East Plant Area TSCA Vault Annual Report Calendar Year 2020

GM Bedford Castings Operations
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EPA ID# IND0060036099

General Motors, LLC

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→ The Power of Commitment

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Terms and Acronyms

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

1. Introduction

This Annual Monitoring Report (Report) summarizes data from calendar year 2020 for post-closure monitoring activities for the Toxic Substances Control Act (TSCA) landfill vault (Vault), located in the East Plant Area of the General Motors LLC (GM) Bedford Casting Operations (BCO) Facility (Facility), in Lawrence County, Bedford, Indiana. This Report has been prepared by GHD on behalf of GM in accordance with the Resource Conservation and Recovery Act (RCRA) Administrative Order on Consent effective August 14, 2014 (U.S. EPA Docket No. RCRA-05-2014-0011), and the East Plant Area Vault Post-Closure Plan (PCP) (GHD, February 3, 2012; as amended by Revision 1, August 25, 2016). The Vault is a part of the RCRA Corrective Action (CA) activities being conducted at the Facility under the East Plant Area Interim Measure (IM) concurrent with other IMs at the Facility. The agency Approvals for the Vault were effective October 18, 2006, and were issued pursuant to 40 Code of Federal Regulations (CFR) § 761.61 (c) for the risk-based approval for the disposal of PCB contaminated waste in the Vault. The Vault was constructed as a component of the East Plant Area IM during RCRA CA activities initiated under the Performance-Based CA Agreement (effective March 20, 2001, and amended October 1, 2002, March 29, 2007, and May 9, 2008) for the Facility. A RCRA Order between U.S. EPA and GM LLC was executed on August 4, 2014 (Administrative Order on Consent (AOC) EPA Docket No. RCRA-05-2014-0011) and replaces the Performance-Based CA Agreement, which has been terminated.

Final closure of the Vault occurred on March 27, 2012. A Post-Closure Plan (PCP) was submitted to U.S. EPA on February 3, 2012, which stated that the post-closure monitoring of the Vault would continue to include the quantity of liquid collected from the leachate collection system (LCS), leak detection system (LDS), and gravel underdrain system (GUS), the water elevations in these systems, analytical results from samples collected from these systems, and effluent quantity/quality from the on-Site groundwater treatment plant (GWTP). The PCP prescribes a reduced frequency of record keeping procedures to, at a minimum, once per month; however, monitoring was generally completed on a daily (LCS, GUS) and weekly (LDS) basis in 2020 Additional post-closure monitoring required by the PCP includes semi-annual inspections of the Vault cover system, recorded in a maintenance log, for the first two years following closure and annually thereafter. Consistent with the PCP and the RCRA AOC, the next annual report covering post-closure monitoring data for the 2021 calendar year will be submitted to U.S. EPA on or before July 15, 2022.

Daily operation and maintenance activities associated with the GWTP, LCS, LDC, GUS and Wet Wells are conducted by Beacon O&M Services (Beacon) (formerly known as Hamtramck Energy Services) under the direction of GM.

1.1 Purpose and Organization of Report

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

This Report is organized as follows:

Section 2.0 – Summary of Record Keeping Log

This section provides a summary of the quantity of liquid collected in 2020 from the LCS, LDS, and the GUS sumps and quantity discharged from these systems to the GWTP for treatment; along with water elevations in the GUS, over the primary liner (LCS), and over the secondary liner (LDS); and the Vault inspection log.

Section 3.0 – Analytical Results

This section provides analytical results for 2020 from the monitoring of the LCS, LDS, GUS, and combined effluent from the GWTP, and groundwater monitoring wells near the Vault.

Section 4.0 – Leachate and Leak Detection Water Disposal

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

Section 5.0 – Summary and Review of Water Elevations

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

Section 6.0 – Issues Encountered and Rectification Actions

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

Section 7.0 – Spill Cleanup Reports

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

Section 8.0 – Financial Assurance

This section discusses financial assurance for the Vault.

Section 9.0 – References

This section presents references cited in this Report.

2. Summary of Record Keeping Log

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

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

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

In 2020, the water level in the GUS system was recorded on a daily basis by the automated system. During 2020, water level in the LDS and LCS systems were manually measured and recorded on a weekly and daily basis, respectively. Summaries of the sump monitoring logs for the LCS, LDS, and GUS including the quantity of liquid pumped from each of the Vault collection systems are presented in Tables 2.1, 2.2, and 2.3, respectively. Field logs for the LCS, LDS, and GUS are presented in Appendices A.1, A.2, and A.3, respectively. In accordance with the Approvals, water pumped from the LCS and LDS is treated and managed in compliance with the National Pollutant Discharge Elimination System (NPDES) permit (NPDES Permit No. IN0064424) for the Site. It should also be noted that Tables 2.1 through 2.3 incorporate corrections, calculations, and additional annotations over the field logs found in Appendix A.

Table 2.4 presents a summary of the water elevations to allow for direct comparison between the various layers of the Vault liner system (listed in order from top to bottom: LCS, lowest point of the primary liner system, LDS, lowest point of the secondary liner system, and GUS). Table 2.5 presents a summary of the monthly maximum water elevation in each of the sumps. Note that the groundwater elevation at the GUS sump remained stable during 2020, however, the static elevation is above the operational level of 667.5 ft. AMSL, as highlighted in the table, due to failure of the original GUS pump and subsequent temporary pumps. Copies of the field logs for manual measurements for the LCS, LDS, and GUS sumps, as well as recorded values from the automated pumping system are provided in Appendix A.

2.2 Summary of Water Treated in the Groundwater Treatment Plant

Water removed from the Vault sumps is directed to the GWTP, which treats PCB-impacted water removed from the Vault Sumps and the SSC wet wells (including Wet Wells #1 through #4). Approximately 205 gallons of water was removed from the LCS and 783.7 gallons from the LDS during 2020. Roughly 2.5 gallons of water was removed from the GUS during the alternate pump testing (more in Section 6). The GWTP discharge at Outfall 004 is sampled monthly under the NPDES permit (NPDES Permit No. IN0064424). Data collected during the 2020 calendar year were reported in accordance with the NPDES permit.

The volume of water discharged from the GWTP is recorded daily. A summary of the total monthly volume and daily average of treated water in the GWTP for 2020 is provided in Table 2.6.

2.3 Summary of the Vault Inspection Log and Maintenance Activities

Maintenance and inspection activities were performed at the Vault during the 2020 calendar year.

GHD completed inspection of the Vault Cover System concurrent with inspection of the West Plant Area and East Plant Area Cover Systems. This inspection was completed on November 20 and 21, 2020. Inspections are typically completed on a semi-annual basis. Due to the COVID-19 business disruption during 2020, the spring inspection was cancelled. The findings of the Fall 2020 inspection were reported in the 4th Quarterly Progress Reports for 2020 (submitted to U.S. EPA on February 8, 2021). A summary of the findings related to the Vault Cover System in 2020 is as follows:

– Weed and tree sapling growth is present at most transects in the East Plant Area, accompanied by some bare patches. There were no significant findings (i.e., no issues that pose a risk to the integrity of the cover) for the Vault Cover System. Copies of the Cover System inspection forms can be found in Appendix B – Cover System Inspection.
– The cover system was inspected for the presence of animal burrows and, where found, were inspected. In general, animal burrows extended between 6 and 12 inches below grade. The depth of the liner for the cover system is 18 inches in total depth (12-inches common fill and 6-inches topsoil), therefore, animal burrows did not compromise the liner. The burrows did not appear to be active. Excavated burrows were filled with clean soil.
– Tree and brush saplings were removed where encountered.
– Cover system grasses were in excess of 4 feet, limiting visibility of the ground surface. A land maintenance contractor was contacted to mow the cover system in Spring 2021.
– Cleanouts associated with the LCS and GUS systems were inspected in November 2020. No obstructions were observed that impeded water flow. Observations were consistent with observations from previous cleanout inspections.

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

The magnetic flow meter (mag meter) identified as FIT-Vault (serial number F1095B16000), measured the combined volume of water being pumped from the Vault sump systems (LCS, LDS, and GUS) via the permanent forcemain to

the EQ tank, before being treated in the GWTP. The mag meter calibration is conducted biennially. The calibration of the mag meter was conducted on August 7, 2020.

3. Analytical Results

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

3.1 Groundwater Monitoring Analytical Results

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

Static groundwater levels are measured quarterly, and groundwater samples are collected during groundwater static levels events during the second and fourth quarters. The first EI CA750 groundwater sampling event of 2020, was conducted on July 13, 14, 15, and 16, 2020 (postponed from the planned May 2020 event due to the COVID-19 business disruption). The second semi-annual sampling event of 2020 was conducted on November 16, 17, 18, and 19, 2020.

Groundwater samples are collected at the perimeter of the Facility on a semi-annual basis under the EI CA750 monitoring program. EI CA750 groundwater monitoring results for the July and November 2020 events were previously reported under separate cover and are summarized in Tables 3.1 and 3.2, respectively. Figures 3.2 and 3.3 present databoxes which summarize the groundwater and surface water analytical results for the PCBs sampling locations in the EI CA750 monitoring program for the July and November semi-annual sampling events of 2020, respectively.

Locations 9-4 and CH-20 are downgradient of the Vault and were non-detect for PCBs during the EI CA750 2020 monitoring events. Locations 9-4 and CH-20 have been non-detect for PCBs since sampling began in 2014 (location 9-4) and in 2015 (location CH-20). PCBs were detected at other wells within the Facility boundary related to historical sources and not hydraulically connected (drown gradient of) to the Vault (e.g., wells near Area of Interest [AOI 8]).

