--	---	---	---	0.2	
9/11/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/12/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/13/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/14/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/15/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/16/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/17/14	13:17	72.43	0.21	--	--	--	668.71	---	--	---	---	---	0.2	
9/18/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/19/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/20/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/21/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/22/14	--	--	--	--	--	--	--	---	--	---	---	---	0.2	
9/23/14	8:52	72.44	0.20	72.58	0.14	29.61	668.70	1,264.7	33.4	9:38	72.58	668.6	0.2	Sampled LCS/LDS, pumped from LDS-LCS
9/24/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
9/25/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
9/26/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
9/27/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
9/28/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
9/29/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
9/30/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/1/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/2/14	13:25	72.44	0.20	--	--	--	668.70	---	--	---	---	---	0.10	
10/3/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/4/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/5/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/6/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	

Table 2.2

Sump Monitoring Log - LDS
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

LEAK DETECTION SYSTEM														
DATE	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	WATER DEPTH (ft AFOS)	WATER DEPTH AFTER PUMPING (feet BTOS)	WATER DEPTH REMOVED (feet)	VOLUME REMOVED BASED ON PUPMING (gallons)	WATER LEVEL BEFORE PUMPING CONVERTED TO ELEVATION (ft AMSL)	FLOW METER READING [c] (gallons)	WATER REMOVED BASED ON FLOW METER (gallons)	TIME OF MEASUREMENT #2 (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	WATER LEVEL AFTER PUMPING CONVERTED TO ELEVATION (ft AMSL)	AVERAGE DAILY FLOW RATE [d] (gallons/acre/day)	COMMENTS
10/7/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/8/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/9/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/10/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/11/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/12/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/13/14	11:26	72.45	0.19	--	--	--	668.69	---	--	---	---	---	0.10	
10/14/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/15/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/16/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/17/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/18/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/19/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/20/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/21/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/22/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/23/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/24/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/25/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/26/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/27/14	1:10	72.41	0.23	--	--	--	668.73	---	--	---	---	---	0.10	
10/28/14	--	--	--	--	--	--	--	---	--	---	---	---	0.10	
10/29/14	9:30	72.41	0.23	72.52	0.11	23.27	668.73	1,288.7	24.0	9:45	72.52	668.6	0.10	Sampled. Pumped from LDS-LCS pumped approximately 24 gallons
10/30/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
10/31/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/1/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/2/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/3/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/4/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/5/14	13:25	72.51	0.13	--	--	--	668.63	---	--	---	---	---	0.07	
11/6/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/7/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/8/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/9/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/10/14	13:30	72.51	0.13	--	--	--	668.63	---	--	---	---	---	0.07	
11/11/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/12/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/13/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/14/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/15/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/16/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/17/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/18/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/19/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/20/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/21/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/22/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/23/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/24/14	--	--	--	--	--	--	--	---	--	---	---	---	0.07	
11/25/14	9:20	72.44	0.20	72.62	0.18	38.07	668.70	1,301.5	12.8	9:38	72.62	668.5	0.07	Sampled, pumped to LCS, removed approximately 12.8 gallons
11/26/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
11/27/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
11/28/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
11/29/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
11/30/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/1/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/2/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/3/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/4/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/5/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/6/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/7/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/8/14	13:15	72.52	0.12	--	--	--	668.62	---	--	---	---	---	0.0	
12/9/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/10/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/11/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/12/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/13/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/14/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/15/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/16/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	

Table 2.2

Sump Monitoring Log - LDS
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

LEAK DETECTION SYSTEM														
DATE	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	WATER DEPTH (ft AFOS)	WATER DEPTH AFTER PUMPING (feet BTOS)	WATER DEPTH REMOVED (feet)	VOLUME REMOVED BASED ON PUPMING (gallons)	WATER LEVEL BEFORE PUMPING CONVERTED TO ELEVATION (ft AMSL)	FLOW METER READING [c] (gallons)	WATER REMOVED BASED ON FLOW METER (gallons)	TIME OF MEASUREMENT #2 (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	WATER LEVEL AFTER PUMPING CONVERTED TO ELEVATION (ft AMSL)	AVERAGE DAILY FLOW RATE [d] (gallons/acre/day)	COMMENTS
12/17/14	9:48	72.52	0.12	--	--	--	668.62	---	0.0	---	---	---	0.0	Insufficient water to sample. No water tranferred.
12/18/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/19/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/20/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/21/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/22/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/23/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/24/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/25/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/26/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/27/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/28/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/29/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/30/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
12/31/14	--	--	--	--	--	--	--	---	--	---	---	---	0.0	
Total					2.20	465.31	*669.94*		752.5					

Notes:

ft AMSL - feet above mean sea level

Top of sump [top of concrete manhole] (feet AMSL): 1	741.14
Bottom of sump (feet AMSL): 668.50	668.5
Total depth of sump manhole (feet): 72.64	72.64
Inside diameter of sump (feet): 6	6

(--) Measurements were not collected.
(---) Water was not removed from the sump.

(1) Water level in LDS not to rise above the primary liner system (670.0 ft AMSL) (or more than 18 inches of water depth or 71.14 ft from top of sump). Pumping must be initiated if water elevation is not within the appropriate limits. All corresponding information to be recorded on this form.
(2) Calculate the average daily LDS collection rate as the volume pumped divided by days between pumping = average gallons collected per day
(3) Compare the collection rate to the Action Leakage Rate of 32,000 gallons/acre/day. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate may indicated a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate.
[a] Water level/water depth less than previous measurement due to human error while taking the measurement.
[b] Water level readings for the LDS sump were recorded on the LCS sump log form and vice versa between January 1, 2014 and February 28, 2014.
[c] Flow meter readings are cumulative unless noted otherwise.
[d] Average daily flow rate calculated by dividing removed volume by the eplased time from the prior pumping event and the area of the Vault footprint (7 acres).
[e] Total volume calculation based on flow meter readings is based on the direct read out of the flow meter. Reading is given as an absolute value and the difference between events gives the events total.
[f] Total volume removed based on pumping is calculation based on change in head. This is the calculation completed in prior years and is used for comparison to prior year calculations

Minimum	71.20	0.1
Maximum	72.52	1.4
Mean	72.2	0.5

Total Volume Accumulation for 2014 based on Flow Meter Readings [e]	**752.5**
Number of Pumping Events	7
Total Volume Accumulation	
(1) **Total Volume Pumped to LCS in 2014 (gallons)**	465.31
(2) **Total Volume Accumulation carried forward from 2013 (gallons)**	-95
(3) **Total Volume Accumulation from last pumping event to end of 2014 (gallons)**	38.07
(1)+(2)+(3) **Net 2014 LDS Accumulation Volume (gallons) [f]**	**408.38**

Table 2.3

Sump Monitoring Log - Gus
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

GRAVEL UNDERDRAIN SYSTEM

DATE	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	MANUAL WATER LEVEL CONVERTED TO ELEVATION (ft AMSL)	WATER LEVEL @ PLC [3] [c] (inches)	PLC WATER LEVEL CONVERTED TO ELEVATION [3] © (ft AMSL)	QUANTITY PUMPED @ PLC (gallons removed)	LOCAL FLOW METER (WWTP) READING [b] (GUS + LCS TOTAL) (gallons)	FLOW METER READING [b] (GUS ONLY = WWTP - LOCAL LCS METER) (gallons)	Volume Removed From Gus (gallons)	COMMENTS
1/1/14	--	--	--	135.00	673.43	0	--	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/2/14	--	--	--	133.00	673.26	0	--	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/3/14	--	--	--	133.00	673.26	0	--	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/4/14	--	--	--	133.00	673.26	0	--	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/5/14	--	--	--	133.00	673.26	0	--	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/6/14	--	--	--	133.00	673.26	0	--	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/7/14	--	--	--	133.00	673.26	0	--	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/8/14	--	--	--	133.00	673.26	0	--	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/9/14	--	--	--	133.00	673.26	0	--	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/10/14	10:00	70.50	669.0	133.00	673.26	0	--	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/11/14	--	--	--	133.00	673.26	0	--	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/12/14	--	--	--	133.00	673.26	0	--	--	--	PLC remaining off due to cold weather (resulting in frozen layflat lines) and treatment system issues (repairing the Astrasand filter).
1/13/14	9:00	70.40	669.1	133.00	673.26	0	--	--	--	PLC remaining off due to cold weather and difficulty with water line and treatment system
1/14/14	--	--	--	133.00	673.26	24,625	--	--	24,625	Automated pumping system turned on.
1/15/14	--	--	--	133.00	673.26	37,115	--	--	37,115	
1/16/14	--	--	--	133.00	673.26	35,860	--	--	35,860	
1/17/14	--	--	--	133.00	673.26	35,080	--	--	35,080	
1/18/14	--	--	--	133.00	673.26	27,555	--	--	27,555	
1/19/14	--	--	--	133.00	673.26	9,420	--	--	9,420	
1/20/14	9:00	75.10	664.4	133.00	673.26	9,070	--	--	9,070	
1/21/14	--	--	--	133.00	673.26	5,935	--	--	5,935	Automated pumping system turned off due to extreme cold (resulting in frozen layflat lines).
1/22/14	--	--	--	133.00	673.26	0	--	--	--	Automated pumping system turned off due to extreme cold (resulting in frozen layflat lines).
1/23/14	--	--	--	133.00	673.26	0	--	--	--	Automated pumping system turned off due to extreme cold (resulting in frozen layflat lines).
1/24/14	--	--	--	133.00	673.26	0	--	--	--	Automated pumping system turned off due to extreme cold (resulting in frozen layflat lines).
1/25/14	--	--	--	133.00	673.26	0	--	--	--	Automated pumping system turned off due to extreme cold (resulting in frozen layflat lines).
1/26/14	--	--	--	133.00	673.26	0	--	--	--	Automated pumping system turned on.
1/27/14	11:00	72.30	667.2	133.00	673.26	0	--	--	--	
1/28/14	--	--	--	133.00	673.26	0	--	--	--	
1/29/14	--	--	--	133.00	673.26	0	--	--	--	
1/30/14	--	--	--	133.00	673.26	0	--	--	--	
1/31/14	--	--	--	--	--	--	--	--	--	
2/1/14	--	--	--	133.00	673.26	0	--	--	--	
2/2/14	--	--	--	133.00	673.26	34,775	--	--	34,775	
2/3/14	8:00	72.30	667.2	--	--	7,490	--	--	7,490	Automated system down for reprogramming due to transducer problems. Sump to be pumped manually.
2/4/14	--	--	--	--	--	35,895	--	--	35,895	
2/5/14	--	--	--	--	--	8,660	--	--	8,660	
2/6/14	15:31	74.60	664.9	240.00	682.18	5,145	--	--	5,145	
2/7/14	--	--	--	145.00	674.26	0	--	--	--	
2/8/14	--	--	--	145.00	674.26	0	--	--	--	
2/9/14	--	--	--	145.00	674.26	0	--	--	--	
2/10/14	--	--	--	145.00	674.26	0	--	--	--	
2/11/14	--	--	--	145.00	674.26	0	--	--	--	
2/12/14	--	--	--	145.00	674.26	0	--	--	--	
2/13/14	--	--	--	145.00	674.26	0	--	--	--	
2/14/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/15/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/16/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/17/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/18/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/19/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/20/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/21/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/22/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/23/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/24/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/25/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/26/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/27/14	--	--	--	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
2/28/14	10:00	70.70	668.8	145.00	674.26	0	--	--	--	All vault sump pumps turned off due to cold weather and frozen discharge lines.
3/1/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system off to allow for reprogramming.
3/2/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system off to allow for reprogramming.
3/3/14	15:00	70.70	668.8	145.00	674.26	0	--	--	--	Automated pumping system off to allow for reprogramming.
3/4/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system off to allow for reprogramming.
3/5/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system off to allow for reprogramming.
3/6/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system off to allow for reprogramming.
3/7/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system off to allow for reprogramming.
3/8/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system off to allow for reprogramming.
3/9/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system off to allow for reprogramming.
3/10/14	16:30	70.60	668.9	145.00	674.26	14,425	--	--	14,425	Automated pumping system off to allow for reprogramming.
3/11/14	--	--	--	145.00	674.26	38,310	--	--	38,310	Automated pumping system off to allow for reprogramming.
3/12/14	--	--	--	145.00	674.26	36,545	--	--	36,545	Automated pumping system off to allow for reprogramming.
3/13/14	--	--	--	145.00	674.26	37,760	--	--	37,760	Automated pumping system off to allow for reprogramming.
3/14/14	--	--	--	145.00	674.26	9,795	--	--	9,795	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.

Table 2.3

Sump Monitoring Log - Gus
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

GRAVEL UNDERDRAIN SYSTEM

DATE	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	MANUAL WATER LEVEL CONVERTED TO ELEVATION (ft AMSL)	WATER LEVEL @ PLC [3] [c] (inches)	PLC WATER LEVEL CONVERTED TO ELEVATION [3] © (ft AMSL)	QUANTITY PUMPED @ PLC (gallons removed)	LOCAL FLOW METER (WWTP) READING [b] (GUS + LCS TOTAL) (gallons)	FLOW METER READING [b] (GUS ONLY = WWTP - LOCAL LCS METER) (gallons)	Volume Removed From Gus (gallons)	COMMENTS
3/15/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/16/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/17/14	13:30	73.00	666.5	145.00	674.26	22,180	--	--	22,180	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/18/14	--	--	--	145.00	674.26	13,020	--	--	13,020	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/19/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/20/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/21/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/22/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/23/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/24/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/25/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/26/14	NR	72.10	667.4	145.00	674.26	0	--	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/27/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/28/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system remained off in response to receipt of analytical results that exceeded NPDES permit discharge criteria. WTP left in standby mode to perform testing of the treatment while effluent discharged to the stormwater pond.
3/29/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system off to allow change out of the carbon from the four storm water treatment vessels at the WTP.
3/30/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system off to allow change out of the carbon from the four storm water treatment vessels at the WTP.
3/31/14	--	--	--	145.00	674.26	0	--	--	--	Automated pumping system off to allow change out of the carbon from the four storm water treatment vessels at the WTP.
4/1/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system off to allow change out of the carbon from the four storm water treatment vessels at the WTP.
4/2/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/3/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/4/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/5/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/6/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/7/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/8/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/9/14	13:30	70.49	669.0	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/10/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/11/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/12/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/13/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/14/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/15/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/16/14	16:55	70.34	669.2	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/17/14	--	--	--	144.00	674.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/18/14	--	--	--	73.00	668.26	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing. Pressure transducer used for PLC water level measurements moved from stilling well into GUS sump. The stilling well has become plugged and is holding water at a depth of 144 inches.
4/19/14	--	--	--	73.00	668.26	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/20/14	--	--	--	73.00	668.26	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/21/14	--	--	--	72.00	668.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/22/14	--	--	--	72.00	668.18	0	--	--	--	Automated pumping system remains off to allow for reprogramming and testing.
4/23/14	9:59	70.32	669.2	72.00	668.18	6,840	2,510,035	2,379,139	0	Automated pumping system turned on. GUS sump was pumped.
4/24/14	--	70.37	669.1	69.00	667.93	12,555	--	--	--	Automated pumping system turned on. GUS sump was pumped.
4/25/14	--	--	--	69.00	667.93	32,767	--	--	--	Automated pumping system turned on. GUS sump was pumped.
4/26/14	--	--	--	69.00	667.93	32,767	--	--	--	Automated pumping system turned on. GUS sump was pumped.
4/27/14	--	--	--	39.00	665.43	38,810	--	--	--	Automated pumping system turned on. GUS sump was pumped.
4/28/14	--	--	--	39.00	665.43	22,220	--	--	--	Automated pumping system turned on. GUS sump was pumped.
4/29/14	14:00	73.26	666.2	43.00	665.76	0	--	--	--	Automated pumping system turned on.
4/30/14	--	--	--	46.00	666.01	0	--	--	--	Automated pumping system turned on.
5/1/14	--	--	--	49	666.26	0	--	--	--	Automated pumping system turned off.
5/2/14	--	--	--	50	666.35	0	--	--	--	Automated pumping system turned off.
5/3/14	--	--	--	53	666.60	0	--	--	--	Automated pumping system turned off.
5/4/14	--	--	--	57	666.93	0	--	--	--	Automated pumping system turned off.
5/5/14	--	--	--	59	667.10	0	--	--	--	Automated pumping system turned off.

Table 2.3

Sump Monitoring Log - Gus
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

GRAVEL UNDERDRAIN SYSTEM

DATE	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	MANUAL WATER LEVEL CONVERTED TO ELEVATION (ft AMSL)	WATER LEVEL @ PLC [3] [c] (inches)	PLC WATER LEVEL CONVERTED TO ELEVATION [3] © (ft AMSL)	QUANTITY PUMPED @ PLC (gallons removed)	LOCAL FLOW METER (WWTP) READING [b] (GUS + LCS TOTAL) (gallons)	FLOW METER READING [b] (GUS ONLY = WWTP - LOCAL LCS METER) (gallons)	Volume Removed From Gus (gallons)	COMMENTS
5/6/14	15:58	71.61	667.9	60	667.18	20,440	2,675,425	2,541,017	161,878	Automated pumping system turned off.
5/7/14	--	--	--	54	666.68	38,795	--	--	--	Automated pumping system turned off.
5/8/14	--	--	--	43	665.76	34,870	--	--	--	Automated pumping system turned off.
5/9/14	--	--	--	38	665.35	0	--	--	--	Automated pumping system turned off.
5/10/14	--	--	--	42	665.68	0	--	--	--	Automated pumping system turned off.
5/11/14	--	--	--	45	665.93	0	--	--	--	Automated pumping system turned on.
5/12/14	--	--	--	45	665.93	0	2,760,158	2,625,750	84,733	Automated pumping system turned on.
5/13/14	--	--	--	51	666.43	0	--	--	--	Automated pumping system turned on.
5/14/14	--	--	--	57	666.93	0	--	--	--	Automated pumping system turned on.
5/15/14	--	--	--	57	666.93	0	--	--	--	Automated pumping system turned on.
5/16/14	--	--	--	59	667.10	0	--	--	--	Automated pumping system turned on.
5/17/14	--	--	--	60	667.18	30,535	--	--	--	Automated pumping system turned on.
5/18/14	--	--	--	60	667.18	38,620	--	--	--	Automated pumping system turned on.
5/19/14	--	--	--	40	665.51	24,885	--	--	--	Automated pumping system turned on.
5/20/14	--	--	--	39	665.43	0	--	--	--	Automated pumping system turned on.
5/21/14	--	--	--	40	665.51	0	2,854,109	2,719,701	93,951	Automated pumping system turned on.
5/22/14	15:52	72.61	666.9	43	665.76	0	--	--	--	Automated pumping system turned on.
5/23/14	--	--	--	46	666.01	0	--	--	--	Automated pumping system turned on.
5/24/14	--	--	--	52	666.51	0	--	--	--	Automated pumping system turned on.
5/25/14	--	--	--	52	666.51	0	--	--	--	Automated pumping system turned on.
5/26/14	--	--	--	68	667.85	0	--	--	--	Automated pumping system turned on.
5/27/14	11:21	71.44	668.1	60	667.18	5,780	--	--	--	Automated pumping system turned on.
5/28/14	--	--	--	58	667.01	38,415	--	--	--	Automated pumping system turned on.
5/29/14	--	--	--	52	666.51	20,065	--	--	--	Automated pumping system turned on.
5/30/14	--	--	--	49	666.26	0	--	--	--	Automated pumping system turned on.
5/31/14	--	--	--	52	666.51	0	--	--	--	Automated pumping system turned on.
6/1/14	--	--	--	52	666.51	0	--	--	--	
6/2/14	--	--	--	55	666.76	0	--	--	--	
6/3/14	--	--	--	57	666.93	0	--	--	--	
6/4/14	--	--	--	60	667.18	35,220	--	--	--	
6/5/14	13:05	72.62	666.9	59	667.10	0	2,974,938	2,840,094	120,393	
6/6/14	--	--	--	50	666.35	0	--	--	--	
6/7/14	--	--	--	40	665.51	0	--	--	--	
6/8/14	--	--	--	43	665.76	0	--	--	--	
6/9/14	--	--	--	47	666.10	0	--	--	--	
6/10/14	13:32	--	--	50	666.35	0	--	--	--	unable to collect a manual water level measurement - no water detected by meter
6/11/14	--	--	--	50	666.35	0	--	--	--	
6/12/14	--	--	--	56	666.85	0	--	--	--	
6/13/14	--	--	--	58	667.01	0	--	--	--	
6/14/14	--	--	--	60	667.18	0	--	--	--	
6/15/14	--	--	--	58	667.01	38,775	--	--	--	
6/16/14	--	--	--	48	666.18	38,245	--	--	--	
6/17/14	14:26	73.42	666.1	36	665.18	13,710	3,108,785	2,973,941	133,847	
6/18/14	--	--	--	40	665.51	0	--	--	--	
6/19/14	--	--	--	44	665.85	0	--	--	--	
6/20/14	--	--	--	47	666.10	0	--	--	--	
6/21/14	--	--	--	50	666.35	0	--	--	--	
6/22/14	--	--	--	62	667.35	0	--	--	--	
6/23/14	--	--	--	55	666.76	0	--	--	--	
6/24/14	--	--	--	57	666.93	0	--	--	--	
6/25/14	--	--	--	59	667.10	0	--	--	--	
6/26/14	--	--	--	60	667.18	33,025	--	--	--	
6/27/14	--	--	--	51	666.43	38,730	--	--	--	
6/28/14	--	--	--	39	665.43	22,675	--	--	--	
6/29/14	--	--	--	39	665.43	0	--	--	--	
6/30/14	--	--	--	42	665.68	0	--	--	--	
7/1/14	9:20	72.67	666.8	46	666.01	0	3,205,190	3,070,346	96,405	
7/2/14	--	--	--	48	666.18	0	--	--	--	
7/3/14	--	--	--	51	666.43	0	--	--	--	
7/4/14	--	--	--	54	666.68	0	--	--	--	
7/5/14	--	--	--	54	666.68	0	--	--	--	
7/6/14	--	--	--	56	666.85	0	--	--	--	
7/7/14	--	--	--	60	667.18	10,795	--	--	--	
7/8/14	--	--	--	60	667.18	38,785	--	--	--	
7/9/14	--	--	--	46	666.01	38,380	--	--	--	
7/10/14	13:10	73.42	666.1	37	665.26	5,345	--	--	--	
7/11/14	--	--	--	40	665.51	0	--	--	--	
7/12/14	--	--	--	43	665.76	0	--	--	--	
7/13/14	--	--	--	46	666.01	0	--	--	--	
7/14/14	--	--	--	48	666.18	0	--	--	--	
7/15/14	--	--	--	48	666.18	0	--	--	--	
7/16/14	--	--	--	51	666.43	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank.
7/17/14	--	--	--	50	666.35	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system turned off due to problems at the groundwater treatment plant.
7/18/14	--	--	--	58	667.01	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/19/14	--	--	--	60	667.18	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/20/14	--	--	--	60	667.18	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/21/14	8:10	71.80	667.7	64	667.51	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/22/14	--	--	--	65	667.60	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/23/14	--	--	--	65	667.60	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.