Sample Quality

The analytical data collected during the first and second half of 2020 EI CA750 sampling events were within the acceptable qualifications, as noted in the Memorandum regarding Full Validation of the Analytical Results previously submitted with the EI CA750 results (Memos 339 and 344).

3.2 Leachate and Leak Detection Water Monitoring Analytical Results

The PCP requires water from the LCS and LDS be sampled at least on quarterly basis for PCBs. Beacon attempted to collected samples from both the LCS and LDS on a monthly basis during 2020. Sufficient water was present to collect samples on January, February, March and April 2020. LCS water samples were analyzed for PCBs and volatile organic compounds. LDS water samples were analyzed for PCBs. Analytical results are presented in Table 3.3.

Analytical results were non detect for PCBs. Vinyl chloride was detected in the February 2020 LCS sample at an estimated concentration of 0.00041mg/L.

3.3 GUS Analytical Results

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

There was no sampling completed at the GUS in 2020. The temporary pump placed in the GUS has failed and attempts to remove and replace the pump have been unsuccessful and sampling with a bailer was not possible due to space restrictions within the sump and pump casings preventing a bailer from being lowered to the GUS water level.

3.4 Water Treatment Facility Analytical Results

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

The GWTP was sampled monthly in accordance with the NPDES permit. Effluent results for PCBs were non-detect during the reporting year. Analytical results for 2020 monthly Outfall 004 discharge sampling events are presented in Table 3.4.

4. Leachate and Leak Detection Water Disposal

Pursuant to U.S. EPA's Risk-Based Approval to Dispose of PCBs dated October 18, 2006; Conditions of Approval; Leachate and Leak Detection System Water Monitoring and Disposal, Section 10.b. – *"Leachate and leak detection water with PCB concentrations from 1 ppm to, but not including, 50 ppm is TSCA reportable material that must be managed in compliance with the … 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 and no evidence of hydraulic conductivity between the layers. Pumped leachate and leak detection liquid were treated by the GWTP.

5. Summary and Review of Water Elevations

The water level above the primary liner (i.e., in the LCS), the secondary liner (i.e., in the LDS) and GUS continued to be generally measured on a weekly basis throughout 2020. Maximum daily water levels recorded at the GUS and LCS sumps within the 24-hour day are automatically stored at the PLC in the WTP and retrieved by the operator once per week (the PLC stores 7 days of data).

Tables 2.1, 2.2, and 2.3 show limited water was removed from the LCS (205 gallons), LDS (783.7 gallons) and GUS (2.5 gallons) during the reporting period. Pumping was last recorded during the calendar year of 2017. The last recorded amount was removed from the LCS was approximately 500 gallons in 2020 and 137.5 gallons from the LDS

in 2017. Table 2.4 presents a summary of the water elevations in each of the sumps. Summaries of the maximum monthly water elevations in each of the systems are presented in Table 2.5. Copies of the field logs with PLC records and manual measurements collected from the LCS, LDS, and GUS sumps are provided in Appendix A.

Pumping operations began in 2006, with significant reduction in the average monthly volume of water removed through 2009. Since 2010, the average monthly volume of water removed has continued to decline, but at a lessening rate. A summary of the average monthly volume of water removed from the LCS and the LDS since 2010 is presented on Figure 5.1 (volume presented is from both the calculation method as used up to 2014 and based on flow meter readings for the LDS to allow for direct comparison between calculation methods and historical monitoring data).

5.1 Leachate Collection System

Manual water level measurements were generally collected on a weekly basis (in excess of the monthly monitoring required by the PCP) in 2020. The automated system records the maximum level and total pumped quantities on a daily basis. At the end of June 2020, communications between the LCS and the PLC at the GWTP became sporadic before completely losing connection. The wireless modems that relay signals between the LCS control panel and the GWTP were scheduled to be replaced in 2020 as part of the Site communication upgrade project.

During 2020 the water elevation in the LCS was maintained within the operating limits set out in the PCP. The water levels recorded by the transducers are transmitted through the wireless modem to the PLC. It is these water level readings (converted to elevation) that trigger the pump in the LCS to turn ‘on’ (set point is 674 feet AMSL). It is noted that on January 21, 2020, the manual water level reading (backup reading) indicated the water elevation exceeded 674 feet AMSL. The level recorded at the PLC was within operating limits and therefore no water was removed. However, the operator manually operated the pump two days later to collect his monthly sample and removed a conservative 50 gallons from the system. Through the year, there were no apparent increases in the rate of the water level rises.

During 2020, the depth of water in the LCS was maintained at less than 1 foot above floor of sump (AFOS) (bottom of sump at 671.00 ft AMSL), with the maximum depth of 674.14 ft AFOS (equivalent water surface depth of 66.69 ft from the top of the sump as manually measured) on January 21, 2020.

On September 24, 2020, the flowmeter was replaced. The meter records the flow rate and totalizer numbers.

The total amount of water removed from the LCS in 2020 was estimated to be 205 gallons, which is less than the estimated 500 gallons pumped in 2019.

5.2 Leak Detection System

Pumping at the LDS is conducted via a portable pump discharging through overland hose that is connected to the hard piping within the LCS manhole (for direct discharge to the EQ tank via forcemain). In 2020 the operator determined the pump had failed. A replacement pump was installed on September 24, 2020. Following pump installation, an initial 589 gallons of water removed. An additional 194.7 gallons of water were removed October 12, 2020.

The total amount of water removed from the LDS during the 2020 calendar year was 783.7 gallons based on flow meter readings. Manual volume calculations were used historically prior to the use of flow meters

During 2020, the depth of water in the LDS was maintained between 0.73 ft and 2.7 ft AFOS (bottom of sump at 668.49 ft AMSL or 72.65 ft below the top of the sump), with the maximum depth of 2.7 ft AFOS (equivalent water surface elevation of 671.17 ft) measured on September 1, 2020 (prior to pump replacement on September 24, 2020).

In assessing geomembrane performance, leakage through the liner is evaluated as an indicator of potential failure of the liner system. Leakage through a liner system can occur through seams and puncture holes from handling and placement. These are eliminated through a robust quality control and quality assurance monitoring and testing program conducted during liner installation. Additional leakage through the liner can occur through pinholes that are inadvertently introduced during the manufacturing process and not visible to the eye.

In assessing the potential for leakage through the primary bottom liner system into the LDS, GM records the amount of water collected within the LDS system and compares that volume to a theoretical action leakage rate (ALR) measured in units of gallons/acre/day (gpad). The volume of water removed (converted to an average flow rate in gpad) should be less than the ALR. The data are used in conjunction with other data to assess the overall performance of the Vault containment system.

The ALR was initially calculated in the Post-Closure Plan (GHD, 25 August 2016), as 32,000 gallons/acre/day (gpad).

As the Vault containment system matures, USEPA suggested GM look at other calculations that could provide information as to the potential indicator of a liner failure. At the suggestion of U.S.EPA, GHD reviewed U.S.EPA's January 1992 Action Leakage Rates for Leak Detection Systems (EPA 530-R-92-004) and agrees that the method presented in the document would provide additional information for on-going liner performance evaluation.

GHD first verified the ALR calculated by U.S.EPA shown on Page 11 of the 1992 document using the equation below:

$$Q = k * h * \tan(\alpha) * B_{avg}$$

k=1 cm/sec (hydraulic conductivity of INDOT No. 8 stone used in the gravel envelope)

α=0.0441 (calculated from the elevation difference between the LDS and LCS sumps and the distance between the two along to gravel base, 1.5 ft./34.033072 ft.)

D=1 foot (average thickness of the gravel envelope within the LDS)

B_{avg}=20 feet (D/ sin(α))

Based on the above conditions, the ALR is calculated at 18,709 gpad.

The average daily flow rate for 2020 was calculated as the total volume of water removed, divided by the number of days since the previous pumping, divided by the Vault footprint (7 acres). The average daily flow rate ranged from 0.08 gallons/acre/day based on volume of liquid removed following the pump replacement in September 2020 to 1.54 gallons/acre/day following pumping during October 2020.

It is concluded that the ALR using both the original and alternate method outlined above, is higher (including a factor of safety of 2 as suggested by the U.S.EPA in their guidance method) than the quantity of liquid removed from the LDS.

5.3 Gravel Underdrain System

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

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

Water level measurements were collected by the PLC on a daily basis. Since November 2016, there was a continued issue that resulted in no manual measurement of the water level for the duration of 2020. The water level tape previously used became lodged in the sump could not be retrieved. Additional water level tapes, including small diameter tapes were attempted, but could not penetrate beyond the previously lodged tapes.

Through October 2017, a temporary pump, operated manually, was used to maintain the GUS system water levels. During October 2017, the temporary pump failed and became lodged in the sump when replacement was attempted. Continued pumping of the GUS throughout 2020 could not be sustained, resulting in the water levels exceeding the operation levels of 667.5 ft AMSL, or 5.32 ft of water depth in the sump due to the continued issues at the sump since 2017. Complete details of the problems with the GUS sump systems are presented in Section 6. Although there were

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

6. Issues Encountered and Remedial Actions

During the cover system inspection in November 2020, the height of the grasses across the cover system (over 4 foot high) limited the inspector's ability to observe ground conditions and posed safety risks. GM contracted a local landscaping service to mow the cover system during 2021 to reduce the height of the cover system vegetation. The cover system was mowed in advance of the Spring 2021 inspection. GM will schedule future inspections to coincide with mowing activities to improve access and visibility of the ground conditions during cover system inspections.

Animal burrows have been observed on the cover system. During the November 2020 inspection, field inspectors dug through multiple burros across the Vault and East Plant Area cover system. The burrows extended 6 to 12 inches below grade and did not appear to be active. Excavated burrows were backfilled with clean soil.

The GWTP operator identified a LDS pump failure and made of note of the failure. Unfortunately, the notice was inadvertently not responded to by others until preparation of the 2019 Annual Vault Report. In order to identify and address operational matters in a more timely manner, GM has a monthly meeting with the GWTP plant operator and GHD personnel to discuss and monitor planned work, issues, and resolutions. In addition, the GWTP operator now posts sump logs to a shared server which GHD reviews, at a minimum, each quarter.

The following actions were taken in 2020 to assess and/or rectify the groundwater removal issues associated with the GUS water collection system:

– A 3-inch galvanized pipe is located within the GUS sump and was used to mount a transducer. The pipe extends to the base of the sump. Design drawings indicate that the bottom of the 3-inch pipe was slightly above the bottom of the sump to allow groundwater to flow into the pipe. Field personnel estimated an approximate 14-foot water column within the 3-inch pipe.
– On November 6, 2020, GHD installed a pump into the 3.25-inch galvanized pipe. GHD removed approximately 2.5 gallons of water from pipe before it went dry. Field staff returned to measure the water level within the pipe the following day and during the static water level gauging event at the end of the month. No water detected. It was theorized that the sediment accumulation in the base of the GUS sump created a plug at the bottom of the pipe, limiting the rate of recharge into pipe.
– GM has exhausted options to remove water from the GUS via the GUS sump. Options are being reviewed to determine if there are alternate means to pump groundwater from within the GUS system to enhance PCB removal while being protective of the Vault liner system. GM is currently evaluating installing pumps within one or more of the GUS cleanouts. The selected pump will need to be able to navigate beyond the bends along the cleanouts into the water table with sufficient room to be able to remove the pumps for future maintenance and replacement. GM is looking to reproduce the worst-case scenario bend in a test scenario prior to a formal field test to minimize the potential for the selected pump(s) to get stuck in a cleanout. The testing will be conducted during the first quarter of 2022. Once a selected pump is identified, the pumping network will be designed (including identification of pump/cleanout and a collection system) and constructed. This work will be completed during the far field dye trace injection study. Upon completion of the far field dye trace injection (estimated to be Fall 2022), pumping from the GUS via the cleanouts will begin.

7. Spill Cleanup Reports

There were no on-Facility PCB spills that occurred in 2020. There were no spills on public roads.

8. Financial Assurance

As required by the August 2014 RCRA AOC, a surety bond was obtained by GM in 2014 to provide financial assurance for the remaining Corrective Action tasks, including operation and maintenance related to the Vault, until the approval of the Corrective Measures Proposal (CMP); at which time costs to complete Corrective Action will be re-evaluated based on the requirements of the CMP. As required under the AOC, the financial assurance cost estimate is updated, at a minimum, annually. GM submitted the FY2020 financial assurance cost estimate to U.S.EPA and IDEM on November 11, 2020. GM submitted the financial assurance demonstration of the FY2020 financial assurance to U.S.EPA on March 31, 2020. GM submitted the revised financial assurance cost estimate for FY2021 to U.S. EPA and IDEM on November 11, 2020, with a revised version, based on U.S.EPA comments submitted on February 12, 2021, GM submitted the financial assurance demonstration of the FY2021 financial assurance to U.S. EPA on March 31, 2021. The surety bond in the amount of the approved financial assurance cost estimate remains in effect.

9. References

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

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

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

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

Tables

Table 2.1

2020 Summary of Leachate Collection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Time of Measurement	Manual Depth to Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (Ft. AMSL)	Volume Removed (gallons	Water Level at PLC[(b)] (inches)	PLC Water Level Converted to Elevation[(d)] (ft. AMSL)	Equivalent Depth of Water Over Primary Liner[(3)] (inches)	Comments
1/1/20	8:05	--	--	--	8.8	671.73	0.090	
1/2/20	8:05	--	--	--	8.8	671.73	0.090	
1/3/20	8:05	--	--	--	8.9	671.74	0.090	
1/4/20	8:05	--	--	--	9.0	671.75	0.090	
1/5/20	8:05	--	--	--	9.0	671.75	0.090	
1/6/20	8:05	--	--	--	9.1	671.76	0.090	
1/7/20	8:05	68	672.83	--	9.2	671.77	0.090	
1/8/20	8:05	--	--	--	9.2	671.77	0.090	
1/9/20	8:05	--	--	--	9.3	671.78	0.090	
1/10/20	8:05	--	--	--	9.3	671.78	0.090	
1/11/20	8:05	--	--	--	9.3	671.78	0.090	
1/12/20	8:05	--	--	--	9.3	671.78	0.090	
1/13/20	8:05	--	--	--	9.4	671.78	0.090	
1/14/20	8:05	67.34	673.49	--	9.4	671.78	0.090	
1/15/20	8:05	--	--	--	9.6	671.80	0.090	
1/16/20	8:05	--	--	--	9.7	671.81	0.090	
1/17/20	8:05	--	--	--	9.7	671.81	0.090	
1/18/20	8:05	--	--	--	10.0	671.83	0.090	
1/19/20	8:05	--	--	--	10.0	671.83	0.090	
1/20/20	8:05	--	--	--	10.1	671.84	0.090	
1/21/20	8:05	66.69	674.14	--	10.1	671.84	0.090	
1/22/20	8:05	--	--	--	10.3	671.86	0.090	
1/23/20	8:05	68.85	671.98	50	10.3	671.86	0.090	sampled and pumped approximately 50 gallons
1/24/20	8:05	--	--	--	5.3	671.44	0.037	
1/25/20	8:05	--	--	--	5.3	671.44	0.037	
1/26/20	8:05	--	--	--	5.4	671.45	0.037	
1/27/20	8:05	--	--	--	5.5	671.46	0.037	
1/28/20	8:05	--	--	--	5.7	671.48	0.037	
1/29/20	8:05	68.36	672.47	--	5.8	671.48	0.037	
1/30/20	8:05	--	--	--	5.8	671.48	0.037	
1/31/20	8:05	--	--	--	5.8	671.48	0.037	
2/1/20	8:05	--	--	--	5.9	671.49	0.037	
2/2/20	8:05	--	--	--	5.9	671.49	0.037	
2/3/20	8:05	68.36	672.47	--	5.9	671.49	0.037	
2/4/20	8:05	--	--	--	6.1	671.51	0.090	
2/5/20	8:05	--	--	--	6.1	671.51	0.090	
2/6/20	8:05	--	--	--	6.2	671.52	0.090	
2/7/20	8:05	--	--	--	6.2	671.52	0.090	
2/8/20	8:05	--	--	--	6.2	671.52	0.090	
2/9/20	8:05	--	--	--	6.3	671.53	0.090	
2/10/20	8:05	--	--	--	6.3	671.53	0.090	
2/11/20	8:05	68.67	672.16	--	1.8	671.15	0.037	sampled
2/12/20	8:05	--	--	--	2.8	671.23	0.037	
2/13/20	8:05	--	--	--	3.0	671.25	0.037	
2/14/20	8:05	--	--	--	3.0	671.25	0.037	
2/15/20	8:05	--	--	--	3.1	671.26	0.037	
2/16/20	8:05	--	--	--	3.2	671.27	0.037	
2/17/20	8:05	68.61	672.22	--	3.3	671.28	0.037	
2/18/20	8:05	--	--	--	3.3	671.28	0.037	
2/19/20	8:05	--	--	--	3.4	671.28	0.037	
2/20/20	8:05	--	--	--	3.4	671.28	0.037	
2/21/20	8:05	--	--	--	3.4	671.28	0.037	
2/22/20	8:05	--	--	--	3.5	671.29	0.037	
2/23/20	8:05	--	--	--	3.6	671.30	0.037	
2/24/20	8:05	--	--	--	3.7	671.31	0.037	
2/25/20	8:05	--	--	--	3.7	671.31	0.037	
2/26/20	8:05	--	--	--	3.7	671.31	0.037	
2/27/20	8:05	68.55	672.28	--	3.7	671.31	0.037	
2/28/20	8:05	--	--	--	3.8	671.32	0.037	
2/29/20	8:05	--	--	--	3.8	671.32	0.037	
3/1/20	8:05	--	--	--	3.8	671.32	0.037	
3/2/20	8:05	68.55	672.28	--	3.8	671.32	0.037	
3/3/20	8:05	--	--	--	3.8	671.32	0.037	
3/4/20	8:05	--	--	--	3.8	671.32	0.037	
3/5/20	8:05	--	--	--	3.8	671.32	0.037	
3/6/20	8:05	--	--	--	3.9	671.33	0.037	
3/7/20	8:05	--	--	--	3.9	671.33	0.037	
3/8/20	8:05	--	--	--	3.9	671.33	0.037	