Table 2.3

Sump Monitoring Log - Gus
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

GRAVEL UNDERDRAIN SYSTEM

DATE	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	MANUAL WATER LEVEL CONVERTED TO ELEVATION (ft AMSL)	WATER LEVEL @ PLC [3] [c] (inches)	PLC WATER LEVEL CONVERTED TO ELEVATION [3] © (ft AMSL)	QUANTITY PUMPED @ PLC (gallons removed)	LOCAL FLOW METER (WWTP) READING [b] (GUS + LCS TOTAL) (gallons)	FLOW METER READING [b] (GUS ONLY = WWTP - LOCAL LCS METER) (gallons)	Volume Removed From Gus (gallons)	COMMENTS
7/24/14	--	--	--	68	667.85	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/25/14	--	--	--	69	667.93	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/26/14	--	--	--	70	668.01	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/27/14	--	--	--	70	668.01	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/28/14	--	--	--	70	668.01	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/29/14	--	--	--	70	668.01	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/30/14	--	--	--	70	668.01	0	--	--	--	SSC WTP down due to plugged intake line from the EQ tank. GUS automated pumping system remained off due to continuing problems at the groundwater treatment plant.
7/31/14	--	--	--	71	668.10	0	--	--	--	Plugged intake line in the EQ tank resolved and the SSC WTP re-started.
8/1/14	--	--	--	71	668.10	21,305	--	--	--	Automated pumping system turned on.
8/2/14	--	--	--	64	667.51	38,700	--	--	--	
8/3/14	--	--	--	54	666.68	38,685	--	--	--	
8/4/14	10:11	73.17	666.3	44	665.85	36,635	--	--	--	
8/5/14	--	--	--	37	665.26	0	--	--	--	226,348
8/6/14	--	--	--	40	665.51	0	--	--	--	
8/7/14	--	--	--	40	665.51	0	--	--	--	228,630
8/8/14	--	--	--	46	666.01	0	--	--	--	
8/9/14	--	--	--	48	666.18	0	--	--	--	
8/10/14	--	--	--	50	666.35	0	--	--	--	
8/11/14	--	--	--	53	666.60	0	--	--	--	
8/12/14	10:20	71.77	667.7	55	666.76	0	3,431,591	3,296,694	226,348	
8/13/14	--	--	--	57	666.93	0	--	--	--	
8/14/14	--	--	--	59	667.10	0	--	--	--	92,670
8/15/14	--	--	--	60	667.18	9,685	--	--	--	92,895
8/16/14	--	--	--	57	666.93	38,915	--	--	--	
8/17/14	--	--	--	46	666.01	38,320	--	--	--	
8/18/14	--	--	--	36	665.18	5,850	--	--	--	
8/19/14	--	--	--	39	665.43	0	--	--	--	
8/20/14	--	--	--	41	665.60	0	--	--	--	
8/21/14	--	--	--	44	665.85	0	--	--	--	
8/22/14	8:10	72.51	666.98	46	666.01	125	3,524,347	3,389,364	92,670	Gus turned off. 1st reading taken @ 8:10, - 72.51, PLC @ 44". 2nd reading takent @ 4:12 PM 72.46, PLC reading 45". Therefore PLC calibration off by 13", will be adjusted in PLC program
8/23/14	--	--	--	48	666.18	0	--	--	--	
8/24/14	--	--	--	50	666.35	0	--	--	--	
8/25/14	--	--	--	51	666.43	0	--	--	--	
8/26/14	10:28	71.58	667.9	54	666.68	120	3,524,593	3,389,610	246	
8/27/14	--	--	--	56	666.85	0	--	--	--	246
8/28/14	--	--	--	57	666.93	0	--	--	--	120
8/29/14	--	--	--	59	667.10	0	--	--	--	
8/30/14	--	--	--	60	667.18	19,470	--	--	--	
8/31/14	--	--	--	54	666.68	38,215	--	--	--	
9/1/14	--	--	--	43	665.76	33,170	--	--	--	90,632
9/2/14	--	--	--	37	665.26	0	--	--	--	90,855
9/3/14	--	--	--	39	665.43	0	--	--	--	
9/4/14	16:35	72.81	666.7	39	665.43	0	3,615,356	3,480,242	90,632	
9/5/14	--	--	--	34	665.01	0	--	--	--	
9/6/14	--	--	--	46	666.01	0	--	--	--	
9/7/14	--	--	--	48	666.18	0	--	--	--	
9/8/14	--	--	--	50	666.35	0	--	--	--	
9/9/14	--	--	--	52	666.51	0	--	--	--	
9/10/14	9:51	Unreadable	N/A	54	666.68	0	3,615,356	3,480,241	0	
9/11/14	--	--	--	55	666.76	0	--	--	--	
9/12/14	--	--	--	57	666.93	0	--	--	--	
9/13/14	--	--	--	60	667.18	0	--	--	--	
9/14/14	--	--	--	57	666.93	5,405	--	--	--	91,586
9/15/14	--	--	--	58	667.01	38,275	--	--	--	91,680
9/16/14	--	--	--	48	666.18	37,795	--	--	--	
9/17/14	13:20	73.40	666.1	48	666.18	10,205	3,706,942	3,571,827	91,585	
9/18/14	--	--	--	51	666.43	0	--	--	--	
9/19/14	--	--	--	52	666.51	27,940	--	--	--	30,503
9/20/14	--	--	--	41	665.60	2,530	--	--	--	30,535
9/21/14	--	--	--	45	665.93	0	--	--	--	
9/22/14	--	--	--	48	666.18	0	--	--	--	
9/23/14	9:03	73.15	666.3	51	666.43	65	3,737,446	3,602,330	30,503	
9/24/14	--	--	--	48	666.18	21,900	--	--	--	
9/25/14	--	--	--	40	665.51	8,690	--	--	--	
9/26/14	--	--	--	44	665.85	0	--	--	--	
9/27/14	--	--	--	48	666.18	0	--	--	--	
9/28/14	--	--	--	48	666.18	0	--	--	--	
9/29/14	--	--	--	52	666.51	8,445	--	--	--	
9/30/14	--	--	--	46	666.01	21,400	--	--	--	60,301
10/1/14	--	--	--	43	665.76	0	--	--	--	60,435
10/2/14	13:36	73.30	666.2	46	666.01	0	3797819	3,662,631	60,301	
10/3/14	--	--	--	49	666.26	0	--	--	--	
10/4/14	--	--	--	51	666.43	0	--	--	--	
10/5/14	--	--	--	52	666.51	24,445	--	--	--	
10/6/14	--	--	--	40	665.51	4,910	--	--	--	
10/7/14	--	--	--	44	665.85	0	--	--	--	59,517
10/8/14	--	--	--	47	666.10	0	--	--	--	59,575
10/9/14	--	--	--	50	666.35	0	--	--	--	
10/10/14	--	--	--	51	666.43	0	--	--	--	

Table 2.3

Sump Monitoring Log - Gus
Post Closure Plan - East Plant Area Vault
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Bedford, Indiana

GRAVEL UNDERDRAIN SYSTEM

DATE	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	MANUAL WATER LEVEL CONVERTED TO ELEVATION (ft AMSL)	WATER LEVEL @ PLC [3] [c] (inches)	PLC WATER LEVEL CONVERTED TO ELEVATION [3] © (ft AMSL)	QUANTITY PUMPED @ PLC (gallons removed)	LOCAL FLOW METER (WWTP) READING [b] (GUS + LCS TOTAL) (gallons)	FLOW METER READING [b] (GUS ONLY = WWTP - LOCAL LCS METER) (gallons)	Volume Removed From Gus (gallons)	COMMENTS
10/11/14	--	--	--	52	666.51	24,960	--	--	--	
10/12/14	--	--	--	40	665.51	5,260	--	--	--	
10/13/14	12:01	73.73	665.8	44	665.85	0	3857336	3,722,148	59,517	
10/14/14	--	--	--	47	666.10	0	--	--	--	
10/15/14	--	--	--	50	666.35	0	--	--	--	
10/16/14	--	--	--	52	666.51	2,270	--	--	--	
10/17/14	--	--	--	49	666.26	28,550	--	--	--	
10/18/14	--	--	--	42	665.68	0	--	--	--	
10/19/14	--	--	--	46	666.01	0	--	--	--	
10/20/14	--	--	--	50	666.35	0	--	--	--	
10/21/14	--	--	--	51	666.43	0	--	--	--	
10/22/14	--	--	--	52	666.51	80,415	--	--	--	61,762
10/23/14	--	--	--	42	665.68	590	--	--	--	126,690
10/24/14	--	--	--	46	666.01	0	--	--	--	
10/25/14	--	--	--	46	666.01	0	--	--	--	Gus off
10/26/14	--	--	--	48	666.18	0	--	--	--	Gus off
10/27/14	1:14	72.86	666.6	52	666.51	14,865	3,919,098	3,783,910	61,762	Gus On
10/28/14	--	--	--	52	666.51	17,465	--	--	--	
10/29/14	--	--	--	44	665.85	55	--	--	--	
10/30/14	--	--	--	47	666.10	0	--	--	--	
10/31/14	--	--	--	51	666.43	0	--	--	--	
11/1/14	--	--	--	52	666.51	3,015	--	--	--	62,501
11/2/14	--	--	--	48	666.18	27,235	--	--	--	47,770
11/3/14	--	--	--	43	665.76	0	--	--	--	
11/4/14	--	--	--	47	666.10	0	--	--	--	
11/5/14	13:32	73.15	666.3	50	666.35	0	3,981,660	3,846,411	62,501	
11/6/14	--	--	--	51	666.43	0	--	--	--	
11/7/14	--	--	--	51	666.43	30,150	--	--	--	
11/8/14	--	--	--	42	665.68	0	--	--	--	60,626
11/9/14	--	--	--	46	666.01	0	--	--	--	30,150
11/10/14	13:37	74.25	665.2	49	666.26	0	4,042,286	3,907,037	60,626	
11/11/14	--	--	--	51	666.43	0	--	--	--	
11/12/14	--	--	--	51	666.43	14,370	--	--	--	
11/13/14	--	--	--	43	665.76	16,160	--	--	--	
11/14/14	--	--	--	44	665.85	0	--	--	--	
11/15/14	--	--	--	48	666.18	0	--	--	--	
11/16/14	--	--	--	50	666.35	0	--	--	--	
11/17/14	--	--	--	51	666.43	0	--	--	--	
11/18/14	--	--	--	52	666.51	29,705	--	--	--	
11/19/14	--	--	--	41	665.60	0	--	--	--	
11/20/14	--	--	--	45	665.93	0	--	--	--	
11/21/14	--	--	--	48	666.18	0	--	--	--	
11/22/14	--	--	--	50	666.35	0	--	--	--	
11/23/14	--	--	--	52	666.51	545	--	--	--	
11/24/14	--	--	--	49	666.26	29,640	--	--	--	
11/25/14	10:05	73.90	665.6	43	665.76	90	4,102,203	3,966,954	59,917	59,917
11/26/14	--	--	--	47	666.10	0	--	--	--	90,510
11/27/14	--	--	--	50	666.35	0	--	--	--	
11/28/14	--	--	--	51	666.43	0	--	--	--	
11/29/14	--	--	--	52	666.51	18,560	--	--	--	
11/30/14	--	--	--	41	665.60	12,380	--	--	--	
12/1/14	--	--	--	45	665.93	0	--	--	--	
12/2/14	--	--	--	48	666.18	0	--	--	--	
12/3/14	--	--	--	50	666.35	0	--	--	--	
12/4/14	--	--	--	52	666.51	7,000	--	--	--	
12/5/14	--	--	--	46	666.01	22,045	--	--	--	
12/6/14	--	--	--	44	665.85	0	--	--	--	
12/7/14	--	--	--	48	666.18	0	--	--	--	61,816
12/8/14	13:20	72.03	667.5	51	666.43	0	4,164,115	4,028,770	61,816	59,985
12/9/14	--	--	--	52	666.51	11,650	--	--	--	
12/10/14	--	--	--	44	665.85	20,150	--	--	--	
12/11/14	--	--	--	44	665.85	0	--	--	--	
12/12/14	--	--	--	49	666.26	0	--	--	--	
12/13/14	--	--	--	51	666.43	0	--	--	--	
12/14/14	--	--	--	52	666.51	26,480	--	--	--	
12/15/14	--	--	--	52	666.51	6,460	--	--	--	
12/16/14	--	--	--	48	666.18	0	--	--	--	
12/17/14	10:10	73.11	666.4	23	664.10	80	--	--	--	
12/18/14	--	--	--	52	666.51	400	--	--	--	
12/19/14	--	--	--	47	666.10	29,160	--	--	--	
12/20/14	--	--	--	44	665.85	0	--	--	--	
12/21/14	--	--	--	44	665.85	0	--	--	--	
12/22/14	--	--	--	51	666.43	0	--	--	--	
12/23/14	--	--	--	52	666.51	20,250	--	--	--	
12/24/14	--	--	--	52	666.51	12,968	--	--	--	
12/25/14	--	--	--	46	666.01	0	--	--	--	

Table 2.3

Sump Monitoring Log - Gus
Post Closure Plan - East Plant Area Vault
GM CETC Bedford Facility
Bedford, Indiana

GRAVEL UNDERDRAIN SYSTEM

DATE	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	MANUAL WATER LEVEL CONVERTED TO ELEVATION (ft AMSL)	WATER LEVEL @ PLC [3] [c] (inches)	PLC WATER LEVEL CONVERTED TO ELEVATION [3] © (ft AMSL)	QUANTITY PUMPED @ PLC (gallons removed)	LOCAL FLOW METER (WWTP) READING [b] (GUS + LCS TOTAL) (gallons)	FLOW METER READING [b] (GUS ONLY = WWTP - LOCAL LCS METER) (gallons)	Volume Removed From Gus (gallons)	COMMENTS
12/26/14	--	--	--	50	666.35	0	--	--	--	
12/27/14	--	--	--	52	666.51	0	--	--	--	
12/28/14	--	--	--	52	666.51	32,560	--	--	--	
12/29/14	--	--	--	44	665.85	0	--	--	--	
12/30/14	--	--	--	48	666.18	0	--	--	--	
12/31/14	--	--	--	52	666.51	18,175	--	--	165,849	Volume pro-rated based on even distribution for 32 days between 12/8/14 and 1/9/2015.
Total						**2,255,567**			**2,264,140**	
							1/9/2015	*4,259,516*	*230,746*	

Notes:

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

(1) Pump operating level between 2 ft (664.18 ft AMSL or 75.31 ft below the top of sump) and 5 ft (667.18 ft AMSL or 72.31 ft below the top of sump) of water in the GUS manhole.
(2) Water level in the GUS not to rise above the secondary liner system (667.50 ft AMSL) (equates to more than 63.84 inches of water depth or a water level of 71.99 ft below the top of sump).
(3) On April 18, 2014, it was discovered (before water level measurements were recorded on the field form) that the stilling well containing the pressure transducer (used to measure water levels for the PLC) was plugged and holding water. The pressure transducer was removed from the stilling well and placed directly in the GUS sump on April 18, 2014 and as a result, the water level measurements collected from the PLC are representative of actual conditions. PLC water depth measurements collected between 1/1/14 and 4/17/14 do not represent the actual water level in the GUS sump.
(--) Measurements were not collected.
(a) Water level/water depth less than previous measurement due to human error while taking the measurement.
(b) Flow meter readings (displayed on mag meter serial number F1095B16000) are cumulative unless noted otherwise.
(c) PLC records the maximum water level observed each day (midnight to midnight). Therefore, the manual water level/elevation will not match the water level/elevation recorded by the PLC.

Maximum	75.10	669.17	
Mean	72.34	667.15	
Total Volume Pumped from the GUS sump in 2014 (gallons)			2,264,140

Summary of 2013 Water Level Elevations
2013 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Plant
Bedford, Indiana

Sump	LCS	LDS	GUS
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)
1/1/14	--	--	--
1/2/14	--	--	--
1/3/14	--	--	--
1/4/14	--	--	--
1/5/14	--	--	--
1/6/14	--	--	--
1/7/14	673.2	669.3	667.7
1/8/14	--	--	--
1/9/14	--	--	--
1/10/14	--	--	--
1/11/14	--	--	--
1/12/14	--	--	--
1/13/14	673.4	669.6	668.0
1/14/14	--	--	--
1/15/14	--	--	--
1/16/14	--	--	--
1/17/14	--	--	--
1/18/14	--	--	--
1/19/14	--	--	--
1/20/14	673.3	669.7	668.1
1/21/14	--	--	--
1/22/14	--	--	--
1/23/14	--	--	--
1/24/14	--	--	--
1/25/14	--	--	--
1/26/14	--	--	--
1/27/14	673.2	669.7	668.1
1/28/14	--	--	--
1/29/14	--	--	--
1/30/14	--	--	--
1/31/14	--	--	--
2/1/14	--	--	--
2/2/14	--	--	--
2/3/14	673.4	669.9	668.3
2/4/14	--	--	--
2/5/14	--	--	--
2/6/14	--	--	--
2/7/14	--	--	--
2/8/14	--	--	--
2/9/14	--	--	--
2/10/14	--	--	--
2/11/14	--	--	--
2/12/14	--	--	--
2/13/14	--	--	--
2/14/14	--	--	--
2/15/14	--	--	--
2/16/14	--	--	--
2/17/14	--	--	--
2/18/14	--	--	--
2/19/14	--	--	--
2/20/14	--	--	--
2/21/14	--	--	--
2/22/14	--	--	--

Summary of 2013 Water Level Elevations
2013 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Plant
Bedford, Indiana

Sump	LCS	LDS	GUS
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)
2/23/14	--	--	--
2/24/14	--	--	--
2/25/14	--	--	--
2/26/14	--	--	--
2/27/14	--	--	--
2/28/14	671.1	669.5	667.9
3/1/14	--	--	--
3/2/14	--	--	--
3/3/14	671.2	669.5	667.9
3/4/14	--	--	--
3/5/14	--	--	--
3/6/14	--	--	--
3/7/14	--	--	--
3/8/14	--	--	--
3/9/14	--	--	--
3/10/14	671.2	669.5	667.9
3/11/14	--	--	--
3/12/14	--	--	--
3/13/14	--	--	--
3/14/14	--	--	--
3/15/14	--	--	--
3/16/14	--	--	--
3/17/14	670.3	668.6	667.0
3/18/14	671.7	--	--
3/19/14	--	--	--
3/20/14	--	--	--
3/21/14	--	--	--
3/22/14	--	--	--
3/23/14	--	--	--
3/24/14	--	--	--
3/25/14	671.0	--	--
3/26/14	--	669.1	667.5
3/27/14	--	--	--
3/28/14	--	--	--
3/29/14	--	--	--
3/30/14	--	--	--
3/31/14	--	--	--
4/1/14	--	--	--
4/2/14	--	--	--
4/3/14	--	--	--
4/4/14	--	--	--
4/5/14	--	--	--
4/6/14	--	--	--
4/7/14	--	--	--
4/8/14	--	--	--
4/9/14	671.1	669.0	667.4
4/10/14	--	--	--
4/11/14	--	--	--
4/12/14	--	--	--
4/13/14	--	--	--
4/14/14	--	--	--
4/15/14	--	--	--
4/16/14	--	669.1	667.5

Summary of 2013 Water Level Elevations
2013 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Plant
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Sump	LCS	LDS	GUS
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)
4/17/14	671.3	--	--
4/18/14	--	--	--
4/19/14	--	--	--
4/20/14	--	--	--
4/21/14	--	--	--
4/22/14	--	--	--
4/23/14	671.2	669.2	667.5
4/24/14	671.2	--	--
4/25/14	--	--	--
4/26/14	--	--	--
4/27/14	--	--	--
4/28/14	--	--	--
4/29/14	671.1	669.1	667.5
4/30/14	--	--	--
5/1/14	--	--	--
5/2/14	--	--	--
5/3/14	--	--	--
5/4/14	--	--	--
5/5/14	--	--	--
5/6/14	671.1	669.2	667.5
5/7/14	--	--	--
5/8/14	--	--	--
5/9/14	--	--	--
5/10/14	--	--	--
5/11/14	--	--	--
5/12/14	--	--	--
5/13/14	671.1	668.9	667.3
5/14/14	--	--	--
5/15/14	--	--	--
5/16/14	--	--	--
5/17/14	--	--	--
5/18/14	--	--	--
5/19/14	--	--	--
5/20/14	--	--	--
5/21/14	--	--	--
5/22/14	671.2	669.2	667.5
5/23/14	--	--	--
5/24/14	--	--	--
5/25/14	--	--	--
5/26/14	--	--	--
5/27/14	671.2	669.2	667.5
5/28/14	--	--	--
5/29/14	--	--	--
5/30/14	--	--	--
5/31/14	--	--	--
6/1/14	--	--	--
6/2/14	--	--	--
6/3/14	--	--	--
6/4/14	--	--	--
6/5/14	671.3	668.8	667.1
6/6/14	--	--	--
6/7/14	--	--	--
6/8/14	--	--	--