Table 2.1

2020 Summary of Leachate Collection System Log
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GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Time of Measurement	Manual Depth to Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (Ft. AMSL)	Volume Removed (gallons	Water Level at PLC[(b)] (inches)	PLC Water Level Converted to Elevation[(d)] (ft. AMSL)	Equivalent Depth of Water Over Primary Liner[(3)] (inches)	Comments
3/9/20	8:05	--	--	--	3.9	671.33	0.037	
3/10/20	8:05	68.75	672.08	--	1.2	671.10	0.037	sampled by bailer
3/11/20	8:05	--	--	--	1.3	671.11	0.037	
3/12/20	8:05	--	--	--	1.4	671.12	0.037	
3/13/20	8:05	--	--	--	1.5	671.13	0.037	
3/14/20	8:05	--	--	--	1.5	671.13	0.037	
3/15/20	8:05	--	--	--	1.6	671.13	0.037	
3/16/20	8:05	68.73	672.10	--	1.7	671.14	0.037	
3/17/20	8:05	--	--	--	1.8	671.15	0.037	
3/18/20	8:05	--	--	--	1.8	671.15	0.037	
3/19/20	8:05	--	--	--	1.7	671.14	0.037	
3/20/20	8:05	--	--	--	1.8	671.15	0.037	
3/21/20	8:05	68.68	672.15	--	1.8	671.15	0.037	
3/22/20	8:05	--	--	--	1.8	671.15	0.037	
3/23/20	8:05	--	--	--	1.8	671.15	0.037	
3/24/20	8:05	--	--	--	1.9	671.16	0.037	
3/25/20	8:05	--	--	--	1.9	671.16	0.037	
3/26/20	8:05	--	--	--	2.1	671.18	0.037	
3/27/20	8:05	--	--	--	2.1	671.18	0.037	
3/28/20	8:05	68.66	672.17	--	2.1	671.18	0.037	
3/29/20	8:05	--	--	--	2.2	671.18	0.037	
3/30/20	8:05	--	--	--	2.2	671.18	0.037	
3/31/20	8:05	--	--	--	2.2	671.18	0.037	
4/1/20	8:05	--	--	--	2.2	671.18	0.037	
4/2/20	8:05	68.61	672.22	--	2.2	671.18	0.037	
4/3/20	8:05	--	--	--	2.2	671.18	0.037	
4/4/20	8:05	--	--	--	2.3	671.19	0.037	
4/5/20	8:05	--	--	--	2.3	671.19	0.037	
4/6/20	8:05	--	--	--	2.3	671.19	0.037	
4/7/20	8:05	--	--	--	2.4	671.20	0.037	
4/8/20	8:05	68.86	671.97	80	2.4	671.20	0.037	sampled and pumped approximately 80 gallons
4/9/20	8:05	--	--	--	--	not recorded		
4/10/20	8:05	--	--	--	--	not recorded		
4/11/20	8:05	--	--	--	--	not recorded		
4/12/20	8:05	--	--	--	--	not recorded		
4/13/20	8:05	68.84	671.99	--	--	not recorded	0.090	
4/14/20	8:05	--	--	--	--	not recorded		
4/15/20	8:05	--	--	--	--	not recorded		
4/16/20	8:05	--	--	--	--	not recorded		
4/17/20	8:05	--	--	--	--	not recorded		
4/18/20	8:05	--	--	--	0.5	671.04	0.037	
4/19/20	8:05	--	--	--	0.5	671.04	0.037	
4/20/20	8:05	68.81	672.02	--	0.5	671.04	0.037	
4/21/20	8:05	--	--	--	0.5	671.04	0.037	
4/22/20	8:05	--	--	--	0.6	671.05	0.037	
4/23/20	8:05	--	--	--	0.6	671.05	0.037	
4/24/20	8:05	--	--	--	0.6	671.05	0.037	
4/25/20	8:05	--	--	--	0.6	671.05	0.037	
4/26/20	8:05	--	--	--	0.6	671.05	0.037	
4/27/20	8:05	68.78	672.05	--	0.6	671.05	0.037	
4/28/20	8:05	--	--	--	0.6	671.05	0.037	
4/29/20	8:05	--	--	--	0.7	671.06	0.037	
4/30/20	8:05	--	--	--	0.8	671.07	0.037	
5/1/20	8:05	--	--	--	0.6	671.05	0.037	
5/2/20	8:05	--	--	--	0.7	671.06	0.037	
5/3/20	8:05	--	--	--	0.7	671.06	0.037	
5/4/20	8:05	68.76	672.07	--	0.8	671.07	0.037	
5/5/20	8:05	--	--	--	0.9	671.08	0.037	
5/6/20	8:05	--	--	--	0.9	671.08	0.037	
5/7/20	8:05	--	--	--	0.9	671.08	0.037	
5/8/20	8:05	--	--	--	0.9	671.08	0.037	
5/9/20	8:05	--	--	--	0.9	671.08	0.037	
5/10/20	8:05	--	--	--	1.0	671.08	0.037	
5/11/20	8:05	68.75	672.08	--	0.9	671.08	0.037	
5/12/20	8:05	--	--	--	0.9	671.08	0.037	
5/13/20	8:05	--	--	--	1.0	671.08	0.037	
5/14/20	8:05	--	--	--	1.0	671.08	0.037	
5/15/20	8:05	--	--	--	1.2	671.10	0.037	

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5/16/20	8:05	--	--	--	1.1	671.09	0.037	
5/17/20	8:05	--	--	--	1.1	671.09	0.037	
5/18/20	8:05	68.7	672.13	--	1.2	671.10	0.037	
5/19/20	8:05	--	--	--	1.2	671.10	0.037	
5/20/20	8:05	--	--	--	1.2	671.10	0.037	
5/21/20	8:05	--	--	--	1.2	671.10	0.037	
5/22/20	8:05	--	--	--	1.3	671.11	0.037	
5/23/20	8:05	--	--	--	1.2	671.10	0.037	
5/24/20	8:05	--	--	--	1.2	671.10	0.037	
5/25/20	8:05	--	--	--	1.2	671.10	0.037	
5/26/20	8:05	68.68	672.15	--	1.3	671.11	0.037	
5/27/20	8:05	--	--	--	1.4	671.12	0.037	
5/28/20	8:05	--	--	--	1.5	671.13	0.037	
5/29/20	8:05	--	--	--	1.5	671.13	0.037	
5/30/20	8:05	--	--	--	1.5	671.13	0.037	
5/31/20	8:05	--	--	--	1.5	671.13	0.037	
6/1/20	8:05	68.66	672.17	--	1.6	671.13	0.037	
6/2/20	8:05	--	--	--	1.7	671.14	0.037	
6/3/20	8:05	--	--	--	1.7	671.14	0.037	
6/4/20	8:05	--	--	--	1.7	671.14	0.037	
6/5/20	8:05	--	--	--	1.8	671.15	0.037	
6/6/20	8:05	--	--	--	1.8	671.15	0.037	
6/7/20	8:05	--	--	--	1.8	671.15	0.037	
6/8/20	8:05	68.63	672.20	--	1.9	671.16	0.037	
6/9/20	8:05	--	--	--	1.9	671.16	0.037	
6/10/20	8:05	--	--	--	2.0	671.17	0.037	
6/11/20	8:05	--	--	--	2.1	671.18	0.037	
6/12/20	8:05	--	--	--	1.9	671.16	0.037	
6/13/20	8:05	--	--	--	2.1	671.18	0.037	
6/14/20	8:05	--	--	--	2.0	671.17	0.037	
6/15/20	8:05	68.61	672.22	--	2.1	671.18	0.037	
6/16/20	8:05	--	--	--	2.1	671.18	0.037	
6/17/20	8:05	--	--	--	2.1	671.18	0.037	
6/18/20	8:05	--	--	--	2.2	671.18	0.037	
6/19/20	8:05	--	--	--	2.2	671.18	0.037	
6/20/20	8:05	--	--	--	2.2	671.18	0.037	
6/21/20	8:05	--	--	--	2.3	671.19	0.037	
6/22/20	8:05	68.6	672.23	--	2.3	671.19	0.037	
6/23/20	8:05	--	--	--	2.3	671.19	0.037	
6/24/20	8:05	--	--	--	2.3	671.19	0.037	
6/25/20	8:05	--	--	--	2.3	671.19	0.037	
6/26/20	8:05	--	--	--	--	not recorded		
6/27/20	8:05	--	--	--	--	not recorded		
6/28/20	8:05	--	--	--	--	not recorded		
6/29/20	8:05	70.19	670.64	--	--	not recorded	<0.037	
6/30/20	8:05	--	--	--	--	not recorded		
7/1/20	8:05	70.11	670.72	--	--	not recorded	<0.037	
7/2/20	8:05	--	--	--	--	not recorded		
7/3/20	8:05	--	--	--	--	not recorded		
7/4/20	8:05	--	--	--	--	not recorded		
7/5/20	8:05	--	--	--	--	not recorded		
7/6/20	8:05	70.09	670.74	--	--	not recorded	<0.037	
7/7/20	8:05	--	--	--	--	not recorded		
7/8/20	8:05	--	--	--	--	not recorded		
7/9/20	8:05	--	--	--	--	not recorded		
7/10/20	8:05	--	--	--	--	not recorded		
7/11/20	8:05	--	--	--	--	not recorded		
7/12/20	8:05	--	--	--	--	not recorded		
7/13/20	8:05	70.03	670.80	--	--	not recorded	<0.037	
7/14/20	8:05	--	--	--	--	not recorded		
7/15/20	8:05	--	--	--	--	not recorded		
7/16/20	8:05	--	--	--	--	not recorded		
7/17/20	8:05	--	--	--	--	not recorded		
7/18/20	8:05	--	--	--	--	not recorded		
7/19/20	8:05	--	--	--	--	not recorded		
7/20/20	8:05	70.02	670.81	--	--	not recorded	<0.037	
7/21/20	8:05	--	--	--	--	not recorded		
7/22/20	8:05	--	--	--	--	not recorded		
7/23/20	8:05	--	--	--	--	not recorded		