Summary of 2013 Water Level Elevations
2013 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Plant
Bedford, Indiana

Sump	LCS	LDS	GUS
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)
6/9/14	--	--	--
6/10/14	671.4	668.8	667.2
6/11/14	--	--	--
6/12/14	--	--	--
6/13/14	--	--	--
6/14/14	--	--	--
6/15/14	--	--	--
6/16/14	--	--	--
6/17/14	671.4	668.8	667.2
6/18/14	--	--	--
6/19/14	--	--	--
6/20/14	--	--	--
6/21/14	--	--	--
6/22/14	--	--	--
6/23/14	--	--	--
6/24/14	--	--	--
6/25/14	--	--	--
6/26/14	--	--	--
6/27/14	--	--	--
6/28/14	--	--	--
6/29/14	--	--	--
6/30/14	--	--	--
7/1/14	671.4	668.8	667.2
7/2/14	--	--	--
7/3/14	--	--	--
7/4/14	--	--	--
7/5/14	--	--	--
7/6/14	--	--	--
7/7/14	--	--	--
7/8/14	--	--	--
7/9/14	--	--	--
7/10/14	671.5	668.9	667.2
7/11/14	--	--	--
7/12/14	--	--	--
7/13/14	--	--	--
7/14/14	--	--	--
7/15/14	--	--	--
7/16/14	--	--	--
7/17/14	--	--	--
7/18/14	--	--	--
7/19/14	--	--	--
7/20/14	--	--	--
7/21/14	671.6	668.8	667.2
7/22/14	--	--	--
7/23/14	--	--	--
7/24/14	671.6	668.9	667.2
7/25/14	--	--	--
7/26/14	--	--	--
7/27/14	--	--	--
7/28/14	--	--	--
7/29/14	--	--	--
7/30/14	--	--	--
7/31/14	--	--	--

Summary of 2013 Water Level Elevations
2013 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Plant
Bedford, Indiana

Sump	LCS	LDS	GUS
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)
8/1/14	--	--	--
8/2/14	--	--	--
8/3/14	--	--	--
8/4/14	671.7	668.8	667.1
8/5/14	--	--	--
8/6/14	--	--	--
8/7/14	--	--	--
8/8/14	--	--	--
8/9/14	--	--	--
8/10/14	--	--	--
8/11/14	--	--	--
8/12/14	671.8	668.8	667.2
8/13/14	--	--	--
8/14/14	--	--	--
8/15/14	--	--	--
8/16/14	--	--	--
8/17/14	--	--	--
8/18/14	--	--	--
8/19/14	--	--	--
8/20/14	--	--	--
8/21/14	--	--	--
8/22/14	671.9	668.8	667.1
8/23/14	--	--	--
8/24/14	--	--	--
8/25/14	--	--	--
8/26/14	671.9	668.8	667.1
8/27/14	--	--	--
8/28/14	--	--	--
8/29/14	--	--	--
8/30/14	--	--	--
8/31/14	--	--	--
9/1/14	--	--	--
9/2/14	--	--	--
9/3/14	--	--	--
9/4/14	672.0	668.7	667.0
9/5/14	--	--	--
9/6/14	--	--	--
9/7/14	--	--	--
9/8/14	--	--	--
9/9/14	--	--	--
9/10/14	672.0	668.7	N/A
9/11/14	--	--	--
9/12/14	--	--	--
9/13/14	--	--	--
9/14/14	--	--	--
9/15/14	--	--	--
9/16/14	--	--	--
9/17/14	672.0	668.7	667.1
9/18/14	--	--	--
9/19/14	--	--	--
9/20/14	--	--	--
9/21/14	--	--	--
9/22/14	--	--	--

Summary of 2013 Water Level Elevations
2013 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Plant
Bedford, Indiana

Sump	LCS	LDS	GUS
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)
9/23/14	672.1	668.7	667.1
9/24/14	--	--	--
9/25/14	--	--	--
9/26/14	--	--	--
9/27/14	--	--	--
9/28/14	--	--	--
9/29/14	--	--	--
9/30/14	--	--	--
10/1/14	--	--	--
10/2/14	672.2	668.7	667.1
10/3/14	--	--	--
10/4/14	--	--	--
10/5/14	--	--	--
10/6/14	--	--	--
10/7/14	--	--	--
10/8/14	--	--	--
10/9/14	--	--	--
10/10/14	--	--	--
10/11/14	--	--	--
10/12/14	--	--	--
10/13/14	672.2	668.7	667.0
10/14/14	--	--	--
10/15/14	--	--	--
10/16/14	--	--	--
10/17/14	--	--	--
10/18/14	--	--	--
10/19/14	--	--	--
10/20/14	--	--	--
10/21/14	--	--	--
10/22/14	--	--	--
10/23/14	--	--	--
10/24/14	--	--	--
10/25/14	--	--	--
10/26/14	--	--	--
10/27/14	672.3	668.7	667.1
10/28/14	--	--	--
10/29/14	--	668.7	667.1
10/30/14	--	--	--
10/31/14	--	--	--
11/1/14	--	--	--
11/2/14	--	--	--
11/3/14	--	--	--
11/4/14	--	--	--
11/5/14	672.4	668.6	667.0
11/6/14	--	--	--
11/7/14	--	--	--
11/8/14	--	--	--
11/9/14	--	--	--
11/10/14	672.4	668.6	667.0
11/11/14	--	--	--
11/12/14	--	--	--
11/13/14	--	--	--
11/14/14	--	--	--

Summary of 2013 Water Level Elevations
2013 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Plant
Bedford, Indiana

Sump	LCS	LDS	GUS
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)
11/15/14	--	--	--
11/16/14	--	--	--
11/17/14	--	--	--
11/18/14	--	--	--
11/19/14	--	--	--
11/20/14	--	--	--
11/21/14	--	--	--
11/22/14	--	--	--
11/23/14	--	--	--
11/24/14	--	--	--
11/25/14	672.5	668.7	667.1
11/26/14	--	--	--
11/27/14	--	--	--
11/28/14	--	--	--
11/29/14	--	--	--
11/30/14	--	--	--
12/1/14	--	--	--
12/2/14	--	--	--
12/3/14	--	--	--
12/4/14	--	--	--
12/5/14	--	--	--
12/6/14	--	--	--
12/7/14	--	--	--
12/8/14	672.6	668.6	667.0
12/9/14	--	--	--
12/10/14	--	--	--
12/11/14	--	--	--
12/12/14	--	--	--
12/13/14	--	--	--
12/14/14	--	--	--
12/15/14	--	--	--
12/16/14	--	--	--
12/17/14	672.6	668.6	667.0
12/18/14	--	--	--
12/19/14	--	--	--
12/20/14	--	--	--
12/21/14	--	--	--
12/22/14	--	--	--
12/23/14	--	--	--
12/24/14	--	--	--
12/25/14	--	--	--
12/26/14	--	--	--
12/27/14	--	--	--
12/28/14	--	--	--
12/29/14	--	--	--
12/30/14	--	--	--
12/31/14	--	--	--

Table 2.5

2014 LCS, LDS, and Underdrain Maximum Water Elevation Summary
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Plant
Bedford, Indiana

Date	Maximum Water Level (based on manual measurements), measured in feet						Remarks
	LCS[1]		LDS[2]		GUS[3]		
	Water Depth (ft)	Water Surface Elev. (ft AMSL)	Water Depth (ft)	Water Surface Elev. (ft AMSL)	Water Depth (ft)	Water Surface Elev. (ft AMSL)	
Jan-14	2.43	673.43	1.24	669.74	6.91	669.09	
Feb-14	2.43	673.43	1.44	669.94	6.61	668.79	
Mar-14	0.71	671.71	1.04	669.54	6.71	668.89	
Apr-14	0.27	671.27	0.66	669.16	6.99	669.17	
May-14	0.23	671.23	0.65	669.15	5.87	668.05	
Jun-14	0.41	671.41	0.33	668.83	4.69	666.87	
Jul-14	0.64	671.64	0.36	668.86	5.51	667.69	
Aug-14	0.89	671.89	0.30	668.80	5.73	667.91	
Sep-14	1.06	672.06	0.23	668.73	4.50	666.68	
Oct-14	1.32	672.32	0.23	668.73	4.45	666.63	
Nov-14	1.47	672.47	0.20	668.70	4.16	666.34	
Dec-14	1.60	672.60	0.12	668.62	5.28	667.46	

Notes:

AMSL - Above mean sea level
ft - feet
Top of sump (datum reference) = 0.0
Diameter of LCS and LDS sumps = 6.0 feet
Diameter of Underdrain sump = 3 feet

[1] LCS: Top of sump [top of concrete manhole] (feet AMSL): 740.83, Bottom of sump (feet AMSL): 671.00, Total depth of sump manhole (feet): 69.83

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

[3] GUS: Top of sump [top of HDPE riser] (feet AMSL): 739.49, Bottom of sump (feet AMSL): 662.18, Total depth of sump manhole (feet): 77.31

Table 2.6

2014 Summary of Monthly Total Volume of Water Treated In SSC WTP and 2,000 GPM Treatment System
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Month	SSC WTP Number of Operational Days	Volume of Water Treated/Discharged at SSC WTP (gallons x 10^6)	Daily Average Water Treated/Discharged at the SSC WTP (gpm)	2,000 gpm Treatment System Number of Operational Days	Volume of Water Treated/Discharged at the 2,000 gpm Treatment System (gallons x 10^6)	Daily Average Water Treated/Discharged at the 2,000 gpm Treatment System (gpm)	Total Volume of Water Treated/Discharged
Jan-14	0	0.000	0	6	7.7952	902	7.795
Feb-14	0	0.000	0	8	5.818696	505	5.819
Mar-14	0	0.000	0	4	3.361008	584	3.361
Apr-14	6	0.293	34	14	18.3212	0	18.614
May-14	31	2.021	45	4	5.0648	0	7.085
Jun-14	30	1.615	37	7	4.114992	408	5.730
Jul-14	15	0.440	20	3	2.763896	640	3.204
Aug-14	31	0.792	18	0	0	0	0.792
Sep-14	30	1.069	25	0	0	0	1.069
Oct-14	30	1.360	31	0	0	0	1.360
Nov-14	28	1.199	30	0	0	0	1.199
Dec-14	29	2.341	56	5	4.446	618	6.787
Total	**230**	**11.128**		**51**	**51.686**		**62.814**
Month Average	**-**	**0.927**		**4.3**	**4.307**		**5.23**
Daily Average	**-**	**0.048**		**-**	**1.013**		**0.17**

Table 3.1

Summary of Total PCBS Analytical Results for EI CA750 2014 Second Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		Plant_property	Plant_Property	EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	Plant_property	P205	P209
Sample Location:		MW-X043Y176	MW-X043Y186	CH-42	CH-42A	CH-43	CH-44	CH-44	MW-X047Y236	MW-X277Y100	MW-X300Y199I-4
Sample Identification:		GW-051314-SA-002	GW-051314-SA-001	GW-051414-JL-006	GW-051414-JL-004	GW-051414-SA-003	GW-051414-SA-005	GW-051414-SA-007	GW-051414-JL-010	GW-051414-JL-008	GW-051414-SA-009
Sample Date:		5/13/2014	5/13/2014	5/14/2014	5/14/2014	5/14/2014	5/14/2014	5/14/2014	5/14/2014	5/14/2014	5/14/2014
Sample Type:								Duplicate			
	Units										
PCBs											
Aroclor-1016 (PCB-1016)	µg/L	0.21 U	0.19 U	0.19 U	0.21 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.21 U	0.19 U	0.19 U	0.21 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.21 U	0.19 U	0.19 U	0.21 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.21 U	0.19 U	0.096 J	0.21 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.21 U	0.19 U	0.19 U	0.21 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.21 U	R	0.19 U	0.21 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.21 U	R	0.19 U	0.21 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.20 U
Total PCBs	µg/L	ND	ND	0.096 J	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.24 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.24 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.24 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.24 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.24 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.24 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.24 U
Total PCBs (dissolved)	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	µg/L	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	µg/L	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	--	--	--	--	--	--	--	--	--	--
2-Hexanone	µg/L	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	--	--	--	--	--	--	--	--	--
Acetone	µg/L	--	--	--	--	--	--	--	--	--	--
Benzene	µg/L	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	µg/L	--	--	--	--	--	--	--	--	--	--
Bromoform	µg/L	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	µg/L	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	µg/L	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--
Chloroethane	µg/L	--	--	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/L	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/L	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	--	--
Cyclohexane	µg/L	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	--	--	--	--	--	--	--	--	--	--

Table 3.1

Summary of Total PCBS Analytical Results for El CA750 2014 Second Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		**Plant_property**	**Plant_Property**	**EastPlantArea**	**EastPlantArea**	**EastPlantArea**	**EastPlantArea**	**EastPlantArea**	**Plant_property**	**P205**	**P209**
Sample Location:		**MW-X043Y176**	**MW-X043Y186**	**CH-42**	**CH-42A**	**CH-43**	**CH-44**	**CH-44**	**MW-X047Y236**	**MW-X277Y100**	**MW-X300Y199I-4**
Sample Identification:		**GW-051314-SA-002**	**GW-051314-SA-001**	**GW-051414-JL-006**	**GW-051414-JL-004**	**GW-051414-SA-003**	**GW-051414-SA-005**	**GW-051414-SA-007**	**GW-051414-JL-010**	**GW-051414-JL-008**	**GW-051414-SA-009**
Sample Date:		**5/13/2014**	**5/13/2014**	**5/14/2014**	**5/14/2014**	**5/14/2014**	**5/14/2014**	**5/14/2014**	**5/14/2014**	**5/14/2014**	**5/14/2014**
Sample Type:								**Duplicate**			
	Units										
PCBs											
Dichlorodifluoromethane (CFC-12)	µg/L	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	--	--	--	--	--	--	--	--	--	--
Isopropyl benzene	µg/L	--	--	--	--	--	--	--	--	--	--
Methyl acetate	µg/L	--	--	--	--	--	--	--	--	--	--
Methyl cyclohexane	µg/L	--	--	--	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/L	--	--	--	--	--	--	--	--	--	--
Methylene chloride	µg/L	--	--	--	--	--	--	--	--	--	--
Styrene	µg/L	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	--	--	--	--	--	--	--	--	--	--
Toluene	µg/L	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	--	--
Trichloroethene	µg/L	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/L	--	--	--	--	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	µg/L	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	µg/L	--	--	--	--	--	--	--	--	--	--
Xylenes (total)	µg/L	--	--	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs)											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
2,4,5-Trichlorophenol	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
2,4,6-Trichlorophenol	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
2,4-Dichlorophenol	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
2,4-Dimethylphenol	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
2,4-Dinitrophenol	µg/L	--	--	--	--	--	--	--	--	50 U	--
2,4-Dinitrotoluene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
2,6-Dinitrotoluene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
2-Chloronaphthalene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
2-Chlorophenol	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
2-Methylnaphthalene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
2-Methylphenol	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
2-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	50 U	--
2-Nitrophenol	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
3&4-Methylphenol	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
3,3'-Dichlorobenzidine	µg/L	--	--	--	--	--	--	--	--	50 U	--
3-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	50 U	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--	--	--	--	--	--	50 U	--
4-Bromophenyl phenyl ether	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
4-Chloro-3-methylphenol	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
4-Chloroaniline	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
4-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	50 U	--
4-Nitrophenol	µg/L	--	--	--	--	--	--	--	--	50 U	--
Acenaphthene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Acenaphthylene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Acetophenone	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Anthracene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Atrazine	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Benzaldehyde	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Benzo(a)anthracene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--

Table 3.1

Summary of Total PCBS Analytical Results for El CA750 2014 Second Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		**Plant_property**	**Plant_Property**	**EastPlantArea**	**EastPlantArea**	**EastPlantArea**	**EastPlantArea**	**EastPlantArea**	**Plant_property**	**P205**	**P209**
Sample Location:		**MW-X043Y176**	**MW-X043Y186**	**CH-42**	**CH-42A**	**CH-43**	**CH-44**	**CH-44**	**MW-X047Y236**	**MW-X277Y100**	**MW-X300Y199I-4**
Sample Identification:		**GW-051314-SA-002**	**GW-051314-SA-001**	**GW-051414-JL-006**	**GW-051414-JL-004**	**GW-051414-SA-003**	**GW-051414-SA-005**	**GW-051414-SA-007**	**GW-051414-JL-010**	**GW-051414-JL-008**	**GW-051414-SA-009**
Sample Date:		**5/13/2014**	**5/13/2014**	**5/14/2014**	**5/14/2014**	**5/14/2014**	**5/14/2014**	**5/14/2014**	**5/14/2014**	**5/14/2014**	**5/14/2014**
Sample Type:								**Duplicate**			
PCBs	***Units***										
Benzo(a)pyrene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Benzo(b)fluoranthene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Benzo(g,h,i)perylene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Benzo(k)fluoranthene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
bis(2-Chloroethyl)ether	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Caprolactam	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Carbazole	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Chrysene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Dibenz(a,h)anthracene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Dibenzofuran	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Diethyl phthalate	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Dimethyl phthalate	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Fluoranthene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Fluorene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Hexachlorobenzene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Hexachlorobutadiene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Hexachlorocyclopentadiene	µg/L	--	--	--	--	--	--	--	--	50 U	--
Hexachloroethane	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Isophorone	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Naphthalene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Nitrobenzene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
N-Nitrosodiphenylamine	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Pentachlorophenol	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Phenanthrene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Phenol	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Pyrene	µg/L	--	--	--	--	--	--	--	--	9.9 U	--
Field Parameters											
Conductivity, field	mS/cm	1.507	1.914	1.034	0.716	1.006	1.058	1.058	0.781	1.059	0.615
Dissolved oxygen (DO), field	µg/L	420	380	760	920	1230	1150	1150	580	2200	790
Oxidation reduction potential (ORP), field	millivolts	-132.6	-139.3	34.8	262.6	-63.1	-85.4	-85.4	-102.4	156.5	-48
pH, field	s.u.	7	6.86	6.68	6.8	6.53	6.69	6.69	7.08	6.76	7.53
Temperature, field	Deg C	14.22	15.59	13.8	13.08	13.01	13.4	13.4	14.57	14.08	13.52
Turbidity, field	NTU	39.6	24	0.53	1.14	3.31	3.02	3.02	0.44	0.43	2.37

Notes:

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

Table 3.1

Summary of Total PCBS Analytical Results for EI CA750 2014 Second Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		**MonitoringWell_RFIBoundary_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**P209**
Sample Location:		**MW-X033Y147S**	**MW-X085Y070S-1**	**MW-X085Y070S-1**	**MW-X085Y070S-2**	**MW-X169Y058S-1**	**MW-X300Y199I-1**
Sample Identification:		**GW-051514-JL-018**	**GW-051514-SA-019**	**GW-051514-SA-021**	**GW-051514-SA-017**	**GW-051514-SA-015**	**GW-062713-SA-009**
Sample Date:		**5/15/2014**	**5/15/2014**	**5/15/2014**	**5/15/2014**	**5/15/2014**	**6/27/2013**
Sample Type:				**Duplicate**			
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.19 U	0.19 U	1.0 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.19 U	0.19 U	1.0 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.19 U	0.19 U	1.0 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.19 U	0.19 U	1.0 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.19 U	0.19 U	1.5	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.19 U	0.19 U	1.0 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.19 U	0.19 U	1.0 U	0.19 U	0.19 U
Total PCBs	µg/L	ND	ND	ND	1.5	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.96 U	0.20 UJ	0.20 U	0.21 U	0.20 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.96 U	0.20 UJ	0.20 U	0.21 U	0.20 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.96 U	0.20 UJ	0.20 U	0.21 U	0.20 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.96 U	0.20 UJ	0.20 U	0.21 U	0.20 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.96 U	0.20 UJ	0.20 U	0.21 U	0.20 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.96 UJ	0.20 UJ	0.20 UJ	0.21 UJ	0.20 UJ	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.96 UJ	0.20 UJ	0.20 UJ	0.21 UJ	0.20 UJ	0.19 U
Total PCBs (dissolved)	µg/L	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)							
1,1,1-Trichloroethane	µg/L	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	--	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/L	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	µg/L	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	--	--	--	--	--	--
1,3-Dichlorobenzene	µg/L	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	--	--	--	--	--	--
2-Hexanone	µg/L	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	--	--	--	--	--
Acetone	µg/L	--	--	--	--	--	--
Benzene	µg/L	--	--	--	--	--	--
Bromodichloromethane	µg/L	--	--	--	--	--	--
Bromoform	µg/L	--	--	--	--	--	--
Bromomethane (Methyl bromide)	µg/L	--	--	--	--	--	--
Carbon disulfide	µg/L	--	--	--	--	--	--
Carbon tetrachloride	µg/L	--	--	--	--	--	--
Chlorobenzene	µg/L	--	--	--	--	--	--
Chloroethane	µg/L	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/L	--	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/L	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/L	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	--	--	--	--	--	--
Cyclohexane	µg/L	--	--	--	--	--	--
Dibromochloromethane	µg/L	--	--	--	--	--	--

Summary of Total PCBS Analytical Results for EI CA750 2014 Second Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		**MonitoringWell_RFIBoundary_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**P209**
Sample Location:		**MW-X033Y147S**	**MW-X085Y070S-1**	**MW-X085Y070S-1**	**MW-X085Y070S-2**	**MW-X169Y058S-1**	**MW-X300Y199I-1**
Sample Identification:		**GW-051514-JL-018**	**GW-051514-SA-019**	**GW-051514-SA-021**	**GW-051514-SA-017**	**GW-051514-SA-015**	**GW-062713-SA-009**
Sample Date:		**5/15/2014**	**5/15/2014**	**5/15/2014**	**5/15/2014**	**5/15/2014**	**6/27/2013**
Sample Type:				**Duplicate**			
	Units						
PCBs							
Dichlorodifluoromethane (CFC-12)	µg/L	--	--	--	--	--	
Ethylbenzene	µg/L	--	--	--	--	--	
Isopropyl benzene	µg/L	--	--	--	--	--	
Methyl acetate	µg/L	--	--	--	--	--	
Methyl cyclohexane	µg/L	--	--	--	--	--	
Methyl tert butyl ether (MTBE)	µg/L	--	--	--	--	--	
Methylene chloride	µg/L	--	--	--	--	--	
Styrene	µg/L	--	--	--	--	--	
Tetrachloroethene	µg/L	--	--	--	--	--	
Toluene	µg/L	--	--	--	--	--	
trans-1,2-Dichloroethene	µg/L	--	--	--	--	--	
trans-1,3-Dichloropropene	µg/L	--	--	--	--	--	
Trichloroethene	µg/L	--	--	--	--	--	
Trichlorofluoromethane (CFC-11)	µg/L	--	--	--	--	--	
Trifluorotrichloroethane (Freon 113)	µg/L	--	--	--	--	--	
Vinyl chloride	µg/L	--	--	--	--	4.2	
Xylenes (total)	µg/L	--	--	--	--	--	
Semi-Volatile Organic Compounds (SVOCs)							
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--	--	--	
2,4,5-Trichlorophenol	µg/L	--	--	--	--	--	
2,4,6-Trichlorophenol	µg/L	--	--	--	--	--	
2,4-Dichlorophenol	µg/L	--	--	--	--	--	
2,4-Dimethylphenol	µg/L	--	--	--	--	--	
2,4-Dinitrophenol	µg/L	--	--	--	--	--	
2,4-Dinitrotoluene	µg/L	--	--	--	--	--	
2,6-Dinitrotoluene	µg/L	--	--	--	--	--	
2-Chloronaphthalene	µg/L	--	--	--	--	--	
2-Chlorophenol	µg/L	--	--	--	--	--	
2-Methylnaphthalene	µg/L	--	--	--	--	--	
2-Methylphenol	µg/L	--	--	--	--	--	
2-Nitroaniline	µg/L	--	--	--	--	--	
2-Nitrophenol	µg/L	--	--	--	--	--	
3&4-Methylphenol	µg/L	--	--	--	--	--	
3,3'-Dichlorobenzidine	µg/L	--	--	--	--	--	
3-Nitroaniline	µg/L	--	--	--	--	--	
4,6-Dinitro-2-methylphenol	µg/L	--	--	--	--	--	
4-Bromophenyl phenyl ether	µg/L	--	--	--	--	--	
4-Chloro-3-methylphenol	µg/L	--	--	--	--	--	
4-Chloroaniline	µg/L	--	--	--	--	--	
4-Chlorophenyl phenyl ether	µg/L	--	--	--	--	--	
4-Nitroaniline	µg/L	--	--	--	--	--	
4-Nitrophenol	µg/L	--	--	--	--	--	
Acenaphthene	µg/L	--	--	--	--	--	
Acenaphthylene	µg/L	--	--	--	--	--	
Acetophenone	µg/L	--	--	--	--	--	
Anthracene	µg/L	--	--	--	--	--	
Atrazine	µg/L	--	--	--	--	--	
Benzaldehyde	µg/L	--	--	--	--	--	
Benzo(a)anthracene	µg/L	--	--	--	--	--	

Table 3.1

Summary of Total PCBS Analytical Results for EI CA750 2014 Second Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		**MonitoringWell_RFIBoundary_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**A001MonitoringWell_WestPlantArea**	**P209**
Sample Location:		**MW-X033Y147S**	**MW-X085Y070S-1**	**MW-X085Y070S-1**	**MW-X085Y070S-2**	**MW-X169Y058S-1**	**MW-X300Y199I-1**
Sample Identification:		**GW-051514-JL-018**	**GW-051514-SA-019**	**GW-051514-SA-021**	**GW-051514-SA-017**	**GW-051514-SA-015**	**GW-062713-SA-009**
Sample Date:		**5/15/2014**	**5/15/2014**	**5/15/2014**	**5/15/2014**	**5/15/2014**	**6/27/2013**
Sample Type:				**Duplicate**			
	Units						
PCBs							
Benzo(a)pyrene	µg/L	--	--	--	--	--	
Benzo(b)fluoranthene	µg/L	--	--	--	--	--	
Benzo(g,h,i)perylene	µg/L	--	--	--	--	--	
Benzo(k)fluoranthene	µg/L	--	--	--	--	--	
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--	--	--	
bis(2-Chloroethoxy)methane	µg/L	--	--	--	--	--	
bis(2-Chloroethyl)ether	µg/L	--	--	--	--	--	
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--	--	--	
Butyl benzylphthalate (BBP)	µg/L	--	--	--	--	--	
Caprolactam	µg/L	--	--	--	--	--	
Carbazole	µg/L	--	--	--	--	--	
Chrysene	µg/L	--	--	--	--	--	
Dibenz(a,h)anthracene	µg/L	--	--	--	--	--	
Dibenzofuran	µg/L	--	--	--	--	--	
Diethyl phthalate	µg/L	--	--	--	--	--	
Dimethyl phthalate	µg/L	--	--	--	--	--	
Di-n-butylphthalate (DBP)	µg/L	--	--	--	--	--	
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--	--	--	
Fluoranthene	µg/L	--	--	--	--	--	
Fluorene	µg/L	--	--	--	--	--	
Hexachlorobenzene	µg/L	--	--	--	--	--	
Hexachlorobutadiene	µg/L	--	--	--	--	--	
Hexachlorocyclopentadiene	µg/L	--	--	--	--	--	
Hexachloroethane	µg/L	--	--	--	--	--	
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--	--	--	
Isophorone	µg/L	--	--	--	--	--	
Naphthalene	µg/L	--	--	--	--	--	
Nitrobenzene	µg/L	--	--	--	--	--	
N-Nitrosodi-n-propylamine	µg/L	--	--	--	--	--	
N-Nitrosodiphenylamine	µg/L	--	--	--	--	--	
Pentachlorophenol	µg/L	--	--	--	--	--	
Phenanthrene	µg/L	--	--	--	--	--	
Phenol	µg/L	--	--	--	--	--	
Pyrene	µg/L	--	--	--	--	--	
Field Parameters							
Conductivity, field	mS/cm	1.876	11.37	11.37	7.262	3.98	0.486
Dissolved oxygen (DO), field	µg/L	670	2650	2650	470	730	5400
Oxidation reduction potential (ORP), field	millivolts	9.7	298.1	298.1	80.3	-35.1	3.8
pH, field	s.u.	6.62	6.63	6.63	6.91	6.88	7.28
Temperature, field	Deg C	15.32	15.62	15.2	15.48	13.6	15.77
Turbidity, field	NTU	3.75	0.8	0.8	9.63	0.87	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 El CA750 2014 Second Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		P006	P006	Plant_property	Plant_Property	A001MonitoringWell_WestPlantArea	EastPlantArea	P015	P015
Sample Location:		MW-X315Y115	MW-X315Y150	MW-X043Y176	MW-X043Y186	MW-X169Y058S-1	MW-X227Y054	Tributary 3-3	Tributary 3-3
Sample Identification:		GW-062713-JH-014	GW-062713-JH-016	GW-062813-JH-018	GW-062813-JH-020	GW-062813-SA-021	GW-062813-SA-025	GW-051614-SA-023	GW-051614-SA-024
Sample Date:		6/27/2013	6/27/2013	6/28/2013	6/28/2013	6/28/2013	6/28/2013	5/16/2014	5/16/2014
Sample Type:									Duplicate
	Units								
PCBs									
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	5.4	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U	0.067 J
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs	µg/L	ND	ND	ND	ND	ND	5.4	ND	0.067 J
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 UJ	0.19 UJ
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 UJ	0.19 UJ
Total PCBs (dissolved)	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)									
1,1,1-Trichloroethane	µg/L								
1,1,2,2-Tetrachloroethane	µg/L								
1,1,2-Trichloroethane	µg/L								
1,1-Dichloroethane	µg/L								
1,1-Dichloroethene	µg/L								
1,2,4-Trichlorobenzene	µg/L								
1,2-Dibromo-3-chloropropane (DBCP)	µg/L								
1,2-Dibromoethane (Ethylene dibromide)	µg/L								
1,2-Dichlorobenzene	µg/L								
1,2-Dichloroethane	µg/L								
1,2-Dichloropropane	µg/L								
1,3-Dichlorobenzene	µg/L								
1,4-Dichlorobenzene	µg/L								
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L								
2-Hexanone	µg/L								
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L								
Acetone	µg/L								
Benzene	µg/L								
Bromodichloromethane	µg/L								
Bromoform	µg/L								
Bromomethane (Methyl bromide)	µg/L								
Carbon disulfide	µg/L								
Carbon tetrachloride	µg/L								
Chlorobenzene	µg/L								
Chloroethane	µg/L								
Chloroform (Trichloromethane)	µg/L								
Chloromethane (Methyl chloride)	µg/L								
cis-1,2-Dichloroethene	µg/L								
cis-1,3-Dichloropropene	µg/L								
Cyclohexane	µg/L								
Dibromochloromethane	µg/L								

Table 3.1

Summary of Total PCBS Analytical Results for EI CA750 2014 Second Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
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Bedford, Indiana

Area		**P006**	**P006**	**Plant_property**	**Plant_Property**	**A001MonitoringWell_WestPlantArea**	**EastPlantArea**	**P015**	**P015**
Sample Location:		**MW-X315Y115**	**MW-X315Y150**	**MW-X043Y176**	**MW-X043Y186**	**MW-X169Y058S-1**	**MW-X227Y054**	**Tributary 3-3**	**Tributary 3-3**
Sample Identification:		**GW-062713-JH-014**	**GW-062713-JH-016**	**GW-062813-JH-018**	**GW-062813-JH-020**	**GW-062813-SA-021**	**GW-062813-SA-025**	**GW-051614-SA-023**	**GW-051614-SA-024**
Sample Date:		**6/27/2013**	**6/27/2013**	**6/28/2013**	**6/28/2013**	**6/28/2013**	**6/28/2013**	**5/16/2014**	**5/16/2014**
Sample Type:									**Duplicate**
	Units								
PCBs									
Dichlorodifluoromethane (CFC-12)	µg/L								
Ethylbenzene	µg/L								
Isopropyl benzene	µg/L								
Methyl acetate	µg/L								
Methyl cyclohexane	µg/L								
Methyl tert butyl ether (MTBE)	µg/L								
Methylene chloride	µg/L								
Styrene	µg/L								
Tetrachloroethene	µg/L								
Toluene	µg/L								
trans-1,2-Dichloroethene	µg/L								
trans-1,3-Dichloropropene	µg/L								
Trichloroethene	µg/L								
Trichlorofluoromethane (CFC-11)	µg/L								
Trifluorotrichloroethane (Freon 113)	µg/L								
Vinyl chloride	µg/L								
Xylenes (total)	µg/L								
Semi-Volatile Organic Compounds (SVOCs)									
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L								
2,4,5-Trichlorophenol	µg/L								
2,4,6-Trichlorophenol	µg/L								
2,4-Dichlorophenol	µg/L								
2,4-Dimethylphenol	µg/L								
2,4-Dinitrophenol	µg/L								
2,4-Dinitrotoluene	µg/L								
2,6-Dinitrotoluene	µg/L								
2-Chloronaphthalene	µg/L								
2-Chlorophenol	µg/L								
2-Methylnaphthalene	µg/L								
2-Methylphenol	µg/L								
2-Nitroaniline	µg/L								
2-Nitrophenol	µg/L								
3&4-Methylphenol	µg/L								
3,3'-Dichlorobenzidine	µg/L								
3-Nitroaniline	µg/L								
4,6-Dinitro-2-methylphenol	µg/L								
4-Bromophenyl phenyl ether	µg/L								
4-Chloro-3-methylphenol	µg/L								
4-Chloroaniline	µg/L								
4-Chlorophenyl phenyl ether	µg/L								
4-Nitroaniline	µg/L								
4-Nitrophenol	µg/L								
Acenaphthene	µg/L								
Acenaphthylene	µg/L								
Acetophenone	µg/L								
Anthracene	µg/L								
Atrazine	µg/L								
Benzaldehyde	µg/L								
Benzo(a)anthracene	µg/L								

Table 3.1

Summary of Total PCBS Analytical Results for EI CA750 2014 Second Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		**P006**	**P006**	**Plant_property**	**Plant_Property**	**A001MonitoringWell_WestPlantArea**	**EastPlantArea**	**P015**	**P015**
Sample Location:		**MW-X315Y115**	**MW-X315Y150**	**MW-X043Y176**	**MW-X043Y186**	**MW-X169Y058S-1**	**MW-X227Y054**	**Tributary 3-3**	**Tributary 3-3**
Sample Identification:		**GW-062713-JH-014**	**GW-062713-JH-016**	**GW-062813-JH-018**	**GW-062813-JH-020**	**GW-062813-SA-021**	**GW-062813-SA-025**	**GW-051614-SA-023**	**GW-051614-SA-024**
Sample Date:		**6/27/2013**	**6/27/2013**	**6/28/2013**	**6/28/2013**	**6/28/2013**	**6/28/2013**	**5/16/2014**	**5/16/2014**
Sample Type:									**Duplicate**
	Units								
PCBs									
Benzo(a)pyrene	µg/L								
Benzo(b)fluoranthene	µg/L								
Benzo(g,h,i)perylene	µg/L								
Benzo(k)fluoranthene	µg/L								
Biphenyl (1,1-Biphenyl)	µg/L								
bis(2-Chloroethoxy)methane	µg/L								
bis(2-Chloroethyl)ether	µg/L								
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L								
Butyl benzylphthalate (BBP)	µg/L								
Caprolactam	µg/L								
Carbazole	µg/L								
Chrysene	µg/L								
Dibenz(a,h)anthracene	µg/L								
Dibenzofuran	µg/L								
Diethyl phthalate	µg/L								
Dimethyl phthalate	µg/L								
Di-n-butylphthalate (DBP)	µg/L								
Di-n-octyl phthalate (DnOP)	µg/L								
Fluoranthene	µg/L								
Fluorene	µg/L								
Hexachlorobenzene	µg/L								
Hexachlorobutadiene	µg/L								
Hexachlorocyclopentadiene	µg/L								
Hexachloroethane	µg/L								
Indeno(1,2,3-cd)pyrene	µg/L								
Isophorone	µg/L								
Naphthalene	µg/L								
Nitrobenzene	µg/L								
N-Nitrosodi-n-propylamine	µg/L								
N-Nitrosodiphenylamine	µg/L								
Pentachlorophenol	µg/L								
Phenanthrene	µg/L								
Phenol	µg/L								
Pyrene	µg/L								
Field Parameters									
Conductivity, field	mS/cm	0.512	0.43	1.484	1.937	3.871	1.316	0.004	0.004
Dissolved oxygen (DO), field	µg/L	830	1620	1070	600	4110	5860	7040	7040
Oxidation reduction potential (ORP), field	millivolts	-67.2	-52.1	-92.9	-81.8	-35.4	-142.9	-58.2	-58.2
pH, field	s.u.	7.02	7.42	6.96	7.1	6.99	7.51	7.37	7.37
Temperature, field	Deg C	19.66	18.85	14.22	14.99	16.01	17.18	17.53	17.53
Turbidity, field	NTU	4.11	32.4	17.3	18.7	10.24	74.2	4.39	4.39

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 2014 First Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	Plant_property	Plant_Property	P209	P209	P209	P006	P006
Sample Location:		**CH-42**	**CH-42A**	**CH-43**	**CH-44**	**CH-44**	**MW-X043Y176**	**MW-X043Y186**	**MW-X300Y199I-1**	**MW-X300Y199I-2**	**MW-X300Y199I-4**	**MW-X315Y115**	**MW-X315Y150**
Sample Identification:		**GW-111014-JL-004**	**GW-111014-JL-002**	**GW-111014-SA-001**	**GW-111014-SA-003**	**GW-111014-SA-005**	**GW-111114-JL-010**	**GW-111114-JL-012**	**GW-111114-SA-011**	**GW-111114-SA-009**	**GW-111114-SA-007**	**GW-111114-JL-006**	**GW-111114-JL-008**
Sample Date:		**11/10/2014**	**11/10/2014**	**11/10/2014**	**11/10/2014**	**11/10/2014**	**11/11/2014**	**11/11/2014**	**11/11/2014**	**11/11/2014**	**11/11/2014**	**11/11/2014**	**11/11/2014**
Sample Type:						**Duplicate**							
	Units												
PCBs													
Aroclor-1016 (PCB-1016)	µg/L	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.20 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.21 UJ	0.19 UJ	0.19 UJ
Aroclor-1221 (PCB-1221)	µg/L	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.20 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.21 UJ	0.19 UJ	0.19 UJ
Aroclor-1232 (PCB-1232)	µg/L	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.20 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.21 UJ	0.19 UJ	0.19 UJ
Aroclor-1242 (PCB-1242)	µg/L	0.080 J	0.19 UJ	0.19 UJ	0.19 UJ	0.20 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.21 UJ	0.19 UJ	0.19 UJ
Aroclor-1248 (PCB-1248)	µg/L	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.20 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.21 UJ	0.19 UJ	0.19 UJ
Aroclor-1254 (PCB-1254)	µg/L	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.20 UJ	0.19 UJ	R	0.19 UJ	0.19 UJ	0.21 UJ	0.19 UJ	0.19 UJ
Aroclor-1260 (PCB-1260)	µg/L	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.20 UJ	0.19 UJ	R	0.19 UJ	0.19 UJ	0.21 UJ	0.19 UJ	0.19 UJ
Total PCBs	µg/L	0.08 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.21 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.21 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.21 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.21 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.21 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.21 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.21 U	0.20 U	0.20 U
Total PCBs (dissolved)	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl benzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	µg/L	--	--	--	--	--	--	--	--	--	--	--	--

Table 3.2

Summary of Total PCBS Analytical Results for EI Ca750 2014 First Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	Plant_property	Plant_Property	P209	P209	P209	P006	P006
Sample Location:		CH-42	CH-42A	CH-43	CH-44	CH-44	MW-X043Y176	MW-X043Y186	MW-X300Y199I-1	MW-X300Y199I-2	MW-X300Y199I-4	MW-X315Y115	MW-X315Y150
Sample Identification:		GW-111014-JL-004	GW-111014-JL-002	GW-111014-SA-001	GW-111014-SA-003	GW-111014-SA-005	GW-111114-JL-010	GW-111114-JL-012	GW-111114-SA-011	GW-111114-SA-009	GW-111114-SA-007	GW-111114-JL-006	GW-111114-JL-008
Sample Date:		11/10/2014	11/10/2014	11/10/2014	11/10/2014	11/10/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014	11/11/2014
Sample Type:						Duplicate							
	Units												
Methyl cyclohexane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (total)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) eth	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
3&4-Methylphenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Atrazine	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--

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GM CET Bedford Facility
Bedford, Indiana

Area		EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	Plant_property	Plant_Property	P209	P209	P209	P006	P006
Sample Location:		**CH-42**	**CH-42A**	**CH-43**	**CH-44**	**CH-44**	**MW-X043Y176**	**MW-X043Y186**	**MW-X300Y199I-1**	**MW-X300Y199I-2**	**MW-X300Y199I-4**	**MW-X315Y115**	**MW-X315Y150**
Sample Identification:		**GW-111014-JL-004**	**GW-111014-JL-002**	**GW-111014-SA-001**	**GW-111014-SA-003**	**GW-111014-SA-005**	**GW-111114-JL-010**	**GW-111114-JL-012**	**GW-111114-SA-011**	**GW-111114-SA-009**	**GW-111114-SA-007**	**GW-111114-JL-006**	**GW-111114-JL-008**
Sample Date:		**11/10/2014**	**11/10/2014**	**11/10/2014**	**11/10/2014**	**11/10/2014**	**11/11/2014**	**11/11/2014**	**11/11/2014**	**11/11/2014**	**11/11/2014**	**11/11/2014**	**11/11/2014**
Sample Type:						**Duplicate**							
	Units												
Caprolactam	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--
Field Parameters													
Conductivity, field	mS/cm	0.77	0.541	0.956	0.931	0.931	1.51	1.668	0.437	0.487	0.66	0.399	0.234
Dissolved oxygen (DO), field	µg/L	490	1530	950	710	710	410	560	1320	1130	2070	270	230
Oxidation reduction potential (ORP), field	millivolts	66.4	222.5	-119.9	-18	-18	-26.5	-30.9	-54.8	-29.9	238.3	2.6	-72.8
pH, field	s.u.	6.81	7.49	6.9	6.85	6.85	6.66	6.53	6.88	6.84	7.06	7.11	7.33
Temperature, field	Deg C	14.5	15.12	15.45	15	15	13.4	12.77	13.31	14.6	15.3	13.86	14.57
Turbidity, field	NTU	0.96	0.75	0.9	3.46	3.46	5.6	2.38	0.38	0.66	0.46	9	37.6