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7/24/20	8:05	--	--	--	--	not recorded		
7/25/20	8:05	--	--	--	--	not recorded		
7/26/20	8:05	--	--	--	--	not recorded		
7/27/20	8:05	70.01	670.82	--	--	not recorded	<0.037	
7/28/20	8:05	--	--	--	--	not recorded		
7/29/20	8:05	--	--	--	--	not recorded		
7/30/20	8:05	--	--	--	--	not recorded		
7/31/20	8:05	--	--	--	--	not recorded		
8/1/20	8:05	--	--	--	--	not recorded		
8/2/20	8:05	--	--	--	--	not recorded		
8/3/20	8:05	69.98	670.85	--	--	not recorded	<0.037	
8/4/20	8:05	--	--	--	--	not recorded		
8/5/20	8:05	--	--	--	--	not recorded		
8/6/20	8:05	--	--	--	--	not recorded		
8/7/20	8:05	--	--	--	--	not recorded		
8/8/20	8:05	--	--	--	--	not recorded		
8/9/20	8:05	--	--	--	--	not recorded		
8/10/20	8:05	69.4	671.43	--	--	not recorded	0.037	
8/11/20	8:05	--	--	--	--	not recorded		
8/12/20	8:05	--	--	--	--	not recorded		
8/13/20	8:05	--	--	--	--	not recorded		
8/14/20	8:05	--	--	--	--	not recorded		
8/15/20	8:05	--	--	--	--	not recorded		
8/16/20	8:05	--	--	--	--	not recorded		
8/17/20	8:05	69.23	671.60	--	--	not recorded	0.090	
8/18/20	8:05	--	--	--	--	not recorded		
8/19/20	8:05	--	--	--	--	not recorded		
8/20/20	8:05	--	--	--	--	not recorded		
8/21/20	8:05	--	--	--	--	not recorded		
8/22/20	8:05	--	--	--	--	not recorded		
8/23/20	8:05	--	--	--	--	not recorded		
8/24/20	8:05	--	--	--	--	not recorded		
8/25/20	8:05	69.28	671.55	--	--	not recorded	0.090	
8/26/20	8:05	--	--	--	--	not recorded		
8/27/20	8:05	--	--	--	--	not recorded		
8/28/20	8:05	--	--	--	--	not recorded		
8/29/20	8:05	--	--	--	--	not recorded		
8/30/20	8:05	--	--	--	--	not recorded		
8/31/20	8:05	--	--	--	--	not recorded		
9/1/20	8:05	69.27	671.56	--	--	not recorded	0.090	
9/2/20	8:05	--	--	--	--	not recorded		
9/3/20	8:05	--	--	--	--	not recorded		
9/4/20	8:05	--	--	--	--	not recorded		
9/5/20	8:05	--	--	--	--	not recorded		
9/6/20	8:05	--	--	--	--	not recorded		
9/7/20	8:05	69.27	671.56	--	--	not recorded	0.090	
9/8/20	8:05	--	--	--	--	not recorded		
9/9/20	8:05	--	--	--	--	not recorded		
9/10/20	8:05	--	--	--	--	not recorded		
9/11/20	8:05	--	--	--	--	not recorded		
9/12/20	8:05	--	--	--	--	not recorded		
9/13/20	8:05	--	--	--	--	not recorded		
9/14/20	8:05	69.27	671.70	--	--	not recorded		
9/15/20	8:05	--	--	--	--	not recorded		
9/16/20	8:05	--	--	--	--	not recorded		
9/17/20	8:05	--	--	--	--	not recorded		
9/18/20	8:05	--	--	--	--	not recorded		
9/19/20	8:05	--	--	--	--	not recorded		
9/20/20	8:05	--	--	--	--	not recorded		
9/21/20	8:05	--	--	--	--	not recorded		
9/22/20	8:05	--	--	--	--	not recorded		
9/23/20	8:05	--	--	--	--	not recorded		
9/24/20	8:05	69.13	671.70	--	--	not recorded		new water level meter installed
9/25/20	8:05	--	--	--	--	not recorded		
9/26/20	8:05	--	--	--	--	not recorded		
9/27/20	8:05	--	--	--	--	not recorded		
9/28/20	8:05	--	--	--	--	not recorded		
9/29/20	8:05	--	--	--	--	not recorded		
9/30/20	8:05	--	--	--	--	not recorded		

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10/1/20	8:05	--	--	--	--	not recorded		
10/2/20	8:05	--	--	--	--	not recorded		
10/3/20	8:05	--	--	--	--	not recorded		
10/4/20	8:05	--	--	--	--	not recorded		
10/5/20	8:05	69.13	671.70	--	--	not recorded	0.090	
10/6/20	8:05	--	--	--	--	not recorded		
10/7/20	8:05	--	--	--	--	not recorded		
10/8/20	8:05	--	--	--	--	not recorded		
10/9/20	8:05	--	--	--	--	not recorded		
10/10/20	8:05	--	--	--	--	not recorded		
10/11/20	8:05	--	--	--	--	not recorded		
10/12/20	8:05	69.42	671.41	75	--	not recorded	0.037	pumped by hand approximately 75 gallons
10/13/20	8:05	--	--	--	--	not recorded		
10/14/20	8:05	--	--	--	--	not recorded		
10/15/20	8:05	--	--	--	--	not recorded		
10/16/20	8:05	--	--	--	--	not recorded		
10/17/20	8:05	--	--	--	--	not recorded		
10/18/20	8:05	--	--	--	--	not recorded		
10/19/20	8:05	69.45	671.38	--	--	not recorded	0.037	
10/20/20	8:05	--	--	--	--	not recorded		
10/21/20	8:05	--	--	--	--	not recorded		
10/22/20	8:05	--	--	--	--	not recorded		
10/23/20	8:05	--	--	--	--	not recorded		
10/24/20	8:05	--	--	--	--	not recorded		
10/25/20	8:05	--	--	--	--	not recorded		
10/26/20	8:05	69.4	671.43	--	--	not recorded	0.037	
10/27/20	8:05	--	--	--	--	not recorded		
10/28/20	8:05	--	--	--	--	not recorded		
10/29/20	8:05	--	--	--	--	not recorded		
10/30/20	8:05	--	--	--	--	not recorded		
10/31/20	8:05	--	--	--	--	not recorded		
11/1/20	8:05	--	--	--	--	not recorded		
11/2/20	8:05	69.39	671.44	--	--	not recorded	0.037	
11/3/20	8:05	--	--	--	--	not recorded		
11/4/20	8:05	--	--	--	--	not recorded		
11/5/20	8:05	--	--	--	--	not recorded		
11/6/20	8:05	--	--	--	--	not recorded		
11/7/20	8:05	--	--	--	--	not recorded		
11/8/20	8:05	--	--	--	--	not recorded		
11/9/20	8:05	--	--	--	--	not recorded		
11/10/20	8:05	69.39	671.44	--	--	not recorded	0.037	
11/11/20	8:05	--	--	--	--	not recorded		
11/12/20	8:05	--	--	--	--	not recorded		
11/13/20	8:05	--	--	--	--	not recorded		
11/14/20	8:05	--	--	--	--	not recorded		
11/15/20	8:05	--	--	--	--	not recorded		
11/16/20	8:05	69.39	671.44	--	--	not recorded	0.037	
11/17/20	8:05	--	--	--	--	not recorded		
11/18/20	8:05	--	--	--	--	not recorded		
11/19/20	8:05	--	--	--	--	not recorded		
11/20/20	8:05	--	--	--	--	not recorded		
11/21/20	8:05	--	--	--	--	not recorded		
11/22/20	8:05	--	--	--	--	not recorded		
11/23/20	8:05	69.32	671.51	--	--	not recorded	0.090	
11/24/20	8:05	--	--	--	--	not recorded		
11/25/20	8:05	--	--	--	--	not recorded		
11/26/20	8:05	--	--	--	--	not recorded		
11/27/20	8:05	--	--	--	--	not recorded		
11/28/20	8:05	--	--	--	--	not recorded		
11/29/20	8:05	--	--	--	--	not recorded		
11/30/20	8:05	69.3	671.53	--	--	not recorded	0.090	
12/1/20	8:05	--	--	--	--	not recorded		
12/2/20	8:05	--	--	--	--	not recorded		
12/3/20	8:05	--	--	--	--	not recorded		
12/4/20	8:05	--	--	--	--	not recorded		
12/5/20	8:05	--	--	--	--	not recorded		
12/6/20	8:05	--	--	--	--	not recorded		
12/7/20	8:05	69.27	671.56	--	--	not recorded	0.090	

Table 2.1

2020 Summary of Leachate Collection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Time of Measurement	Manual Depth to Water Level (feet below top of sump)	Manual Water Level Converted to Elevation (Ft. AMSL)	Volume Removed (gallons	Water Level at PLC[(b)] (inches)	PLC Water Level Converted to Elevation[(d)] (ft. AMSL)	Equivalent Depth of Water Over Primary Liner[(3)] (inches)	Comments
12/8/20	8:05	--	--	--	--	not recorded		
12/9/20	8:05	--	--	--	--	not recorded		
12/10/20	8:05	--	--	--	--	not recorded		
12/11/20	8:05	--	--	--	--	not recorded		
12/12/20	8:05	--	--	--	--	not recorded		
12/13/20	8:05	--	--	--	--	not recorded		
12/14/20	8:05	69.25	671.58	--	--	not recorded	0.090	
12/15/20	8:05	--	--	--	--	not recorded		
12/16/20	8:05	--	--	--	--	not recorded		
12/17/20	8:05	--	--	--	--	not recorded		
12/18/20	8:05	--	--	--	--	not recorded		
12/19/20	8:05	--	--	--	--	not recorded		
12/20/20	8:05	--	--	--	--	not recorded		
12/21/20	8:05	69.25	671.58	--	--	not recorded	0.090	
12/22/20	8:05	--	--	--	--	not recorded		
12/23/20	8:05	--	--	--	--	not recorded		
12/24/20	8:05	--	--	--	--	not recorded		
12/25/20	8:05	--	--	--	--	not recorded		
12/26/20	8:05	--	--	--	--	not recorded		
12/27/20	8:05	--	--	--	--	not recorded		
12/28/20	8:05	--	--	--	--	not recorded		
12/29/20	8:05	--	--	--	--	not recorded		
12/30/20	8:05	--	--	--	--	not recorded		
12/31/20	8:05	69.24	671.59	--	--	not recorded	0.090	
Total				205				

Notes:
ft AMSL - feet above mean sea level

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

(--) Measurements were not collected.
(1) Pump operating level between 1 ft (672.00 ft AMSL or 68.83 ft below the top of sump) and 3 ft (674.00 ft AMSL or 66.83 ft below the top of sump) of water in the LCS manhole.
(2) Temporary LCS pump manually operated, PLC systems not functional. See report text section 6 for additional details.
(3) Due to communication loss between the LCS and PLC, the depth of water over primary liner was calculated using manual water level from July-December 2020.
(a) Flow meter readings are cumulative unless noted otherwise.
(b) PLC records the maximum water level observed each day (midnight to midnight). Therefore, the manual water level/elevation will not match the water level/elevation recorded by the PLC. Indication of the water level in the LCS rising to 674.00 ft AMSL or higher (manual and PLC readings).

Table 2.2

2020 Summary of Leak Detection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Tme of Measurement	Depth to Water Before Pumping (feet below top of sump)	Water Level Before Pumping Converted to Elevation (ft. AMSL)	Flow Meter Reading[(a)] Start (gallons)	Flow Meter Reading[(a)] End (gallons)	Calculated Volume Removed (gallons)	Comments
1/1/20	--	--	--	--	--	--	
1/2/20	--	--	--	--	--	--	
1/3/20	--	--	--	--	--	--	
1/4/20	--	--	--	--	--	--	
1/5/20	--	--	--	--	--	--	
1/6/20	8:30	70.22	670.92	--	--	--	
1/7/20	--	--	--	--	--	--	
1/8/20	--	--	--	--	--	--	
1/9/20	--	--	--	--	--	--	
1/10/20	--	--	--	--	--	--	
1/11/20	--	--	--	--	--	--	
1/12/20	--	--	--	--	--	--	
1/13/20	8:45	70.31	670.83	--	--	--	
1/14/20	--	--	--	--	--	--	
1/15/20	--	--	--	--	--	--	
1/16/20	--	--	--	--	--	--	
1/17/20	--	--	--	--	--	--	
1/18/20	--	--	--	--	--	--	
1/19/20	--	--	--	--	--	--	
1/20/20	8:22	70.40	670.74	--	--	--	
1/21/20	--	--	--	--	--	--	
1/22/20	--	--	--	--	--	--	
1/23/20	10:50	70.34	670.8	--	--	--	sample by bailing
1/24/20	--	--	--	--	--	--	
1/25/20	--	--	--	--	--	--	
1/26/20	--	--	--	--	--	--	
1/27/20	--	--	--	--	--	--	
1/28/20	10:30	70.34	670.8	--	--	--	
1/29/20	--	--	--	--	--	--	
1/30/20	--	--	--	--	--	--	
1/31/20	--	--	--	--	--	--	
2/1/20	--	--	--	--	--	--	
2/2/20	--	--	--	--	--	--	
2/3/20	9:15	70.34	670.8	--	--	--	
2/4/20	--	--	--	--	--	--	
2/5/20	--	--	--	--	--	--	
2/6/20	--	--	--	--	--	--	
2/7/20	--	--	--	--	--	--	
2/8/20	--	--	--	--	--	--	
2/9/20	--	--	--	--	--	--	
2/10/20	9:17	70.43	670.71	--	--	--	
2/11/20	--	--	--	--	--	--	
2/12/20	13:00	70.43	670.71	--	--	--	bailed sample pump fail
2/13/20	--	--	--	--	--	--	
2/14/20	--	--	--	--	--	--	
2/15/20	--	--	--	--	--	--	
2/16/20	--	--	--	--	--	--	
2/17/20	10:20	70.42	670.72	--	--	--	
2/18/20	--	--	--	--	--	--	
2/19/20	--	--	--	--	--	--	
2/20/20	--	--	--	--	--	--	
2/21/20	--	--	--	--	--	--	
2/22/20	--	--	--	--	--	--	
2/23/20	--	--	--	--	--	--	
2/24/20	--	--	--	--	--	--	
2/25/20	--	--	--	--	--	--	
2/26/20	--	--	--	--	--	--	
2/27/20	16:30	70.42	670.72	--	--	--	
2/28/20	--	--	--	--	--	--	
2/29/20	--	--	--	--	--	--	
3/1/20	--	--	--	--	--	--	
3/2/20	9:32	70.42	670.72	--	--	--	
3/3/20	--	--	--	--	--	--	
3/4/20	--	--	--	--	--	--	
3/5/20	--	--	--	--	--	--	
3/6/20	--	--	--	--	--	--	
3/7/20	--	--	--	--	--	--	
3/8/20	--	--	--	--	--	--	
3/9/20	--	--	--	--	--	--	
3/10/20	12:02	70.38	670.76	--	--	--	sample+ bailed
3/11/20	--	--	--	--	--	--	
3/12/20	--	--	--	--	--	--	

Table 2.2

2020 Summary of Leak Detection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Tme of Measurement	Depth to Water Before Pumping (feet below top of sump)	Water Level Before Pumping Converted to Elevation (ft. AMSL)	Flow Meter Reading[(a)] Start (gallons)	Flow Meter Reading[(a)] End (gallons)	Calculated Volume Removed (gallons)	Comments
3/13/20	--	--	--	--	--	--	
3/14/20	--	--	--	--	--	--	
3/15/20	--	--	--	--	--	--	
3/16/20	10:02	70.38	670.76	--	--	--	
3/17/20	--	--	--	--	--	--	
3/18/20	--	--	--	--	--	--	
3/19/20	--	--	--	--	--	--	
3/20/20	--	--	--	--	--	--	
3/21/20	9:30	70.36	670.78	--	--	--	
3/22/20	--	--	--	--	--	--	
3/23/20	--	--	--	--	--	--	
3/24/20	--	--	--	--	--	--	
3/25/20	--	--	--	--	--	--	
3/26/20	--	--	--	--	--	--	
3/27/20	--	--	--	--	--	--	
3/28/20	9:55	70.36	670.78	--	--	--	
3/29/20	--	--	--	--	--	--	
3/30/20	--	--	--	--	--	--	
3/31/20	--	--	--	--	--	--	
4/1/20	--	--	--	--	--	--	
4/2/20	10:30	70.30	670.84	--	--	--	
4/3/20	--	--	--	--	--	--	
4/4/20	--	--	--	--	--	--	
4/5/20	--	--	--	--	--	--	
4/6/20	--	--	--	--	--	--	
4/7/20	--	--	--	--	--	--	
4/8/20	10:20	70.30	670.84	--	--	--	sampled by bailer
4/9/20	--	--	--	--	--	--	
4/10/20	--	--	--	--	--	--	
4/11/20	--	--	--	--	--	--	
4/12/20	--	--	--	--	--	--	
4/13/20	9:47	70.29	670.85	--	--	--	
4/14/20	--	--	--	--	--	--	
4/15/20	--	--	--	--	--	--	
4/16/20	--	--	--	--	--	--	
4/17/20	--	--	--	--	--	--	
4/18/20	--	--	--	--	--	--	
4/19/20	--	--	--	--	--	--	
4/20/20	9:20	70.26	670.88	--	--	--	
4/21/20	--	--	--	--	--	--	
4/22/20	--	--	--	--	--	--	
4/23/20	--	--	--	--	--	--	
4/24/20	--	--	--	--	--	--	
4/25/20	--	--	--	--	--	--	
4/26/20	--	--	--	--	--	--	
4/27/20	7:42	70.24	670.9	--	--	--	
4/28/20	--	--	--	--	--	--	
4/29/20	--	--	--	--	--	--	
4/30/20	--	--	--	--	--	--	
5/1/20	--	--	--	--	--	--	
5/2/20	--	--	--	--	--	--	
5/3/20	--	--	--	--	--	--	
5/4/20	10:20	70.20	670.94	--	--	--	
5/5/20	--	--	--	--	--	--	
5/6/20	--	--	--	--	--	--	
5/7/20	--	--	--	--	--	--	
5/8/20	--	--	--	--	--	--	
5/9/20	--	--	--	--	--	--	
5/10/20	--	--	--	--	--	--	
5/11/20	10:46	70.17	670.97	--	--	--	
5/12/20	--	--	--	--	--	--	
5/13/20	--	--	--	--	--	--	
5/14/20	--	--	--	--	--	--	
5/15/20	--	--	--	--	--	--	
5/16/20	--	--	--	--	--	--	
5/17/20	--	--	--	--	--	--	
5/18/20	10:02	70.15	670.99	--	--	--	
5/19/20	--	--	--	--	--	--	
5/20/20	--	--	--	--	--	--	
5/21/20	--	--	--	--	--	--	
5/22/20	--	--	--	--	--	--	
5/23/20	--	--	--	--	--	--	