Notes:

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

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Bedford, Indiana

Area		MonitoringWell_RFIBoundary_WestPlantArea	Plant_property	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	EastPlantArea	RFIBoundary_P216West
Sample Location:		MW-X033Y147S	MW-X047Y236	MW-X085Y070S-1	MW-X085Y070S-2	MW-X169Y058S-1	MW-X227Y054	MW-X261Y356D-3
Sample Identification:		GW-111214-JL-016	GW-111214-JL-014	GW-111214-SA-015	GW-111214-SA-013	GW-111214-SA-017	GW-111214-JL-018	GW-111214-SA-019
Sample Date:		11/12/2014	11/12/2014	11/12/2014	11/12/2014	11/12/2014	11/12/2014	11/12/2014
Sample Type:								
	Units							
PCBs								
Aroclor-1016 (PCB-1016)	µg/L	0.20 U	0.20 U	0.19 U	0.21 U	0.19 U	1.9 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.20 U	0.20 U	0.19 U	0.21 U	0.19 U	1.9 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.20 U	0.20 U	0.19 U	0.21 U	0.19 U	1.9 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.20 U	0.20 U	0.19 U	0.21 U	0.19 U	5.5 J	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.20 U	0.20 U	0.19 U	0.18 J	0.19 U	1.9 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.20 U	0.20 U	0.19 U	0.21 U	0.19 U	1.9 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.20 U	0.20 U	0.19 U	0.21 U	0.19 U	1.9 U	0.20 U
Total PCBs	µg/L	ND	ND	ND	0.18 J	ND	5.5 J	ND
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.21 U	0.19 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.21 U	0.19 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.21 U	0.19 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.21 U	0.19 U	0.19 U	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.21 U	0.19 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.21 U	0.19 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.21 U	0.19 U	0.19 U	0.20 U
Total PCBs (dissolved)	µg/L	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	µg/L	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	--	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/L	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	--	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	µg/L	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	--	--	--	--	--	--	--
1,3-Dichlorobenzene	µg/L	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	--	--	--	--	--	--	--
2-Hexanone	µg/L	--	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	--	--	--	--	--	--
Acetone	µg/L	--	--	--	--	--	--	--
Benzene	µg/L	--	--	--	--	--	--	--
Bromodichloromethane	µg/L	--	--	--	--	--	--	--
Bromoform	µg/L	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	µg/L	--	--	--	--	--	--	--
Carbon disulfide	µg/L	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	--	--	--	--	--	--	--
Chlorobenzene	µg/L	--	--	--	--	--	--	--
Chloroethane	µg/L	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/L	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/L	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--
Cyclohexane	µg/L	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/L	--	--	--	--	--	--	--
Ethylbenzene	µg/L	--	--	--	--	--	--	--
Isopropyl benzene	µg/L	--	--	--	--	--	--	--
Methyl acetate	µg/L	--	--	--	--	--	--	--

Table 3.2

Summary of Total PCBS Analytical Results for EI Ca750 2014 First Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		MonitoringWell_RFIBoundary_WestPlantArea	Plant_property	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	EastPlantArea	RFIBoundary_P216West
Sample Location:		MW-X033Y147S	MW-X047Y236	MW-X085Y070S-1	MW-X085Y070S-2	MW-X169Y058S-1	MW-X227Y054	MW-X261Y356D-3
Sample Identification:		GW-111214-JL-016	GW-111214-JL-014	GW-111214-SA-015	GW-111214-SA-013	GW-111214-SA-017	GW-111214-JL-018	GW-111214-SA-019
Sample Date:		11/12/2014	11/12/2014	11/12/2014	11/12/2014	11/12/2014	11/12/2014	11/12/2014
Sample Type:								
	Units							
Methyl cyclohexane	µg/L	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/L	--	--	--	--	--	--	--
Methylene chloride	µg/L	--	--	--	--	--	--	--
Styrene	µg/L	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	--	--	--	--	--	--	--
Toluene	µg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--
Trichloroethene	µg/L	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/L	--	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	µg/L	--	--	--	--	--	--	--
Vinyl chloride	µg/L	--	--	--	--	2.7	--	--
Xylenes (total)	µg/L	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs)								
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) eth	µg/L	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--	--	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--	--	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--	--	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--	--	--	--	--
2-Chloronaphthalene	µg/L	--	--	--	--	--	--	--
2-Chlorophenol	µg/L	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	--	--	--	--	--	--	--
2-Methylphenol	µg/L	--	--	--	--	--	--	--
2-Nitroaniline	µg/L	--	--	--	--	--	--	--
2-Nitrophenol	µg/L	--	--	--	--	--	--	--
3&4-Methylphenol	µg/L	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--	--	--	--	--
3-Nitroaniline	µg/L	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--	--	--	--	--
4-Chloroaniline	µg/L	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--	--	--	--	--
4-Nitroaniline	µg/L	--	--	--	--	--	--	--
4-Nitrophenol	µg/L	--	--	--	--	--	--	--
Acenaphthene	µg/L	--	--	--	--	--	--	--
Acenaphthylene	µg/L	--	--	--	--	--	--	--
Acetophenone	µg/L	--	--	--	--	--	--	--
Anthracene	µg/L	--	--	--	--	--	--	--
Atrazine	µg/L	--	--	--	--	--	--	--
Benzaldehyde	µg/L	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--	--	--	--	--

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GM CET Bedford Facility
Bedford, Indiana

Area		MonitoringWell_RFIBoundary_WestPlantArea	Plant_property	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	EastPlantArea	RFIBoundary_P216West
Sample Location:		MW-X033Y147S	MW-X047Y236	MW-X085Y070S-1	MW-X085Y070S-2	MW-X169Y058S-1	MW-X227Y054	MW-X261Y356D-3
Sample Identification:		GW-111214-JL-016	GW-111214-JL-014	GW-111214-SA-015	GW-111214-SA-013	GW-111214-SA-017	GW-111214-JL-018	GW-111214-SA-019
Sample Date:		11/12/2014	11/12/2014	11/12/2014	11/12/2014	11/12/2014	11/12/2014	11/12/2014
Sample Type:								
	Units							
Caprolactam	µg/L	--	--	--	--	--	--	--
Carbazole	µg/L	--	--	--	--	--	--	--
Chrysene	µg/L	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--	--	--	--	--
Dibenzofuran	µg/L	--	--	--	--	--	--	--
Diethyl phthalate	µg/L	--	--	--	--	--	--	--
Dimethyl phthalate	µg/L	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--	--	--	--	--
Fluoranthene	µg/L	--	--	--	--	--	--	--
Fluorene	µg/L	--	--	--	--	--	--	--
Hexachlorobenzene	µg/L	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/L	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--	--	--	--	--
Hexachloroethane	µg/L	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--	--	--	--	--
Isophorone	µg/L	--	--	--	--	--	--	--
Naphthalene	µg/L	--	--	--	--	--	--	--
Nitrobenzene	µg/L	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--	--	--	--	--
Pentachlorophenol	µg/L	--	--	--	--	--	--	--
Phenanthrene	µg/L	--	--	--	--	--	--	--
Phenol	µg/L	--	--	--	--	--	--	--
Pyrene	µg/L	--	--	--	--	--	--	--
Field Parameters								
Conductivity, field	mS/cm	1.912	0.638	9.803	6.421	2.578	1.267	0.505
Dissolved oxygen (DO), field	µg/L	520	250	2080	270	1470	370	4460
Oxidation reduction potential (ORP), field	millivolts	17.3	171.8	-200.9	-221.6	-180.3	-105.4	-65.1
pH, field	s.u.	6.58	7.1	6.56	7.35	7.28	7.53	6.94
Temperature, field	Deg C	14.38	12.69	14.08	14.38	12.54	12.42	11.67
Turbidity, field	NTU	1.62	3.67	0.9	18.1	0.65	18.6	1.17

Notes:

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

Table 3.2

Summary of Total PCBS Analytical Results for EI Ca750 2014 First Semi-Annual Groundwater Samples
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GM CET Bedford Facility
Bedford, Indiana

Area		RFIBoundary_P216West	P205	P216GM_P216_east	EastPlantArea	Plant_Property	Plant_Property	P015	P015
Sample Location:		MW-X261Y356D-3	MW-X277Y100	MW-X297Y305D-2	9-4	MW-X043Y186	MW-X043Y186	Tributary 3-3	Tributary 3-3
Sample Identification:		GW-111214-SA-021	GW-111314-JL-020	GW-111314-SA-022	GW-121114-SA-025	GW-121814-SA-026	GW-121814-SA-027	GW-111314-SA-023	GW-111314-SA-024
Sample Date:		11/12/2014	11/13/2014	11/13/2014	12/11/2014	12/18/2014	12/18/2014	11/13/2014	11/13/2014
Sample Type:		Duplicate					Duplicate		Duplicate
	Units								
PCBs									
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.19 U	0.19 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.19 U	0.19 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.19 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.19 U	0.19 U	0.089 J	0.20 U	0.19 U	0.19 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.19 U	0.19 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.19 U	0.19 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.20 U	0.19 U	0.19 U	0.20 U
Total PCBs	µg/L	ND	ND	ND	0.089 J	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.20 U	0.19 U	0.19 U	0.20 U	0.21 U	0.19 U	0.20 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.20 U	0.19 U	0.19 U	0.20 U	0.21 U	0.19 U	0.20 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.20 U	0.19 U	0.19 U	0.20 U	0.21 U	0.19 U	0.20 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.20 U	0.19 U	0.19 U	0.20 U	0.21 U	0.19 U	0.20 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.20 U	0.19 U	0.19 U	0.20 U	0.21 U	0.19 U	0.20 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.20 U	0.19 U	0.19 U	0.20 U	0.21 U	0.19 U	0.20 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.20 U	0.19 U	0.19 U	0.20 U	0.21 U	0.19 U	0.20 U	0.19 U
Total PCBs (dissolved)	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)									
1,1,1-Trichloroethane	µg/L	--	1.0 U	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	1.0 U	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	--	1.0 U	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	--	1.0 U	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	--	1.0 U	--	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/L	--	1.0 U	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	--	2.0 U	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	µg/L	--	1.0 U	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	--	1.0 U	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	--	1.0 U	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	--	1.0 U	--	--	--	--	--	--
1,3-Dichlorobenzene	µg/L	--	1.0 U	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	--	1.0 U	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	--	10 U	--	--	--	--	--	--
2-Hexanone	µg/L	--	10 U	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	10 U	--	--	--	--	--	--
Acetone	µg/L	--	10 U	--	--	--	--	--	--
Benzene	µg/L	--	1.0 U	--	--	--	--	--	--
Bromodichloromethane	µg/L	--	1.0 U	--	--	--	--	--	--
Bromoform	µg/L	--	1.0 U	--	--	--	--	--	--
Bromomethane (Methyl bromide)	µg/L	--	1.0 U	--	--	--	--	--	--
Carbon disulfide	µg/L	--	1.0 U	--	--	--	--	--	--
Carbon tetrachloride	µg/L	--	1.0 U	--	--	--	--	--	--
Chlorobenzene	µg/L	--	1.0 U	--	--	--	--	--	--
Chloroethane	µg/L	--	1.0 U	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/L	--	1.0 U	--	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/L	--	1.0 U	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/L	--	1.0 U	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	--	1.0 U	--	--	--	--	--	--
Cyclohexane	µg/L	--	1.0 U	--	--	--	--	--	--
Dibromochloromethane	µg/L	--	1.0 U	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/L	--	1.0 U	--	--	--	--	--	--
Ethylbenzene	µg/L	--	1.0 U	--	--	--	--	--	--
Isopropyl benzene	µg/L	--	1.0 U	--	--	--	--	--	--
Methyl acetate	µg/L	--	10 U	--	--	--	--	--	--

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GM CET Bedford Facility
Bedford, Indiana

Area		RFIBoundary_P216West	P205	P216GM_P216_east	EastPlantArea	Plant_Property	Plant_Property	P015	P015
Sample Location:		MW-X261Y356D-3	MW-X277Y100	MW-X297Y305D-2	9-4	MW-X043Y186	MW-X043Y186	Tributary 3-3	Tributary 3-3
Sample Identification:		GW-111214-SA-021	GW-111314-JL-020	GW-111314-SA-022	GW-121114-SA-025	GW-121814-SA-026	GW-121814-SA-027	GW-111314-SA-023	GW-111314-SA-024
Sample Date:		11/12/2014	11/13/2014	11/13/2014	12/11/2014	12/18/2014	12/18/2014	11/13/2014	11/13/2014
Sample Type:		Duplicate					Duplicate		Duplicate
	Units								
Methyl cyclohexane	µg/L	--	1.0 U	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/L	--	1.0 U	--	--	--	--	--	--
Methylene chloride	µg/L	--	1.0 U	--	--	--	--	--	--
Styrene	µg/L	--	1.0 U	--	--	--	--	--	--
Tetrachloroethene	µg/L	--	1.0 U	--	--	--	--	--	--
Toluene	µg/L	--	1.0 U	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	--	1.0 U	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	--	1.0 U	--	--	--	--	--	--
Trichloroethene	µg/L	--	1.0 U	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/L	--	1.0 U	--	--	--	--	--	--
Trifluorotrichloroethane (Freon 113)	µg/L	--	1.0 U	--	--	--	--	--	--
Vinyl chloride	µg/L	--	1.0 U	--	--	--	--	--	--
Xylenes (total)	µg/L	--	2.0 U	--	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs)									
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) eth	µg/L	--	9.5 U	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/L	--	9.5 U	--	--	--	--	--	--
2,4,6-Trichlorophenol	µg/L	--	9.5 U	--	--	--	--	--	--
2,4-Dichlorophenol	µg/L	--	9.5 U	--	--	--	--	--	--
2,4-Dimethylphenol	µg/L	--	9.5 U	--	--	--	--	--	--
2,4-Dinitrophenol	µg/L	--	48 UJ	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/L	--	9.5 U	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/L	--	9.5 U	--	--	--	--	--	--
2-Chloronaphthalene	µg/L	--	9.5 U	--	--	--	--	--	--
2-Chlorophenol	µg/L	--	9.5 U	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	--	9.5 U	--	--	--	--	--	--
2-Methylphenol	µg/L	--	9.5 U	--	--	--	--	--	--
2-Nitroaniline	µg/L	--	48 U	--	--	--	--	--	--
2-Nitrophenol	µg/L	--	9.5 U	--	--	--	--	--	--
3&4-Methylphenol	µg/L	--	9.5 U	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	48 U	--	--	--	--	--	--
3-Nitroaniline	µg/L	--	48 U	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	--	48 U	--	--	--	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	9.5 U	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/L	--	9.5 U	--	--	--	--	--	--
4-Chloroaniline	µg/L	--	9.5 U	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	9.5 U	--	--	--	--	--	--
4-Nitroaniline	µg/L	--	48 U	--	--	--	--	--	--
4-Nitrophenol	µg/L	--	48 U	--	--	--	--	--	--
Acenaphthene	µg/L	--	9.5 U	--	--	--	--	--	--
Acenaphthylene	µg/L	--	9.5 U	--	--	--	--	--	--
Acetophenone	µg/L	--	9.5 U	--	--	--	--	--	--
Anthracene	µg/L	--	9.5 U	--	--	--	--	--	--
Atrazine	µg/L	--	9.5 U	--	--	--	--	--	--
Benzaldehyde	µg/L	--	9.5 U	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	--	9.5 U	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	--	9.5 U	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	--	9.5 U	--	--	--	--	--	--
Benzo(g,h,i)perylene	µg/L	--	9.5 U	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	--	9.5 U	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	9.5 U	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	9.5 U	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	9.5 U	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	9.5 U	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	9.5 U	--	--	--	--	--	--

Table 3.2

Summary of Total PCBS Analytical Results for EI Ca750 2014 First Semi-Annual Groundwater Samples
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		RFIBoundary_P216West	P205	P216GM_P216_east	EastPlantArea	Plant_Property	Plant_Property	P015	P015
Sample Location:		MW-X261Y356D-3	MW-X277Y100	MW-X297Y305D-2	9-4	MW-X043Y186	MW-X043Y186	Tributary 3-3	Tributary 3-3
Sample Identification:		GW-111214-SA-021	GW-111314-JL-020	GW-111314-SA-022	GW-121114-SA-025	GW-121814-SA-026	GW-121814-SA-027	GW-111314-SA-023	GW-111314-SA-024
Sample Date:		11/12/2014	11/13/2014	11/13/2014	12/11/2014	12/18/2014	12/18/2014	11/13/2014	11/13/2014
Sample Type:		Duplicate					Duplicate		Duplicate
	Units								
Caprolactam	µg/L	--	9.5 U	--	--	--	--	--	--
Carbazole	µg/L	--	9.5 U	--	--	--	--	--	--
Chrysene	µg/L	--	9.5 U	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	--	9.5 U	--	--	--	--	--	--
Dibenzofuran	µg/L	--	9.5 U	--	--	--	--	--	--
Diethyl phthalate	µg/L	--	9.5 U	--	--	--	--	--	--
Dimethyl phthalate	µg/L	--	9.5 U	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	9.5 U	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	9.5 U	--	--	--	--	--	--
Fluoranthene	µg/L	--	9.5 U	--	--	--	--	--	--
Fluorene	µg/L	--	9.5 U	--	--	--	--	--	--
Hexachlorobenzene	µg/L	--	9.5 U	--	--	--	--	--	--
Hexachlorobutadiene	µg/L	--	9.5 U	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/L	--	48 U	--	--	--	--	--	--
Hexachloroethane	µg/L	--	9.5 U	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	9.5 U	--	--	--	--	--	--
Isophorone	µg/L	--	9.5 U	--	--	--	--	--	--
Naphthalene	µg/L	--	9.5 U	--	--	--	--	--	--
Nitrobenzene	µg/L	--	9.5 U	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	9.5 U	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/L	--	9.5 U	--	--	--	--	--	--
Pentachlorophenol	µg/L	--	9.5 U	--	--	--	--	--	--
Phenanthrene	µg/L	--	9.5 U	--	--	--	--	--	--
Phenol	µg/L	--	9.5 U	--	--	--	--	--	--
Pyrene	µg/L	--	9.5 U	--	--	--	--	--	--
Field Parameters									
Conductivity, field	mS/cm	0.505	0.844	0.581	0.617	1.649	--	0.98	0.98
Dissolved oxygen (DO), field	µg/L	4460	660	1840	710	1520	--	10330	10330
Oxidation reduction potential (ORP), field	millivolts	-65.1	-76.9	202.8	202.5	-103.3	--	44.8	44.8
pH, field	s.u.	6.94	6.88	6.58	7.35	7.19	--	7.58	7.58
Temperature, field	Deg C	11.67	12.61	13.16	15.54	10.85	--	11.99	11.99
Turbidity, field	NTU	1.17	2.6	0.48	5.26	13.6	--	2.33	2.33

Notes:

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

Table 3.3

2014 Leachate Collection System Monitoring Analytical Results
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		**A007**	**A007**	**A007**	**A007**	**A007**	**A007**	**A007**	**A007**
Sample Location:		**EPA LCS**	**EPA LCS**	**EPA LCS**	**EPA LCS**	**EPA LCS**	**EPA LCS**	**EPA LCS**	**EPA LCS**
Sample Identification:		**WL-AOI7-012214-GS-39989**	**WL-AOI7-022514-GS-39995**	**WL-AOI7-031814-GS-39998**	**WL-AOI7-042914-GS-40005**	**WL-AOI7-052714-GS-40010**	**WL-AOI7-062414-NZ-40031**	**WL-AOI7-072414-GS-40035**	**WL-AOI7-082614-GS-40042**
Sample Date:		**1/22/2014**	**2/25/2014**	**3/18/2014**	**4/29/2014**	**5/27/2014**	**6/24/2014**	**7/24/2014**	**8/26/2014**
Sample Type:									
	Units								
PCBs									
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.20 U	0.19 U	0.95 U	0.95 U	0.40 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.20 U	0.19 U	0.95 U	0.95 U	0.40 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.20 U	0.19 U	0.95 U	0.95 U	0.40 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.20 U	0.37	0.95 U	0.95 U	1.9	0.36	0.25 J
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.20 U	0.19 U	0.95 U	0.95 U	0.40 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.20 U	0.19 U	0.95 U	0.95 U	0.40 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.20 U	0.19 U	0.95 U	0.95 U	0.098 J	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND	0.37	ND	ND	1.998 J	0.36	0.25 J
Volatile Organic Compounds (VOCs)									
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	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	1.0 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	1.0 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	1.0 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	1.0 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	1.0 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	1.0 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	1.0 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	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	10 U	10 U	10 U	10 U
Benzene	ug/L	0.13 J	1.0 U	1.0 U	1.0 U	1.0 U	0.25 J	1.0 U	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	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	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	1.0 U	1.0 U	1.0 U	1.0 UJ
Carbon tetrachloride	ug/L	1.0 U	1.0 UJ	1.0 U	1.0 U	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	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 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	1.0 U	0.32 J	0.23 J	1.0 U	1.0 U	0.98 J
Chloromethane (Methyl chloride)	ug/L	1.0 UJ	1.0 U	1.0 U	1.0 U	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	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	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	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	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	ug/L	--	--	--	--	--	--	--	--
Tetrachloroethene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	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	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	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	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	ug/L	--	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 UJ	1.0 U	1.0 U	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	1.0 U	1.0 U	1.0 U	1.0 U
Field Parameters									
Conductivity, field	mS/cm	--	--	--	--	--	--	--	--
pH, field	s.u.	--	--	--	--	--	--	--	--

Notes:
ND( ) - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
R - Rejected.
R - Rejected.