Table 2.2

2020 Summary of Leak Detection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Tme of Measurement	Depth to Water Before Pumping (feet below top of sump)	Water Level Before Pumping Converted to Elevation (ft. AMSL)	Flow Meter Reading[(a)] Start (gallons)	Flow Meter Reading[(a)] End (gallons)	Calculated Volume Removed (gallons)	Comments
5/24/20	--	--	--	--	--	--	
5/25/20	--	--	--	--	--	--	
5/26/20	11:05	70.14	671	--	--	--	
5/27/20	--	--	--	--	--	--	
5/28/20	--	--	--	--	--	--	
5/29/20	--	--	--	--	--	--	
5/30/20	--	--	--	--	--	--	
5/31/20	--	--	--	--	--	--	
6/1/20	9:00	70.12	671.02	--	--	--	
6/2/20	--	--	--	--	--	--	
6/3/20	--	--	--	--	--	--	
6/4/20	--	--	--	--	--	--	
6/5/20	--	--	--	--	--	--	
6/6/20	--	--	--	--	--	--	
6/7/20	--	--	--	--	--	--	
6/8/20	9:10	70.12	671.02	--	--	--	
6/9/20	--	--	--	--	--	--	
6/10/20	--	--	--	--	--	--	
6/11/20	--	--	--	--	--	--	
6/12/20	--	--	--	--	--	--	
6/13/20	--	--	--	--	--	--	
6/14/20	--	--	--	--	--	--	
6/15/20	11:15	70.12	671.02	--	--	--	
6/16/20	--	--	--	--	--	--	
6/17/20	--	--	--	--	--	--	
6/18/20	--	--	--	--	--	--	
6/19/20	--	--	--	--	--	--	
6/20/20	--	--	--	--	--	--	
6/21/20	--	--	--	--	--	--	
6/22/20	12:02	70.10	671.04	--	--	--	
6/23/20	--	--	--	--	--	--	
6/24/20	--	--	--	--	--	--	
6/25/20	--	--	--	--	--	--	
6/26/20	--	--	--	--	--	--	
6/27/20	--	--	--	--	--	--	
6/28/20	--	--	--	--	--	--	
6/29/20	10:25	70.08	671.06	--	--	--	
6/30/20	--	--	--	--	--	--	
7/1/20	--	--	--	--	--	--	
7/2/20	--	--	--	--	--	--	
7/3/20	--	--	--	--	--	--	
7/4/20	--	--	--	--	--	--	
7/5/20	--	--	--	--	--	--	
7/6/20	7:42	70.10	671.04	--	--	--	
7/7/20	--	--	--	--	--	--	
7/8/20	--	--	--	--	--	--	
7/9/20	--	--	--	--	--	--	
7/10/20	--	--	--	--	--	--	
7/11/20	--	--	--	--	--	--	
7/12/20	--	--	--	--	--	--	
7/13/20	9:10	70.03	671.11	--	--	--	
7/14/20	--	--	--	--	--	--	
7/15/20	--	--	--	--	--	--	
7/16/20	--	--	--	--	--	--	
7/17/20	--	--	--	--	--	--	
7/18/20	--	--	--	--	--	--	
7/19/20	--	--	--	--	--	--	
7/20/20	10:22	70.03	671.11	--	--	--	
7/21/20	--	--	--	--	--	--	
7/22/20	--	--	--	--	--	--	
7/23/20	--	--	--	--	--	--	
7/24/20	--	--	--	--	--	--	
7/25/20	--	--	--	--	--	--	
7/26/20	--	--	--	--	--	--	
7/27/20	10:19	70.01	671.13	--	--	--	
7/28/20	--	--	--	--	--	--	
7/29/20	--	--	--	--	--	--	
7/30/20	--	--	--	--	--	--	
7/31/20	--	--	--	--	--	--	
8/1/20	--	--	--	--	--	--	
8/2/20	--	--	--	--	--	--	
8/3/20	8:25	70.00	671.14	--	--	--	

Table 2.2

2020 Summary of Leak Detection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Tme of Measurement	Depth to Water Before Pumping (feet below top of sump)	Water Level Before Pumping Converted to Elevation (ft. AMSL)	Flow Meter Reading[(a)] Start (gallons)	Flow Meter Reading[(a)] End (gallons)	Calculated Volume Removed (gallons)	Comments
8/4/20	--	--	--	--	--	--	
8/5/20	--	--	--	--	--	--	
8/6/20	--	--	--	--	--	--	
8/7/20	--	--	--	--	--	--	
8/8/20	--	--	--	--	--	--	
8/9/20	--	--	--	--	--	--	
8/10/20	8:20	69.95	671.19	--	--	--	
8/11/20	--	--	--	--	--	--	
8/12/20	--	--	--	--	--	--	
8/13/20	--	--	--	--	--	--	
8/14/20	--	--	--	--	--	--	
8/15/20	--	--	--	--	--	--	
8/16/20	--	--	--	--	--	--	
8/17/20	8:22	69.97	671.17	--	--	--	
8/18/20	--	--	--	--	--	--	
8/19/20	--	--	--	--	--	--	
8/20/20	--	--	--	--	--	--	
8/21/20	--	--	--	--	--	--	
8/22/20	--	--	--	--	--	--	
8/23/20	--	--	--	--	--	--	
8/24/20	8:30	69.97	671.17	--	--	--	
8/25/20	--	--	--	--	--	--	
8/26/20	--	--	--	--	--	--	
8/27/20	--	--	--	--	--	--	
8/28/20	--	--	--	--	--	--	
8/29/20	--	--	--	--	--	--	
8/30/20	--	--	--	--	--	--	
8/31/20	--	--	--	--	--	--	
9/1/20	9:00	69.97	671.17	--	--	--	
9/2/20	--	--	--	--	--	--	
9/3/20	--	--	--	--	--	--	
9/4/20	--	--	--	--	--	--	
9/5/20	--	--	--	--	--	--	
9/6/20	--	--	--	--	--	--	
9/7/20	8:20	69.95	671.19	--	--	--	
9/8/20	--	--	--	--	--	--	
9/9/20	--	--	--	--	--	--	
9/10/20	--	--	--	--	--	--	
9/11/20	--	--	--	--	--	--	
9/12/20	--	--	--	--	--	--	
9/13/20	--	--	--	--	--	--	
9/14/20	9:22	69.97	671.17	--	--	--	
9/15/20	--	--	--	--	--	--	
9/16/20	--	--	--	--	--	--	
9/17/20	--	--	--	--	--	--	
9/18/20	--	--	--	--	--	--	
9/19/20	--	--	--	--	--	--	
9/20/20	--	--	--	--	--	--	
9/21/20	--	--	--	--	--	--	
9/22/20	--	--	--	--	--	--	
9/23/20	--	--	--	--	--	--	
9/24/20	14:10	69.97	671.17	4380.7	4969.7	589.00	new pump installed - portable flowmeter (start:4380.7)(end:4969.7)
9/25/20	--	--	--	--	--	--	
9/26/20	--	--	--	--	--	--	
9/27/20	--	--	--	--	--	--	
9/28/20	--	--	--	--	--	--	
9/29/20	--	--	--	--	--	--	
9/30/20	--	--	--	--	--	--	
10/1/20	--	--	--	--	--	--	
10/2/20	--	--	--	--	--	--	
10/3/20	--	--	--	--	--	--	
10/4/20	--	--	--	--	--	--	
10/5/20	14:05	71.58	669.56	--	--	--	
10/6/20	--	--	--	--	--	--	
10/7/20	--	--	--	--	--	--	
10/8/20	--	--	--	--	--	--	
10/9/20	--	--	--	--	--	--	
10/10/20	--	--	--	--	--	--	
10/11/20	--	--	--	--	--	--	
10/12/20	8:38	71.55	669.59	4969.7	5164.4	194.70	pumped with portable flow meter (start:4969.7)(end:5164.4)