Table 3.3

2014 Leachate Collection System Monitoring Analytical Results
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		**A007**	**A007**	**A007**	**A007**
Sample Location:		**EPA LCS**	**EPA LCS**	**EPA LCS**	**EPA LCS**
Sample Identification:		**WL-AOI7-092314-GS-40048**	**WL-AOI7-102914-GS-40056**	**WL-AOI7-112514-GS-40060**	**WL-AOI7-121714-GS-40066**
Sample Date:		**9/23/2014**	**10/29/2014**	**11/25/2014**	**12/17/2014**
Sample Type:					
	Units				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.24	0.24	0.29	0.19
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U
Total PCBs	ug/L	0.24	0.24	0.29	0.19
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 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 UJ	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
2-Chloroethyl vinyl ether	ug/L	10 U	10 U	10 U	10 U
Benzene	ug/L	1.0 U	1.0 U	1.0 UJ	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 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 UJ	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
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 U	1.0 U	1.0 U	1.0 UJ
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 UJ	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	ug/L	--	--	--	--
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 UJ	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
Trichloroethene	ug/L	--	--	--	--
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:
ND( ) - Not detected at the associated reporting lin
J - Estimated concentration.
UJ - Not detected; associated reporting limit is esti
R - Rejected.
R - Rejected.

Table 3.4

2014 Leak Detection System Monitoring Analytical Results
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Sample Location		A007	A007	A007	A007	A007	A007	A007	A007
Sample Identification		EPA LDS	EPA LDS	EPA LDS	EPA LDS	EPA LDS	EPA LDS	EPA LDS	EPA LDS
Sample Date		WL-AOI7-012214-GS-39990	WL-AOI7-012214-GS-39991	WL-AOI7-022514-GS-39996	WL-AOI7-031814-GS-39999	WL-AOI7-042914-GS-40006	WL-AOI7-042914-GS-40007	WL-AOI7-052714-GS-40011	WL-AOI7-052714-GS-40012
Sample Type		1/22/2014	1/22/2014	2/25/2014	3/18/2014	4/29/2014	4/29/2014	5/27/2014	5/27/2014
	Units		Duplicate				Duplicate		Duplicate
PCBs									
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 UJ	0.19 U	0.97 U	0.99 U	0.95 U	0.95 U	0.95 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.19 UJ	0.19 U	0.97 U	0.99 U	0.95 U	0.95 U	0.95 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.19 UJ	0.19 U	0.97 U	0.99 U	0.95 U	0.95 U	0.95 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.19 UJ	0.19 U	0.97 U	0.99 U	0.95 U	0.95 U	0.95 U
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.19 UJ	0.19 U	0.97 U	0.99 U	0.95 U	0.95 U	0.95 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.19 UJ	0.19 U	0.97 U	0.99 U	0.95 U	0.95 U	0.95 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.19 UJ	0.19 U	0.97 U	0.99 U	0.95 U	0.95 U	0.95 U
Total PCBs	µg/L	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

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

Table 3.4

2014 Leak Detection System Monitoring Analytical Results
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Sample Location		A007	A007	A007	A007	A007	A007	A007
Sample Identification		EPA LDS	EPA LDS	EPA LDS	EPA LDS	EPA LDS	EPA LDS	EPA LDS
Sample Date		WL-AOI7-062414-NZ-40032	WL-AOI7-072414-GS-40036	WL-AOI7-082614-GS-40043	WL-AOI7-092314-GS-40049	WL-AOI7-102914-GS-40057	WL-AOI7-112514-GS-40061	WL-AOI7-112514-GS-40062
Sample Type		6/24/2014	7/24/2014	8/26/2014	9/23/2014	10/29/2014	11/25/2014	11/25/2014
	Units							Duplicate
PCBs								
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.20 U	0.19 U	0.19 U	0.20 U	1.0 U	1.0 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.20 U	0.19 U	0.19 U	0.20 U	1.0 U	1.0 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.20 U	0.19 U	0.19 U	0.20 U	1.0 U	1.0 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.34	0.19 U	0.27	0.20 U	1.0 U	1.0 U
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.20 U	0.17 J	0.19 U	0.20 U	1.0 U	1.0 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.20 U	0.19 U	0.19 U	0.20 U	1.0 U	1.0 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.20 U	0.19 U	0.19 U	0.20 U	1.0 U	1.0 U
Total PCBs	µg/L	ND	0.34	0.17 J	0.27	ND	ND	ND

Notes:

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

Table 3.5

2014 Water Treatment Plant (SSC WTP And 2,000 GPM Treatment System) Monitoring Analytical Results
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		A010_EastPlant	A010_EastPlant	A010_EastPlant	A010_EastPlant	A010_EastPlant	A010_EastPlant	A010_EastPlant
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-AOI10-010614-GS-39993	WW-AOI10-010614-GS-39993a	WW-AOI10-012214-GS-40001	WW-AOI10-022414-GS-40002	WW-AOI10-031114-GS-40009	WW-AOI10-032514-GS-40017	WW-AOI10-032714-GS-40026
Sample Date:		1/6/2014	1/6/2014	1/22/2014	2/24/2014	3/11/2014	3/25/2014	3/27/2014
Sample Type:								
	Units							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	--	0.19 U	--	0.19 U	0.19 U Dup 0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	--	0.19 U	--	0.19 U	0.19 U Dup 0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	--	0.19 U	--	0.19 U	0.19 U Dup 0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	--	0.19 U	--	0.12 J	0.45 Dup 0.43	0.13 J	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	--	0.19 U	--	0.19 U	0.19 U Dup 0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	--	0.19 U	--	0.19 U	0.19 U Dup 0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	--	0.19 U	--	0.19 U	0.19 U Dup 0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	--	ND	--	0.12 J	0.45 Dup 0.43	0.13 J	ND
General Chemistry								
Biochemical oxygen demand (BOD)	ug/L	--	--	--	--	--	--	--
Biochemical oxygen demand (carbonace	ug/L	--	--	4500	--	--	--	--
Chemical oxygen demand (COD)	ug/L	8600 J	--	--	--	--	--	--
Chloride	ug/L	--	--	--	--	--	--	--
N-Hexane extractable material	ug/L	--	--	--	--	--	--	--
Nitrite/Nitrate	ug/L	220	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	5000 U	--	--	--	--	--	--
Oil and grease (HEM), total	ug/L	--	--	--	--	--	--	--
pH (water)	s.u.	--	--	--	--	--	--	--
pH, field	s.u.	--	--	--	--	--	--	--
pH, lab	s.u.	--	--	--	--	--	--	--
Phosphorus	ug/L	24 J	--	--	--	--	--	--
Total kjeldahl nitrogen (TKN)	ug/L	5000 U	--	--	--	--	--	--
Total suspended solids (TSS)	ug/L	4000 U	--	--	--	--	--	--
Turbidity	NTU	--	--	--	--	--	--	--

Notes:

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

Table 3.5

2014 Water Treatment Plant (SSC WTP And 2,000 GPM Treatment System) Monitoring Analytical Results
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		A010_EastPlant	A010_EastPlant	A010_EastPlant	A010_EastPlant	A010_EastPlant	A010_EastPlant	A010_EastPlant
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-AOI10-040214-GS-40050	WW-AOI10-040214-GS-40051	WW-AOI10-040314-GS-40058	WW-AOI10-042114-GS-40082	WW-AOI10-050514-GS-40095	WW-AOI10-060414-GS-40107	WW-AOI10-070814-GS-40129
Sample Date:		4/2/2014	4/2/2014	4/3/2014	4/21/2014	5/5/2014	6/4/2014	7/8/2014
Sample Type:			Duplicate					
	Units							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	ND	ND	ND	ND	ND	ND
General Chemistry								
Biochemical oxygen demand (BOD)	ug/L	--	--	--	--	--	--	--
Biochemical oxygen demand (carbonace	ug/L	--	--	--	--	--	--	--
Chemical oxygen demand (COD)	ug/L	--	--	--	--	--	--	--
Chloride	ug/L	--	--	--	--	--	--	--
N-Hexane extractable material	ug/L	--	--	--	--	--	--	--
Nitrite/Nitrate	ug/L	--	--	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	--	--	--	--
Oil and grease (HEM), total	ug/L	--	--	--	--	--	--	--
pH (water)	s.u.	--	--	--	--	--	--	--
pH, field	s.u.	--	--	--	--	--	--	--
pH, lab	s.u.	--	--	--	--	--	--	--
Phosphorus	ug/L	--	--	--	--	--	--	--
Total kjeldahl nitrogen (TKN)	ug/L	--	--	--	--	--	--	--
Total suspended solids (TSS)	ug/L	--	--	--	--	--	--	--
Turbidity	NTU	--	--	--	--	--	--	--

Notes:

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

Table 3.5

2014 Water Treatment Plant (SSC WTP And 2,000 GPM Treatment System) Monitoring Analytical Results
2014 East Plant Area Vault Annual Monitoring Report
GM CET Bedford Facility
Bedford, Indiana

Area		**A010_EastPlant**	**A010_EastPlant**	**A010_EastPlant**	**A010_EastPlant**	**A010_EastPlant**
Sample Location:		**CRA WWTP Tag 66**	**CRA WWTP Tag 66**	**CRA WWTP Tag 66**	**CRA WWTP Tag 66**	**CRA WWTP Tag 66**
Sample Identification:		**WW-AOI10-080614-GS-40154**	**WW-AOI10-090414-GS-40161**	**WW-AOI10-100714-GS-40175**	**WW-AOI10-111114-GS-40182**	**WW-AOI10-120814-GS-40188**
Sample Date:		**8/6/2014**	**9/4/2014**	**10/7/2014**	**11/11/2014**	**12/8/2014**
Sample Type:						
	Units					
PCBs						
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.18 J
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
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	0.18 J
General Chemistry						
Biochemical oxygen demand (BOD)	ug/L	--	--	--	--	--
Biochemical oxygen demand (carbonace	ug/L	--	--	--	--	--
Chemical oxygen demand (COD)	ug/L	--	--	--	--	--
Chloride	ug/L	--	--	--	--	--
N-Hexane extractable material	ug/L	--	--	--	--	--
Nitrite/Nitrate	ug/L	--	--	--	--	--
Oil and grease (HEM), polar	ug/L	--	--	--	--	--
Oil and grease (HEM), total	ug/L	--	--	--	--	--
pH (water)	s.u.	--	--	--	--	--
pH, field	s.u.	--	--	--	--	--
pH, lab	s.u.	--	--	--	--	--
Phosphorus	ug/L	--	--	--	--	--
Total kjeldahl nitrogen (TKN)	ug/L	--	--	--	--	--
Total suspended solids (TSS)	ug/L	--	--	--	--	--
Turbidity	NTU	--	--	--	--	--

Notes:

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

Appendices

Appendix A
LCS Sump Field Logs, LDS Sump Field Logs, GUS Sump Field Logs, And Automated Pumping System Logs

Sevenson Environmental Services, Inc.

LETTER OF TRANSMITTAL

2749 Lockport Road
Niagara Falls, New York 14305
(716) 284-0431

TO: CRA	DATE: February 3, 2014
ADDRESS: GM Drive and 4th Street	JOB NO.: E801
CITY: Bedford, IN 47421	RE: 13968: Vault Sump Monitoring Logs
ATTENTION: George Seng	

PLEASE BE ADVISED:

WE ARE SENDING YOU:	☐ **Attached**	☐ **Under Separate Cover Via The Following:**		
☐ PRINTS	☐ PLANS	☐ SHOP DRAWINGS	☐ SAMPLES	☐ SPECIFICATIONS
☐ ARTWORK	☐ PROOFS	☐ PHOTOGRAPHS	☐ COPY OF LETTER	☐ CHANGE ORDER
☐				

	No. of Copies	Drawing No.	Date	Description
1	1	1/1/14-1/31/14	2/3/14	Under Drain Collection System Manhole
2	1	1/1/14-1/31/14	2/3/14	Leak Detection System Manhole Log
3	1	1/1/14-1/31/14	2/3/14	Leak Detection Sign In Log
4	1	1/1/14-1/31/14	2/3/14	Leachate Collection System Manhole Log
5	1	1/1/14-1/31/14	2/3/14	Instrument Calibration Record
6				
7				

THESE ARE BEING TRANSMITTED AS INDICATED BELOW:

☒ AS REQUESTED	☐ APPROVED AS IS	☐ SUBMIT COPIES FOR DISTRIBUTION
☐ FOR APPROVAL	☐ APPROVED WITH CORRECTIONS	☐ RETURN CORRECTED
☒ FOR YOUR USE	☐ RETURNED WITH CORRECTIONS	☐ RETURNED AFTER LOAN TO US
☐ FOR YOUR COMMENTS	☐ RESUBMIT COPIES FOR APPROVAL	☐

COMMENTS:

COPIES TO:	**SEVENSON ENVIRONMENTAL SERVICES, INC.**
▪	
▪	
▪	
▪	**Signed** _____
▪	**Shane Reynolds**

H:\GM Bedford\Contract\Transmittals\George Seng\Transmittal Sump Logs.doc

H:\GM Bedford\Contract\Transmittals\George Seng\Transmittal Sump Logs.doc

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 YES	PUMP OPERATIONAL NO	COMMENTS (weather, pump details, testing etc..)
01/01/14					
01/02/14					
01/03/14					
01/04/14					
01/05/14					
01/06/14					
01/07/14	10:00	70.5			
01/08/14					
01/09/14					
01/10/14					
01/11/14					
01/12/14					
01/13/14	9:00	70.4			
01/14/14					
01/15/14					
01/16/14					
01/17/14					
01/18/14					
01/19/14					
01/20/14	9:00	75			
01/21/14					
01/22/14					
01/23/14					
01/24/14					
01/25/14					
01/26/14	~~11:00~~	~~72.3~~			
01/27/14	11:00	72.3			
01/28/14					
01/29/14					
01/30/14					
01/31/14					

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 YES	PUMP OPERATIONAL NO	COMMENTS (weather, pump details, testing etc..)
01/01/14						
01/02/14						
01/03/14						
01/04/14						
01/05/14						
01/06/14						
01/07/14	10:00	71.8			NO	
01/08/14						
01/09/14						
01/10/14						
01/11/14						
01/12/14						
01/13/14	9:00	71.5			NO	
01/14/14						
01/15/14						
01/16/14						
01/17/14						
01/18/14						
01/19/14						
01/20/14	9:00	71.4			NO	
01/21/14						
01/22/14						
01/23/14						
01/24/14						
01/25/14						
01/26/14						
01/27/14	11:00	71.4			NO	
01/28/14						
01/29/14						
01/30/14						
01/31/14						

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..)
01/01/14					
01/02/14					
01/03/14					
01/04/14					
01/05/14					
01/06/14					
01/07/14	10:00	67.0			
01/08/14					
01/09/14					
01/10/14					
01/11/14					
01/12/14					
01/13/14	9:00	67.4			
01/14/14					
01/15/14					
01/16/14					
01/17/14					
01/18/14					
01/19/14					
01/20/14	9:00	67.5			
01/21/14					
01/22/14					
01/23/14					
01/24/14					
01/25/14					
01/26/14					
01/27/14	11:00	67.6			
01/28/14					
01/29/14					
01/30/14					
01/31/14					

Leak Detection

	Leachate Under Drain	Date	Time On	CRA Approval	Time Off	CRA Approval	Printed Name	Signed Name	Notes
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

Form SOP 8.0-01

INSTRUMENT CALIBRATION RECORD

PROJECT GM Bedford 013968
LOCATION Bedford IN
CLIENT GM

PROJECT MGR. McGurgan
FIELD REP Terri Channing
DATE Listed

Instrument	Date Calib-rated	By	Standard Used	Decontamination, Maintenance or Repair Performed	Remarks
Solinst Interface Model #122			Vault sumps 5' tape	Decon + measure	
		E/F	5' TAPE	Decon + Measure	
		E/F	5' TAPE	Decon + Measure	
		E/F	5' TAPE	Decon + Measure	
		E/F	5' TAPE	Decon + Measure	

Other Remarks

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

Month / Year	January 2014				
	Leachate Collection (LCS)		Gravel Underdrain (GUS)		Leak Detection (LDS)[1]
Day	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level (in)	Gallons Pumped
1	0	32	0	135	
2	0	36	0	133	Vault Pumps
3	0	36	0	133	remain off
4	0	36	0	133	due to extremp
5	0	36	0	133	cold and frozen
6	0	36	0	133	lines
7	0	36	0	133	
8	0	36	0	133	
9	0	37	0	133	
10	0	38	0	133	
11	0	38	0	133	
12	0	36	0	133	
13	0	36	0	133	
14	0	37	24625	133	Vault Pumps
15	0	37	37115	135	returned to
16	0	37	35860	133	automatic pump
17	0	37	35080	132	
18	0	38	27555	133	
19	0	39	9420	134	
20	0	39	9070	133	
21	0	39	5935	133	vault pumps off
22	0	39	0	133	due to extreme cold
23	0	39	0	133	
24	0	40	0	133	
25	0	40	0	133	
26	0	4039	0	133	
27	0	38	0	133	
28	0	38	0	133	vault pumps returned
29	0	38	0	133	to on position
30	0	38	0	133	
31					
TOTAL	0		0		0

Notes: 1 - Leak Detection Gallons Pumped is measured using a flow meter while manually pumping the LDS to the LCS.

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 YES	PUMP OPERATIONAL NO	COMMENTS (weather, pump details, testing etc..)
02/01/14					
02/02/14					
02/03/14	8:00	72.3			
02/04/14					
02/05/14					
02/06/14	15:31	74.6			
02/07/14	B	~~74.6~~			
02/08/14	B				
02/09/14					
02/10/14					
02/11/14					
02/12/14					
02/13/14					
02/14/14					
02/15/14					
02/16/14					
02/17/14					
02/18/14					
02/19/14					
02/20/14					
02/21/14					
02/22/14					
02/23/14					
02/24/14					
02/25/14					
02/26/14					
02/27/14					
02/28/14	10:00	70.7			

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 YES	PUMP OPERATIONAL NO	COMMENTS (weather, pump details, testing etc..)
02/01/14						
02/02/14						
02/03/14	8:00	71.2			NO	
02/04/14						
02/05/14						
02/06/14						
02/07/14						
02/08/14						
02/09/14						
02/10/14						
02/11/14						
02/12/14						
02/13/14						
02/14/14						
02/15/14						
02/16/14						
02/17/14						
02/18/14						
02/19/14						
02/20/14						
02/21/14						
02/22/14						
02/23/14						
02/24/14						
02/25/14						
02/26/14						
02/27/14						
02/28/14	10:00	71.6			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..)
02/01/14					
02/02/14					
02/03/14	9:00	87.4			
02/04/14					
02/05/14					
02/06/14					
02/07/14					
02/08/14					
02/09/14					
02/10/14					
02/11/14					
02/12/14					
02/13/14					
02/14/14					
02/15/14					
02/16/14					
02/17/14					
02/18/14					
02/19/14					
02/20/14					
02/21/14					
02/22/14					
02/23/14					
02/24/14					
02/25/14					
02/26/14					
02/27/14					
02/28/14	1000	69.7			

Leak Detection

	Leachate Under Drain	Date	Time On	CRA Approval	Time Off	CRA Approval	Printed Name	Signed Name	Notes
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									

Form SOP 8.0-01

INSTRUMENT CALIBRATION RECORD

PROJECT GM Bedford 013968 PROJECT MGR. McGurgan

LOCATION Bedford IN FIELD REP Terri Channing

CLIENT GM DATE Listed

Instrument	Date Calib-rated	By	Standard Used	Decontamination, Maintenance or Repair Performed	Remarks
Solinst Interface Model #122			Vault sumps 5' tape	Decon + measure	
		E/F	5' TAPE	Decon + Measure	
		E/F	5' TAPE	Decon + Measure	

Other Remarks

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

Month / Year	FEBRUARY 2014				
	Leachate Collection (LCS)		Gravel Underdrain (GUS)		Leak Detection (LDS)[1]
Day	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level (in)	Gallons Pumped
1	0	38	0	133	
2	0	39	34775	133	
3	0		7490		Down for
4	~~2140~~ 0		35895		Reprogram
5	~~2140~~	~~[illegible]~~	8660		
6	0	117	5145	240	Due to transducer
7	0	9	0	145	problems GUS will be
8	0	9	0	145	pumped by hand and manual
9	0	10	0	145	readings taken for mass bal
10	15	10	0	145	
11	~~[illegible]~~ 5	10	0	145	turn off vault
12	25	10	0	145	Vault pumps off
13	135	10	0	145	Due to cold weather
14	0	10	0	145	
15	0	10	0	145	
16	0	10	0	145	
17	0	10	0	145	
18	0	11	0	145	
19	0	11	0	145	
20	0	11	0	145	
21	0	11	0	145	
22	0	11	0	145	
23	0	11	0	145	
24	0	11	0	145	~~[illegible]~~
25	0	11	0	145	
26	0	11	0	145	
27	0	11	0	145	
28	0	11	0	145	
29					
30					
31					
TOTAL	0		0		0

Notes: 1 - Leak Detection Gallons Pumped is measured using a flow meter while manually pumping the LDS to the LCS.

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 YES	PUMP OPERATIONAL NO	COMMENTS (weather, pump details, testing etc..)
03/01/14	3				
03/02/14					
03/03/14	3:00	70.7			
03/04/14					
03/05/14					
03/06/14					
03/07/14					
03/08/14					
03/09/14					
03/10/14	4:30	70.6			
03/11/14					
03/12/14					
03/13/14					
03/14/14					
03/15/14					
03/16/14					
03/17/14	1:30	73.0			
03/18/14	9:46				
03/19/14					
03/20/14					
03/21/14					
03/22/14					
03/23/14					
03/24/14					
03/25/14					
03/26/14		72.0			
03/27/14					
03/28/14					
03/29/14					
03/30/14					
03/31/14					

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..)
03/01/14					
03/02/14					
03/03/14	3:00	71.6	NO		
03/04/14					
03/05/14					
03/06/14					
03/07/14					
03/08/14					
03/09/14					
03/10/14	9:30	71.6	NO		
03/11/14					
03/12/14					
03/13/14					
03/14/14					
03/15/14					
03/16/14					
03/17/14	1:30	72.5	NO		
03/18/14		72.16	YES		T of manhole 74.3 top of concrete
03/19/14					
03/20/14					
03/21/14					
03/22/14					
03/23/14					
03/24/14					
03/25/14					
03/26/14		72.0			
03/27/14					
03/28/14					
03/29/14					
03/30/14					
03/31/14					

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 YES	PUMP OPERATIONAL NO	COMMENTS (weather, pump details, testing etc..)
03/01/14						
03/02/14						
03/03/14	3:00	69.6				
03/04/14						
03/05/14						
03/06/14						
03/07/14						
03/08/14						
03/09/14						
03/10/14	9:30	69.6				
03/11/14						
03/12/14						
03/13/14						
03/14/14						
03/15/14						
03/16/14						
03/17/14	1:30	70.5				
03/18/14	9:46	69.12				
03/19/14						
03/20/14						
03/21/14						
03/22/14						
03/23/14						
03/24/14						
03/25/14	14:46	69.81				
03/26/14						
03/27/14						
03/28/14						
03/29/14						
03/30/14						
03/31/14						

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

Month / Year	March 2014				
	Leachate Collection (LCS)		Gravel Underdrain (GUS)		Leak Detection (LDS)[1]
Day	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level (in)	Gallons Pumped
1	0		0	145	off
2	0		0		
3	0		0		
4	0		0		
5	0		0		
6	0		0		
7	0		0		
8	0		0		
9	0		0		
10	0		14425		GUS on
11	0		38310		
12	0		36545		
13	0		37760		
14	0		9795		
15	0		0		off
16	0		0		off
17	0		22180		GUS on
18	500		13020		both
19	0		0		off
20	2005	13	0		LCS
21	0		0		off
22	0		0		
23	0		0		
24	0		0		
25	0		0		
26	0		0		
27	0		0		
28	0		0		
29	0		0		
30	0		0		
31	0		0		
TOTAL	0		0		0

Notes: 1 - Leak Detection Gallons Pumped is measured using a flow meter while manually pumping the LDS to the LCS.

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..)
04/01/14					
04/02/14					
04/03/14					
04/04/14					
04/05/14					
04/06/14					
04/07/14					
04/08/14					
04/09/14	1:40	72.1			
04/10/14					
04/11/14					
04/12/14					
04/13/14					
04/14/14					
04/15/14					
04/16/14	16:52	72.04			
04/17/14					
04/18/14					
04/19/14					
04/20/14					
04/21/14					
04/22/14					
04/23/14	14:10	71.98			
04/24/14					
04/25/14					
04/26/14					
04/27/14					
04/28/14					
04/29/14	13:56	72.0			
04/30/14					

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 YES	PUMP OPERATIONAL NO	COMMENTS (weather, pump details, testing etc..)
04/01/14					
04/02/14					
04/03/14					
04/04/14					
04/05/14					
04/06/14					
04/07/14					
04/08/14					
04/09/14	1:30	70.49		X	
04/10/14					
04/11/14					
04/12/14					
04/13/14					
04/14/14					
04/15/14					
04/16/14	16:55	70.34		X	
04/17/14					
04/18/14					
04/19/14					
04/20/14					
04/21/14					
04/22/14					
04/23/14	9:59	70.32			
04/24/14		70.57			
04/25/14					
04/26/14					
04/27/14					
04/28/14					
04/29/14	14:00	73.26			
04/30/14					

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

Month / Year	April 2014				
	Leachate Collection (LCS)		Gravel Underdrain (GUS)		Leak Detection (LDS)[1]
Day	Gallons Pumped	Water Level (in)	Gallons Pumped	Water Level (in)	Gallons Pumped
1	0	9	0	144	offduty
2	0	9	0	144	plc issues
3	0	9	0	144	
4	0	9	0	144	
5	0	9	0	144	
6	0	9	0	144	
7	0	9	0	144	
8	0	9	0	144	
9	0	9	0	144	
10	0	9	0	144	
11	0	9	0	144	
12	0	9	0	144	
13	0	9	0	144	
14	0	9	0	144	
15	0	9	0	144	
16	0	9	0	144	
17	0	9	0	144	
18	0	11	0	73	
19	0	11	0	73	
20	0	11	0	73	
21	0	11	0	72	
22	0	11	0	72	
23	445	11	6840	72	on
24	2800	7	12555	65	
25	1800	8	32767	69	
26	50	8	32767	60	
27	5	8	38810	39	
28	5	8	2220	55	
29	5	9	0	73	FT vault - 266155 LCS - 344108
30	5	9	0	46	
31					
TOTAL	0		0		0

Notes: 1 - Leak Detection Gallons Pumped is measured using a flow meter while manually pumping the LDS to the LCS.

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 YES	PUMP OPERATIONAL NO	COMMENTS (weather, pump details, testing etc..)
05/01/14						
05/02/14						
05/03/14						
05/04/14						
05/05/14						
05/06/14	346	69.71				Local flow meter 134408
05/07/14						
05/08/14						
05/09/14						
05/10/14						
05/11/14						
05/12/14						
05/13/14	7:24	69.71				Local flow 134408
05/14/14						
05/15/14						
05/16/14						
05/17/14						
05/18/14						
05/19/14						
05/20/14						
05/21/14						
05/22/14	3:25	69.64				local flow meter 134408
05/23/14						
05/24/14						
05/25/14						
05/26/14						
05/27/14	9:60	69.60				local 134408
05/28/14						
05/29/14						
05/30/14						
05/31/14						

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..)
05/01/14					
05/02/14					
05/03/14					
05/04/14					
05/05/14					
05/06/14	352	71.99			
05/07/14					
05/08/14					
05/09/14					
05/10/14					
05/11/14					
05/12/14					
05/13/14		72.20			
05/14/14	1:27				
05/15/14					
05/16/14					
05/17/14					
05/18/14					
05/19/14					
05/20/14					
05/21/14					
05/22/14	3:30	71.99			
05/23/14					
05/24/14					
05/25/14					
05/26/14					
05/27/14	9:58	71.99			Sampled and pumped - FM total 1097.0 After 72.38
05/28/14					
05/29/14					
05/30/14					
05/31/14					

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 YES	PUMP OPERATIONAL NO	COMMENTS (weather, pump details, testing etc..)
05/01/14					
05/02/14					
05/03/14					
05/04/14					
05/05/14					
05/06/14	3:58	71.61			
05/07/14					
05/08/14					
05/09/14					
05/10/14					
05/11/14					
05/12/14					
05/13/14					
05/14/14					
05/15/14					
05/16/14					
05/17/14					
05/18/14					
05/19/14					
05/20/14					
05/21/14					
05/22/14	3:32	72.61			
05/23/14					
05/24/14					
05/25/14					
05/26/14					
05/27/14	11:21	71.44			
05/28/14					
05/29/14					
05/30/14					
05/31/14					

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

Month / Year	May / 2014

Day	Leachate Collection (LCS) @ PLC		LCS @ Local Display	Gravel Underdrain (GUS) @ PLC		GUS @ Local Display	Leak Detection (LDS) [1]	
	Gallons Pumped	Water Level (in)	Gallons Pumped [3]	Gallons Pumped	Water Level (in)	Gallons Pumped [3]	Gallons Pumped [2]	
1			–	0	49	–		
2	~~5~~	9	–	0	50	–		
3	~~5~~	9	–	0	53	–		
4	~~5~~	9	–	0	57	–		
5	~~5~~	9	–	0	59	–		
6	0	9	134408	20440	60	2675425		
7	5	9	–	38795	54	–	Modified new version of program in PLC	
8	0	9	–	34870	43	–		
9	0	10	–	0	38	–		
10	0	9	–	0	42	–		
11	0	9	–	0	45	–		
12	6	9	134408	0	45	2760158		
13	0	10		0	51			
14	0	10		0	59			
15	0	10		0	57			
16	0	10		0	59			
17	0	10		30535	60			
18	0	10		38620	60			
19	0	10		24865	40			
20	0	10		0	39			
21	0	10	134408	0	40	2854109		
22	0	10		0	43			
23	0	10		0	46			
24	0	10		0	52			
25	0	10		0	52			
26	0	11		0	68			
27	345	11	5780	~~135~~	60		Sampled - pump LDS	
28	0	11		38415	58			
29	100	11		20065	52			
30	0	11		0	49			
31	0	11		0	52			
TOTAL								

Notes: 1 - Leak Detection Gallons Pumped is measured using a flow meter while manually pumping the LDS to the LCS.
2 - Run the LCS in Manual Mode when pumping from the LDS to the LCS.
3 - Collect Total Flow Readings at Local Flow Meter Displays weekly to compare to PLC readings.

12-19-13 Pumped leak detection total gallons pumped — 454.3
3-18-14 pumped leak detection total gallons pumped -756.5
5-27-14 pumped leak detection total gallons pumped -1097

LEACHATE COLLECTION SYSTEM

YEAR: 2014 MONTH: June

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1			11	0	
2			11		
3			11		
4			11		
5	1251	69.31	11		Local flow meter 134844
6			12		
7			12		
8			12		
9			12		
10	13:28	69.47	12		Local flow meter 134844
11			12		
12			12		
13			12		
14			12		
15			12		
16			12		
17	14:10	69.42	12		Local 134844
18			13		
19			13		
20			13		
21			13		
22			13		
23			13		
24			13		Sampled By Nate Zeyler
25			13		
26			13		
27			13		
28			13		
29			13		
30			13		
31			13		

Notes:

Top of sump [top of concrete manhole] (feet AMSL): 740.83 *Total depth of sump manhole (feet): 69.83*

Bott[illegible]mp (feet AMSL): 671.00 *Inside diameter of sump (feet): 6*

(1) Pum[illegible]ting level between 1 ft (672.00 ft AMSL) and 3 ft (674.00 ft AMSL) of water in the LCS manhole.

(2) LCS pump to be manually turned on (to prevent an increase in the water elevation) while water removed from LDS sump is being pumped into the LCS manhole, if the water depth in the LCS is greater than 1 ft. All associated information to be recorded on log sheet to [illegible]te this activity.

LEAK DETECTION SYSTEM

YEAR: 2016 MONTH: June

DAY	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	FLOW METER READING (gallons removed)	TIME OF MEASUREMENT #2 (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	COMMENTS
1						
2						
3						
4						
5	1257	72.36				
6						
7						
8						
9						
10	13:36	72.33				
11						
12						
13						
14						
15						
16						
17	14:12	72.31				
18						
19						
20						
21						
22						
23						
24						Sampled by Nat Ziegler (No water transferred to LCS)
25						
26						
27						
28						
29						
30						
31						

Notes:

Top of sump [top of concrete manhole] (feet AMSL): 741.14 *Total depth of sump manhole (feet): 72.64*

Bottom of sump (feet AMSL): 668.50 *Inside diameter of sump (feet): 6*

(1) Water level in LDS not to rise above the primary liner system (670.0 ft AMSL) (or more than 18 inches of water depth or 71.14 ft from TOS). Pumping must be initiated if water elevation is not within the appropriate limits. All corresponding information to be recorded on this form.

(2) Calculate the average daily LDS collection rate as the volume pumped divided by days between pumping = average gallons collected per day

(3) Compare the collection rate to the Action Leakage Rate of **TBD**. An increase in the collection rate, or collection rate comparable to the Action Leakage Rate indicated a leak in one of the liners. Notify the PM immediately of any significant changes in the LDS collection rate.

GRAVEL UNDERDRAIN SYSTEM

YEAR: 2014 MONTH: June

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1			52	0	
2			55	0	
3			57	0	
4			60	35220	
5	13:05	72.62	57	0	Local flow meter 2974938
6			50	0	
7			40	0	
8			43	0	
9			47	0	
10	13:32	unable to read	50	0	No water detected by meter
11			50	0	
12			56	0	
13			58	0	
14			60	0	
15			58	38773	
16			48	35245	
17	14:26	73.42	36	[redacted] 13710 - 3108765	
18			40	0	
19			44	0	
20			47	0	
21			50	0	
22			62	0	
23			55	0	
24			57	0	
25			59	0	
26			6	33025	
27			51	[redacted] 38730	
28			39	22675	
29			39	0	
30			42	0	
31					

Notes:

Top of sump [top of HDPE] (feet AMSL): 739.49 *Total depth of sump manhole (feet): 77.31*

Bottom of sump (feet AMSL): 662.18 *Inside diameter of sump (feet): 3*

(1) Pump cycling level between 2 ft (664.18 ft AMSL) and 5 ft (667.18 ft AMSL) of water in the GUS manhole.

(2) Water level in the GUS not to rise above the secondary liner system (667.50 ft AMSL) (or more than 63.84 inches of water depth).

LEACHATE COLLECTION SYSTEM

YEAR: 2014 MONTH: July

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1	9:06	69.89	14	0	134844
2			14		
3			14		
4			14		
5			14		
6			14		
7			14		
8			14		
9			14		
10	13:01	69.36	14		134844
11			14		
12			14		
13			14		
14			14		
15			14		
16			14		
17			14		LCS turned off
18			15		
19			15		
20			15		
21	17:41	69.19	15		134844
22			15		
23			15		
* 24	11:16	69.19	15		Sampled
25			15		
26			15		
27			15		
28			15		
29			15		
30			15		
31			15		

Notes:

Top of sump (feet AMSL) 740.83
Bottom of sump (feet AMSL) 671.00
Total depth of sump manhole (feet) 69.83
Inside diameter of sump (feet) 6
(1) Pump operating level between 1 ft (672.00 ft AMSL) and 3 ft (674.00 ft AMSL) of water in the LCS manhole.

LEAK DETECTION SYSTEM

YEAR: 2014 MONTH: July

DAY	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	FLOW METER READING (gallons removed)	TIME OF MEASUREMENT #2 (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	COMMENTS
1	9:15	72.31				
2						
3						
4						
5						
6						
7						
8						
9						
10	15:07	72.29				
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21	7:50	72.30				
22						
23						
24	11:25	72.28			~72.36	Sampled totalizer readings - 1174.7 (777 gallons)
25						
26						
27						
28						
29						
30						
31						

Notes:

Top of sump (feet AMSL) 741.14 *Total depth of sump manhole (feet)* 72.64

Bottom of sump (feet AMSL) 668.50 *Inside diameter of sump (feet)* 6.00

(1) Water level in LDS not to rise above the primary liner system (670.0 ft AMSL) (or more than 18 inches of water depth or 71.14 ft from TOS). Pumping must be initiated if water elevation is not within the appropriate limits. All corresponding information to be recorded on this form.

(2) Calculate the average daily LDS collection rate as the volume pumped divided by days between pumping = average gallons collected per day

GRAVEL UNDERDRAIN SYSTEM

YEAR: 2014 MONTH: July

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1	9:20	72.67	46		320519 total at local display
2			48		
3			51		
4			54		
5			54		
6			56		
7			60		
8			60		
9			46		
10	13:10	73.42	37		
11			40		
12			43		
13			46		
14			48		
15			48		
16			51		
17			60		GUS turned off
18			58		
19			60		
20			60		
21	8:10	71.60	64		
22			65		
23			65		
24			68		
25			69		
26			70		
27			70		
28			70		
29			70		
30			70		
31			71		

Notes:

Top of sump (feet AMSL) 739.49 *Total depth of sump manhole (feet)* 77.31

Bottom of sump (feet AMSL) 662.18 *Inside diameter of sump (feet)* 3

(1) Pump operating level between 2 ft (664.18 ft AMSL) and 5 ft (667.18 ft AMSL) of water in the GUS manhole.

(2) Water level in the GUS not to rise above the secondary liner system (667.50 ft AMSL) (or more than 63.84 inches of water depth).

LEACHATE COLLECTION SYSTEM

YEAR: 2014 MONTH: August

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1			16	0	
2			16	0	
3			16	0	
4	8:55	69.09	16	0	
5			16	0	
6			16	0	
7			16	0	
8			16	0	
9			16	0	
10			16	0	
11			16	0	
12	9:10	69.03	16	0	134897
13			16	0	
14			16	0	
15			16	0	
16			16	0	
17			16	0	
18			16	0	
19			16	0	
20			16	0	
21			16	0	
22	8:00	68.97	16	0	~~134985~~ 134983
23			16	0	
24			16	0	
25			16	0	
26	9:30	68.94	16	0	134983 / Samples collected, pump run in hand operation
27			17	0	
28			17	0	
29			17	0	
30			17	0	
31			17	0	

Notes:

Top of sump (feet AMSL) 740.83
Bottom of sump (feet AMSL) 671.00
Total depth of sump manhole (feet) 69.83
Inside diameter of sump (feet) 6

(1) Pump operating level between 1 ft (672.00 ft AMSL) and 3 ft (674.00 ft AMSL) of water in the LCS manhole.

LEAK DETECTION SYSTEM

YEAR: 2014 MONTH: August

DAY	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	FLOW METER READING (gallons removed)	TIME OF MEASUREMENT #2 (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	COMMENTS
1						
2						
3						
4	9:43	72.35				
5						
6						
7						
8						
9						
10						
11						
12	10:05	72.34				
13						
14						
15						
16						
17						
18						
19						
20						
21						
22	805	72.36				
23						
24						
25						
26	9:50	72.36	1231.3	10:20	72.55	Samples collected, pumped to LCS
27						
28						
29						
30						
31						

Notes:

Top of sump (feet AMSL) 741.14 *Total depth of sump manhole (feet)* 72.64

Bottom of sump (feet AMSL) 668.50 *Inside diameter of sump (feet)* 6.00

(1) Water level in LDS not to rise above the primary liner system (670.0 ft AMSL) (or more than 18 inches of water depth or 71.14 ft from TOS). Pumping must be initiated if water elevation is not within the appropriate limits. All corresponding information to be recorded on this form.

(2) Calculate the average daily LDS collection rate as the volume pumped divided by days between pumping = average gallons collected per day

GRAVEL UNDERDRAIN SYSTEM

YEAR: 2014 MONTH: August

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1			71	21305	
2			64	38700	
3			54	38685	
4	10:11	73.17	44	36635	
5			37	0	
6			40	0	
7			42	0	
8			46	0	
9			48	0	
10			50	0	
11			53	0	
12	10:20	71.77	55	0	3431591
13			57	0	
14			58	0	
15			60	9685	
16			57	38915	
17			46	38320	
18			36	5850	
19			39	0	
20			41	0	PLC 44"
21			44	0	Voltalarm 3524347
22	8:10	72.51	46	125	1st reading taken 8:10 - 72.51 Gus turned off, second reading taken @ 4:12pm 72.45 PLC Reading 45"
23			48	0	
24			50	0	
25			51	0	
26	10:28	71.89	54	120	3524593
27			56	0	
28			57	0	
29			59	0	
30			60	19470	
31			54	38215	

Notes:

Top of sump (feet AMSL) 739.49 *Total depth of sump manhole (feet)* 77.31

Bottom of sump (feet AMSL) 662.18 *Inside diameter of sump (feet)* 3

(1) Pump operating level between 2 ft (664.18 ft AMSL) and 5 ft (667.18 ft AMSL) of water in the GUS manhole.

(2) Water level in the GUS not to rise above the secondary liner system (667.50 ft AMSL) (or more than 63.84 inches of water depth).

LEACHATE COLLECTION SYSTEM

YEAR: 2014 MONTH: Sept

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1			17		
2			17		
3			17		
4	4:50	68.88	17		13514 (Local display)
5			17		
6			17		
7			17		
8			17		
9			17		
(10)	9:38	68.85	17		~~13515~~ 13515
11			17		
12			17		
13			17		
14			17		
15			18		
16			18		
(17)	13:10	68.79	18		13511.5
18			18		
19			18		
20			18		
21			18		
22			18		
(23)	8:45	68.77	18		13511.6 (pumped from LCS to LDS Imp)
24			18		
25			18		
26			18		
27			18		
28			18		
29			18		
30			18		
31					

Notes:

Top of sump (feet AMSL) 740.83
Bottom of sump (feet AMSL) 671.00
Total depth of sump manhole (feet) 69.83
Inside diameter of sump (feet) 6

(1) Pump operating level between 1 ft (672.00 ft AMSL) and 3 ft (674.00 ft AMSL) of water in the LCS manhole.

LEAK DETECTION SYSTEM

YEAR: 2014 MONTH: Sept

DAY	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	FLOW METER READING (gallons removed)	TIME OF MEASUREMENT #2 (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	COMMENTS
1						
2						
3						
4	4:42	72.46				
5						
6						
7						
8						
9						
10	9:41	72.41				
11						
12						
13						
14						
15						
16						
17	13:17	72.43				
18						
19						
20						
21						
22						
23	8:52	72.44	264.7	9:38	72.58	(sampled LCS/LDS, Pumped from LDS - LCS)
24						
25						
26						
27						
28						
29						
30						
31						

Notes:

Top of sump (feet AMSL) 741.14 *Total depth of sump manhole (feet)* 72.64

Bottom of sump (feet AMSL) 668.50 *Inside diameter of sump (feet)* 6.00

(1) Water level in LDS not to rise above the primary liner system (670.0 ft AMSL) (or more than 18 inches of water depth or 71.14 ft from TOS). Pumping must be initiated if water elevation is not within the appropriate limits. All corresponding information to be recorded on this form.

(2) Calculate the average daily LDS collection rate as the volume pumped divided by days between pumping = average gallons collected per day

GRAVEL UNDERDRAIN SYSTEM

YEAR: 2014 MONTH: Sept

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL feet below top of sump	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1			43	33170	
2			37	0	
3			39	0	(Local display)
(4)	4:35	72.81	39	0	3615356
5			34	0	
6			46	0	
7			48	0	
8			50	0	
9			52	0	
(10)	9:31	Unreadable	54	0	3615356
11			55	0	
12			57	0	
13			60	0	
14			57	5405	
15			58	362775	
16			48	367795	
(17)	13:20	73.40	48	10205	3706942
18			59	0	
19			52	27940	
20			41	2530	
21			45	0	
22			48	0	
(23)	9:03	73.15	51	65	3737445
24			48	21900	
25			40	8690	
26			44	0	
27			48	0	
28			48	0	
29			52	84495	
30			46	21400	
31					

Notes:

Top of sump (feet AMSL) 739.49 *Total depth of sump manhole (feet)* 77.31

Bottom of sump (feet AMSL) 662.18 *Inside diameter of sump (feet)* 3

(1) Pump operating level between 2 ft (664.18 ft AMSL) and 5 ft (667.18 ft AMSL) of water in the GUS manhole.

(2) Water level in the GUS not to rise above the secondary liner system (667.50 ft AMSL) (or more than 63.84 inches of water depth).

LEACHATE COLLECTION SYSTEM

YEAR: 2014 MONTH: Oct

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1			18	0	
2	13:20	68.67	19	~~135188~~ 0	135188
3			19	0	
4			19	0	
5			19	0	
6			19	0	
7			19	0	
8			19	0	
9			19	0	
10			19	0	
11			19	0	
12			19	0	
(13)	11:30	68.61	19	~~135188~~ 0	135188
14			19	0	
15			19	0	
16			19	0	
17			19	0	
18			19	0	
19			20	0	
20			20	0	
21			20	0	
22			20	0	
23			20	6	
24			20	0	
25			20	0	
26			20	0	
(27)	1:00	68.51	20	0	135188
28			20	0	
29			20	0	Sampled Ran pump in Manual
30			20	0	
31			20	0	

Notes:

Top of sump (feet AMSL) 740.83 *Total depth of sump manhole (feet)* 69.83

Bottom of sump (feet AMSL) 671.00 *Inside diameter of sump (feet)* 6

(1) Pump operating level between 1 ft (672.00 ft AMSL) and 3 ft (674.00 ft AMSL) of water in the LCS manhole.

LEAK DETECTION SYSTEM

YEAR: 2014 MONTH: Oct

DAY	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	FLOW METER READING (gallons removed)	TIME OF MEASUREMENT #2 (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	COMMENTS
1						
2	13:25	72.44				
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13	11:26	72.45				
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27	1:10	72.41				
28						
29	9:30	72.41	1288.57	9:45	72.52	Sampled. pumped from LDS - LCS Pumped approx 24 gallons
30						
31						

Notes:

Top of sump (feet AMSL) 741.14 *Total depth of sump manhole (feet)* 72.64

Bottom of sump (feet AMSL) 668.50 *Inside diameter of sump (feet)* 6.00

(1) Water level in LDS not to rise above the primary liner system (670.0 ft AMSL) (or more than 18 inches of water depth or 71.14 ft from TOS). Pumping must be initiated if water elevation is not within the appropriate limits. All corresponding information to be recorded on this form.

(2) Calculate the average daily LDS collection rate as the volume pumped divided by days between pumping = average gallons collected per day

GRAVEL UNDERDRAIN SYSTEM

YEAR: 2014 MONTH: Oct

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL feet below top of sump	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1			43	0	
2	13:36	73.30	46	~~3[illegible]~~ 0	3797819
3			49	0	
4			51	0	
5			52	24445	
6			40	4910	
7			44	0	
8			47	0	
9			50	0	
10			51	0	
11			52	24960	
12			40	5260	
(13)	12:01	73.73	44	0	3857336
14			47	0	
15			50	0	
16			52	2270	
17			49	28550	
18			42	0	
19			46	0	
20			50	0	
21			51	0	
22			52	80415	
23			42	590	
24			46	0	
25			46	0	GUS off
26			48	0	GUS off
(27)	1:14	72.86	52	14865	3919098 GUS on
28			52	17465	
29			44	55	
30			47	0	
31			51	0	

Notes:

Top of sump (feet AMSL) 739.49 *Total depth of sump manhole (feet)* 77.31

Bottom of sump (feet AMSL) 662.18 *Inside diameter of sump (feet)* 3

(1) Pump operating level between 2 ft (664.18 ft AMSL) and 5 ft (667.18 ft AMSL) of water in the GUS manhole.

(2) Water level in the GUS not to rise above the secondary liner system (667.50 ft AMSL) (or more than 63.84 inches of water depth).

LEACHATE COLLECTION SYSTEM

YEAR: 2014 MONTH: Nov

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1			20	0	
2			20	0	
3			20	0	
4			20	0	
(5)	13:20	68.46	21	0	135249 (at local)
6			21	0	
7			21	0	
8			21	0	
9			21	0	
10	13:25	68.43	21	0	135249 (at local)
11			21	0	
12			21	0	
13			21	0	
14			21	0	
15			21	0	
16			21	0	
17			21	0	
18			21	0	
19			21	0	
20			21	0	
21			22	0	
22			22	0	
23			22	0	
24			22	0	
25	9:10	68.36	21	0	135249 (at local) Sampled
26			22	0	
27			22	0	
28			22	0	
29			22	0	
30			22	0	
31					

Notes:

Top of sump (feet AMSL) 740.83 *Total depth of sump manhole (feet)* 69.83

Bottom of sump (feet AMSL) 671.00 *Inside diameter of sump (feet)* 6

(1) Pump operating level between 1 ft (672.00 ft AMSL) and 3 ft (674.00 ft AMSL) of water in the LCS manhole.

LEAK DETECTION SYSTEM

YEAR: 2014 MONTH: Nov

DAY	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	FLOW METER READING (gallons removed)	TIME OF MEASUREMENT #2 (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	COMMENTS
1						
2						
3						
4						
5	13:25	72.51				
6						
7						
8						
9						
10	13:30	72.51				
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25	9:20	72.44	1301.5	9:38	72.62	Sampled, pumped to LCS removed approx 12.8 gallons
26						
27						
28						
29						
30						
31						

Notes:

Top of sump (feet AMSL) 741.14 *Total depth of sump monhole (feet)* 72.64

Bottom of sump (feet AMSL) 668.50 *Inside diameter of sump (feet)* 6.00

(1) Water level in LDS not to rise above the primary liner system (670.0 ft AMSL) (or more than 18 inches of water depth or 71.14 ft from TOS). Pumping must be initiated if water elevation is not within the appropriate limits. All corresponding information to be recorded on this form.

(2) Calculate the average daily LDS collection rate as the volume pumped divided by days between pumping = average gallons collected per day

GRAVEL UNDERDRAIN SYSTEM

YEAR: 2014 MONTH: Nov

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1			52	3015	
2			48	27285	
3			43	0	
4			47	0	
5	13:32	73.15	50	0	*3961660 (at log)
6			51	0	
7			51	30150	
8			42	0	
9			46	0	
10	13:37	74.25	49	0	4049286
11			51	0	
12			51	14370	
13			43	16160	
14			44	0	
15			48	0	
16			50	0	
17			51	0	
18			52	29705	
19			41	0	
20			45	0	
21			48	0	
22			50	0	
23			52	545	
24			49	29640	
25	10:05	73.90	43	90	4102203 (at log)
26			47	0	
27			50	0	
28			51	0	
29			52	18560	
30			41	12380	
31					

Notes:

Top of sump (feet AMSL) 739.49 *Total depth of sump manhole (feet)* 77.31

Bottom of sump (feet AMSL) 662.18 *Inside diameter of sump (feet)* 3

(1) Pump operating level between 2 ft (664.18 ft AMSL) and 5 ft (667.18 ft AMSL) of water in the GUS manhole.

(2) Water level in the GUS not to rise above the secondary liner system (667.50 ft AMSL) (or more than 63.84 inches of water depth).

LEAK DETECTION SYSTEM

YEAR: 2014 MONTH: Dec

DAY	TIME OF MEASUREMENT #1 (hh:mm)	DEPTH TO WATER BEFORE PUMPING (feet below top of sump)	FLOW METER READING (gallons removed)	TIME OF MEASUREMENT # (hh:mm)	DEPTH TO WATER AFTER PUMPING (feet below top of sump)	COMMENTS
1						
2						
3						
4						
5						
6						
7						
8	1315	72.52				
9						
10						
11						
12						
13						
14						
15						
16						
17	9:48	72.52				Insufficient water to sample No water transferred
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

Notes:

Top of sump (feet AMSL) 741.14 *Total depth of sump manhole (feet)* 72.64

Bottom of sump (feet AMSL) 668.50 *Inside diameter of sump (feet)* 6.00

(1) Water level in LDS not to rise above the primary liner system (670.0 ft AMSL) (or more than 18 inches of water depth or 71.14 ft from TOS). Pumping must be initiated if water elevation is not within the appropriate limits. All corresponding information to be recorded on this form.

(2) Calculate the average daily LDS collection rate as the volume pumped divided by days between pumping = average gallons collected per day

LEACHATE COLLECTION SYSTEM

YEAR: 2014 MONTH: Dec

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL (feet below top of sump)	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1			22	0	
2			22		
3			22		
4			22		
5			22		
6			22		
7			23		
(8)	13:00	68.23	23		135345 (at local)
9			23		
10			23		
11			23		
12			23		
13			23		
14			23		
15			23		
16			23		
(17)	9:40	68.23	23		135345 (at local) (Sampled)
18			23		
19			23		
20			23		
21			23		
22			24		
23			24		
24			24		
25			24		
26			24		
27			24		
28			24		
29			24		
30			24		
31			24		

Notes:

Top of sump (feet AMSL) 740.83
Bottom of sump (feet AMSL) 671.00
Total depth of sump monhole (feet) 69.83
Inside diameter of sump (feet) 6

(1) Pump operating level between 1 ft (672.00 ft AMSL) and 3 ft (674.00 ft AMSL) of water in the LCS manhole.

GRAVEL UNDERDRAIN SYSTEM

YEAR: 2014 MONTH: Dec

DAY	TIME OF MEASUREMENT (hh:mm)	MANUAL DEPTH TO WATER LEVEL feet below top of sump	WATER LEVEL @ PLC (inches)	QUANTITY PUMPED @ PLC (gallons removed)	COMMENTS
1			45	0	
2			48	0	
3			50	0	
4			52	7000	
5			46	22045	
6			44	0	
7			48	0	
(8)	1320	72.03	51	0	4164115 (at local)
9			52	11680	
10			44	20180	
11			44	0	
12			49	0	
13			51	0	
14			52	26480	
15			~~51~~ 52	6460	
16			~~54~~ 48	0	
(17)	10:10	73.11	~~49~~ 23	80	
18			52	400	
19			47	29160	
20			44	0	
21			44	9	
22			51	2	
23			52	~~32500~~ 20280	
24			52	12968	
25			46	0	
26			50	0	
27			52	0	
28			52	32560	
29			44	0	
30			48	0	
31			52	18175	

Notes:

Top of sump (feet AMSL) 739.49 *Total depth of sump manhole (feet)* 77.31

Bottom of sump (feet AMSL) 662.18 *Inside diameter of sump (feet)* 3

(1) Pump operating level between 2 ft (664.18 ft AMSL) and 5 ft (667.18 ft AMSL) of water in the GUS manhole.

(2) Water level in the GUS not to rise above the secondary liner system (667.50 ft AMSL) (or more than 63.84 inches of water depth).

Appendix B
Sediment and Erosion Control Inspection Forms - Sevenson Environmental Services

Sevenson Environmental Services, Inc
Weekly Sediment and Erosion Control Inspection Form

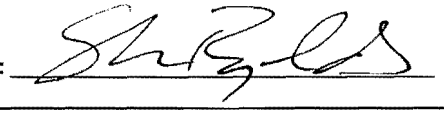
ITEM	Parcel 201	AOI - 8	AOI -11	AOI -4	AOI - 5	AOI - 6	AOI - 10	AOI - 15	Vault	East AOI 4	Spring 18	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	x	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	x	NA

Inspection Requirements:
1. To be performed weekly
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

Comments:

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:  **Date Performed:** 1/27/2014

Sevenson Environmental Services, Inc
Weekly Sediment and Erosion Control Inspection Form

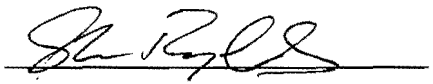
ITEM	Parcel 201	AOI - 8	AOI -11	AOI -4	AOI - 5	AOI - 6	AOI - 10	AOI - 15	Vault	East AOI 4	Spring 18	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	x	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	x	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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:  Date Performed: 2/3/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover											NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	x	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	x	NA

Inspection Requirements:
1. To be performed weekly
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

Comments: Unable to perform inspection due to snow cover

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:  **Date Performed:** 2/10/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover											NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	x	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	x	NA

Inspection Requirements:
1.To be performed weekly
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

Comments: Unable to perform inspection due to snow cover

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:  **Date Performed:** 2/17/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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:  **Date Performed:** 2/26/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover											NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X	NA

Inspection Requirements:
1.To be performed weekly
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

Comments: Unable to inspect soil cover due to snow cover.

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: _____ Date Performed: 3/3/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X	NA

Inspection Requirements:
1. To be performed weekly
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

Comments:

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: _____ **Date Performed:** 3/10/2014

Sevenson Environmental Services, Inc.
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ **Date Performed:** 3/24/2014

Weekly Security 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1. To be performed weekly
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

Comments:

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: _____ Date Performed: 3/31/2014

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

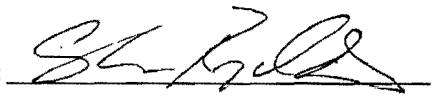
ITEM	Parcel 201	AOI - 8	AOI -11	AOI -4	AOI - 5	AOI - 6	AOI - 10	AOI - 15	Vault	East AOI 4	Spring 18	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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:  Date Performed: 4/7/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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:  **Date Performed:** 4/14/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 4/28/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1. To be performed weekly
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

Comments:

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:  **Date Performed:** 5/5/2014

Sevenson Environmental Services, Inc.
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1. To be performed weekly
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

Comments:

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: 

Date Performed: 5/12/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 5/27/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 6/2/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 6/9/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1. To be performed weekly
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

Comments:

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: _____ Date Performed: 6/17/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 6/23/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 7/7/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 7/14/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ **Date Performed:** 7/21/2014

Sevenson Environmental Services, Inc
Weekly Sediment and Erosion Control Inspection Form

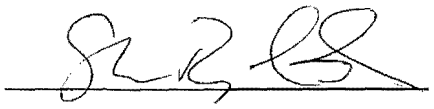
ITEM	Parcel 201	AOI - 8	AOI -11	AOI -4	AOI - 5	AOI - 6	AOI - 10	AOI - 15	Vault	East AOI 4	Spring 18	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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:  Date Performed: 7/28/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ **Date Performed:** 8/4/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 8/11/2014

Sevenson Environmental Services, Inc.
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 8/18/2014

Sevenson Environmental Services, Inc
Weekly Sediment and Erosion Control Inspection Form

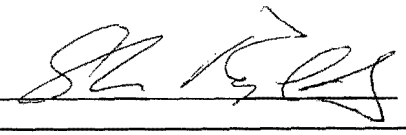
ITEM	Parcel 201	AOI - 8	AOI -11	AOI -4	AOI - 5	AOI - 6	AOI - 10	AOI - 15	Vault	East AOI 4	Spring 18	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1. To be performed weekly
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

Comments:

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:  **Date Performed:** 9/2/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 9/8/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 9/15/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 9/22/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	NA
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ **Date Performed:** 9/29/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	X
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 10/6/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	X
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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:  **Date Performed:** 10/13/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	X
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ **Date Performed:** 10/20/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	X
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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:  **Date Performed:** 10/27/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	X
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1. To be performed weekly
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

Comments:

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: _____ **Date Performed:** 11/3/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	X
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1. To be performed weekly
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

Comments:

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: _____ Date Performed: 11/10/2014

Seversons Environmental Services, Inc
Weekly Sediment and Erosion Control Inspection Form

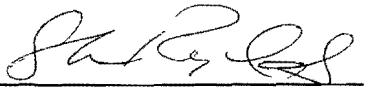
ITEM	Parcel 201	AOI - 8	AOI -11	AOI -4	AOI - 5	AOI - 6	AOI - 10	AOI - 15	Vault	East AOI 4	Spring 18	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	X
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments: Unable to properly inspect due to snow cover

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:  **Date Performed:** 11/17/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	X
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1. To be performed weekly
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

Comments: Unable to properly inspect due to snow cover

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: _____ **Date Performed:** 12/8/2014

Sevenson Environmental Services, Inc
Weekly 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	WW#3
Silt Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	X
Safety Fence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soil Cover	X	X	X	X	X	X	X	X	X	X	NA	X
Tarp Cover	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pumps	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hoses	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Inspection Requirements:
1.To be performed weekly
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

Comments:

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: _____ Date Performed: 12/15/2014

Appendix C
Inspection Report - Cardno JF New
September 5, 2013

Plant Documentation

17.04.2014 14:04:34
! = out of range
= not read or communication error
* = parameter changed

Flowmeter Verification Certificate Transmitter

CRA	GM Bedford
Customer	Plant
50W40-ULDA1AC5BAAA	FIT-LCS
Order code	Tag Name
PROMAG 50 W DN40	0.7115 - 0.7115
Device type	K-Factor
F1095B16000	0
Serial number	Zero point
V2.04.00	V1.04.10
Software Version Transmitter	Software Version I/O-Module
04/17/2014	08:46 AM
Verification date	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	**Simubox Details**
500170	8695304
Production number	Production number
Test510	1.00.01
Software Version	Software Version
05/2013	--/----
Last Calibration Date	Last Calibration Date

Date Operator's Sign Inspector's Sign

Overall results:

The achieved test results show that the instrumment 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.

Endress+Hauser
People for Process Automation

FieldCheck - Result Tab Transmitter

Customer	**CRA**	Plant	**GM Bedford**
Order code	**50W40-ULDA1AC5BAAA**	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	**04/17/2014**	Verification time	**08:46 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 %	0.42 %
✓		7.967 gal/m (10.0%)	1.50 %	0.02 %
✓		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	-0.007 mA
✓		4.800 mA (5%)	0.05 mA	-0.006 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.007 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.014 mA
✓		20.000 mA (100%)	0.05 mA	0.017 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	3.865 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..135.066 mV	0.000 mV

Legend of symbols

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

FieldCheck: Parameters Transmitter

Customer	**CRA**		Plant	**GM Bedford**
Order code	**50W40-ULDA1AC5BAAA**		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	**04/17/2014**		Verification time	**08:46 AM**

Curent Output	**Assign**	**Current Range**	**Value 0_4mA**	**Value 20 mA**		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	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. 107.0

Plant Documentation

17.04.2014 13:59:02
! = out of range
= not read or communication error
* = parameter changed

Flowmeter Verification Certificate Transmitter

CRA	GM Bedford
Customer	Plant
50W40-UL0A1AC2BAAA	--------
Order code	Tag Name
PROMAG 50 W DN40	0.708 - 0.708
Device type	K-Factor
F1095C16000	17
Serial number	Zero point
V2.04.00	V1.04.10
Software Version Transmitter	Software Version I/O-Module
04/16/2014	12:35 PM
Verification date	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	**Simubox Details**
500170	8695304
Production number	Production number
Test510	1.00.01
Software Version	Software Version
05/2013	--/----
Last Calibration Date	Last Calibration Date

Date Operator's Sign Inspector's Sign

Overall results:

The achieved test results show that the instrumment 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.

Endress+Hauser
People for Process Automation

FieldCheck - Result Tab Transmitter

Customer	**CRA**	Plant	**GM Bedford**
Order code	**50W40-UL0A1AC2BAAA**	Tag Name	**--------**
Device type	**PROMAG 50 W DN40**	K-Factor	**0.708 - 0.708**
Serial number	**F1095C16000**	Zero point	**17**
Software Version Transmitter	**V2.04.00**	Software Version I/O-Module	**V1.04.10**
Verification date	**04/16/2014**	Verification time	**12:35 PM**

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 %	0.43 %
✓		7.967 gal/m (10.0%)	1.50 %	0.03 %
✓		39.836 gal/m (50.0%)	1.50 %	-0.01 %
✓		79.672 gal/m (100%)	1.50 %	-0.01 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.006 mA
✓		4.800 mA (5%)	0.05 mA	-0.007 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.006 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.003 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	3.894 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..234.056 mV	16.433 mV

Legend of symbols

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

FieldCheck: Parameters Transmitter

Customer	**CRA**	Plant	**GM Bedford**
Order code	**50W40-UL0A1AC2BAAA**	Tag Name	**--------**
Device type	**PROMAG 50 W DN40**	K-Factor	**0.708 - 0.708**
Serial number	**F1095C16000**	Zero point	**17**
Software Version Transmitter	**V2.04.00**	Software Version I/O-Module	**V1.04.10**
Verification date	**04/16/2014**	Verification time	**12:35 PM**

Curent Output	**Assign**	**Current Range**	**Value 0_4mA**	**Value 20 mA**		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 gal/m	50.00 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. 117.0