Table 2.2

2020 Summary of Leak Detection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Tme of Measurement	Depth to Water Before Pumping (feet below top of sump)	Water Level Before Pumping Converted to Elevation (ft. AMSL)	Flow Meter Reading[(a)] Start (gallons)	Flow Meter Reading[(a)] End (gallons)	Calculated Volume Removed (gallons)	Comments
10/13/20	--	--	--	--	--	--	
10/14/20	--	--	--	--	--	--	
10/15/20	--	--	--	--	--	--	
10/16/20	--	--	--	--	--	--	
10/17/20	--	--	--	--	--	--	
10/18/20	--	--	--	--	--	--	
10/19/20	16:02	71.92	669.22	--	--	--	
10/20/20	--	--	--	--	--	--	
10/21/20	--	--	--	--	--	--	
10/22/20	--	--	--	--	--	--	
10/23/20	--	--	--	--	--	--	
10/24/20	--	--	--	--	--	--	
10/25/20	--	--	--	--	--	--	
10/26/20	10:55	71.91	669.23	--	--	--	
10/27/20	--	--	--	--	--	--	
10/28/20	--	--	--	--	--	--	
10/29/20	--	--	--	--	--	--	
10/30/20	--	--	--	--	--	--	
10/31/20	--	--	--	--	--	--	
11/1/20	--	--	--	--	--	--	
11/2/20	10:05	71.89	669.25	--	--	--	
11/3/20	--	--	--	--	--	--	
11/4/20	--	--	--	--	--	--	
11/5/20	--	--	--	--	--	--	
11/6/20	--	--	--	--	--	--	
11/7/20	--	--	--	--	--	--	
11/8/20	--	--	--	--	--	--	
11/9/20	9:52	71.90	669.24	--	--	--	
11/10/20	--	--	--	--	--	--	
11/11/20	--	--	--	--	--	--	
11/12/20	--	--	--	--	--	--	
11/13/20	--	--	--	--	--	--	
11/14/20	--	--	--	--	--	--	
11/15/20	--	--	--	--	--	--	
11/16/20	10:25	71.90	669.24	--	--	--	
11/17/20	--	--	--	--	--	--	
11/18/20	--	--	--	--	--	--	
11/19/20	--	--	--	--	--	--	
11/20/20	--	--	--	--	--	--	
11/21/20	--	--	--	--	--	--	
11/22/20	--	--	--	--	--	--	
11/23/20	11:04	71.89	669.25	--	--	--	
11/24/20	--	--	--	--	--	--	
11/25/20	--	--	--	--	--	--	
11/26/20	--	--	--	--	--	--	
11/27/20	--	--	--	--	--	--	
11/28/20	--	--	--	--	--	--	
11/29/20	--	--	--	--	--	--	
11/30/20	14:00	71.85	669.29	--	--	--	
12/1/20	--	--	--	--	--	--	
12/2/20	--	--	--	--	--	--	
12/3/20	--	--	--	--	--	--	
12/4/20	--	--	--	--	--	--	
12/5/20	--	--	--	--	--	--	
12/6/20	--	--	--	--	--	--	
12/7/20	10:02	71.85	669.29	--	--	--	
12/8/20	--	--	--	--	--	--	
12/9/20	--	--	--	--	--	--	
12/10/20	--	--	--	--	--	--	
12/11/20	--	--	--	--	--	--	
12/12/20	--	--	--	--	--	--	
12/13/20	--	--	--	--	--	--	
12/14/20	11:15	71.87	669.27	--	--	--	
12/15/20	--	--	--	--	--	--	
12/16/20	--	--	--	--	--	--	
12/17/20	--	--	--	--	--	--	
12/18/20	--	--	--	--	--	--	
12/19/20	--	--	--	--	--	--	
12/20/20	--	--	--	--	--	--	
12/21/20	10:20	71.85	669.29	--	--	--	
12/22/20	--	--	--	--	--	--	
12/23/20	--	--	--	--	--	--	

Table 2.2

2020 Summary of Leak Detection System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Tme of Measurement	Depth to Water Before Pumping (feet below top of sump)	Water Level Before Pumping Converted to Elevation (ft. AMSL)	Flow Meter Reading[(a)] Start (gallons)	Flow Meter Reading[(a)] End (gallons)	Calculated Volume Removed (gallons)	Comments
12/24/20	--	--	--	--	--	--	
12/25/20	--	--	--	--	--	--	
12/26/20	--	--	--	--	--	--	
12/27/20	--	--	--	--	--	--	
12/28/20	--	--	--	--	--	--	
12/29/20	--	--	--	--	--	--	
12/30/20	--	--	--	--	--	--	
12/31/20	16:32	71.85	669.29	--	--	--	
Total						783.70	

Notes:

ft AMSL - feet above mean sea level

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

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

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

(a) Flow meter readings are cumulative unless noted otherwise.
Indication of water level in LDS rising to 670.0 ft AMSL or higher

Table 2.3

2020 Summary of Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Time of Measurement	Water Level at PLC [(a)] (inches)	PLC Water Level Converted to Elevation[(2)] (ft. AMSL)	Comments[(1)]
1/1/20	8:00	82.3	669.03	
1/2/20	8:00	82.3	669.03	
1/3/20	8:00	81.8	668.99	
1/4/20	8:00	81.8	668.99	
1/5/20	8:00	81.9	669.00	
1/6/20	8:00	82.0	669.01	
1/7/20	8:00	82.0	669.01	
1/8/20	8:00	82.1	669.02	
1/9/20	8:00	82.1	669.02	
1/10/20	8:00	81.9	669.00	
1/11/20	8:00	81.9	669.00	
1/12/20	8:00	81.9	669.00	
1/13/20	8:00	82.3	669.03	
1/14/20	8:00	82.3	669.03	
1/15/20	8:00	82.2	669.03	
1/16/20	8:00	82.2	669.03	
1/17/20	8:00	82.2	669.03	
1/18/20	8:00	82.2	669.03	
1/19/20	8:00	82.3	669.03	
1/20/20	8:00	82.3	669.03	
1/21/20	8:00	82.4	669.04	
1/22/20	8:00	82.6	669.06	
1/23/20	8:00	82.4	669.04	
1/24/20	8:00	82.3	669.03	
1/25/20	8:00	82.3	669.03	
1/26/20	8:00	82.1	669.02	
1/27/20	8:00	82.1	669.02	
1/28/20	8:00	82.1	669.02	
1/29/20	8:00	82.0	669.01	
1/30/20	8:00	82.0	669.01	
1/31/20	8:00	82.0	669.01	
2/1/20	8:00	82.0	669.01	
2/2/20	8:00	82.0	669.01	
2/3/20	8:00	81.6	668.98	
2/4/20	8:00	81.6	668.98	
2/5/20	8:00	81.5	668.97	
2/6/20	8:00	81.6	668.98	
2/7/20	8:00	81.6	668.98	
2/8/20	8:00	81.6	668.98	
2/9/20	8:00	81.6	668.98	
2/10/20	8:00	81.6	668.98	
2/11/20	8:00	81.5	668.97	
2/12/20	8:00	81.8	668.97	
2/13/20	8:00	81.3	668.95	
2/14/20	8:00	81.3	668.95	
2/15/20	8:00	81.3	668.95	
2/16/20	8:00	81.9	669.00	
2/17/20	8:00	81.9	669.00	
2/18/20	8:00	81.9	669.00	
2/19/20	8:00	81.6	668.98	
2/20/20	8:00	81.6	668.98	
2/21/20	8:00	81.5	668.97	
2/22/20	8:00	81.5	668.97	
2/23/20	8:00	81.3	668.95	
2/24/20	8:00	81.3	668.95	
2/25/20	8:00	80.8	668.91	

Table 2.3

2020 Summary of Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Time of Measurement	Water Level at PLC [(a)] (inches)	PLC Water Level Converted to Elevation[(2)] (ft. AMSL)	Comments[(1)]
2/26/20	8:00	81.3	668.95	
2/27/20	8:00	81.3	668.95	
2/28/20	8:00	81.3	668.95	
2/29/20	8:00	81.3	668.95	
3/1/20	8:00	81.6	668.98	
3/2/20	8:00	81.6	668.98	
3/3/20	8:00	81.4	668.96	
3/4/20	8:00	81.4	668.93	
3/5/20	8:00	81.3	668.95	
3/6/20	8:00	81.2	668.94	
3/7/20	8:00	81.2	668.94	
3/8/20	8:00	81.3	668.95	
3/9/20	8:00	81.1	668.93	
3/10/20	8:00	81.1	668.93	
3/11/20	8:00	81.1	668.93	
3/12/20	8:00	81.1	668.93	
3/13/20	8:00	81.1	668.93	
3/14/20	8:00	81.3	668.95	
3/15/20	8:00	81.6	668.98	
3/16/20	8:00	81.6	668.98	
3/17/20	8:00	81.4	668.96	
3/18/20	8:00	81.4	668.96	
3/19/20	8:00	81.3	668.95	
3/20/20	8:00	81.4	668.96	
3/21/20	8:00	81.4	668.96	
3/22/20	8:00	81.4	668.96	
3/23/20	8:00	81.6	668.98	
3/24/20	8:00	81.6	668.98	
3/25/20	8:00	81.6	668.98	
3/26/20	8:00	81.9	669.00	
3/27/20	8:00	82.2	669.03	
3/28/20	8:00	81.6	668.98	
3/29/20	8:00	81.9	669.00	
3/30/20	8:00	81.6	668.98	
3/31/20	8:00	81.9	669.00	
4/1/20	8:00	82.1	669.02	
4/2/20	8:00	81.9	669.00	
4/3/20	8:00	81.9	669.00	
4/4/20	8:00	81.9	669.00	
4/5/20	8:00	81.9	669.00	
4/6/20	8:00	81.8	668.99	
4/7/20	8:00	82.1	669.22	
4/8/20	8:00	81.5	668.97	
4/9/20	8:00	81.9	669.00	
4/10/20	8:00	81.9	669.00	
4/11/20	8:00	82.1	669.02	
4/12/20	8:00	81.9	669.00	
4/13/20	8:00	81.9	669.00	
4/14/20	8:00	81.5	668.97	
4/15/20	8:00	81.5	668.97	
4/16/20	8:00	81.5	668.97	
4/17/20	8:00	81.5	668.97	
4/18/20	8:00	81.5	668.97	
4/19/20	8:00	81.5	668.97	
4/20/20	8:00	81.5	668.97	
4/21/20	8:00	81.5	668.97	

Table 2.3

2020 Summary of Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Time of Measurement	Water Level at PLC [(a)] (inches)	PLC Water Level Converted to Elevation[(2)] (ft. AMSL)	Comments[(1)]
4/22/20	8:00	81.5	668.97	
4/23/20	8:00	81.4	668.96	
4/24/20	8:00	81.3	668.95	
4/25/20	8:00	81.5	668.97	
4/26/20	8:00	81.5	668.97	
4/27/20	8:00	81.4	668.96	
4/28/20	8:00	81.4	668.96	
4/29/20	8:00	81.5	668.97	
4/30/20	8:00	81.5	668.97	
5/1/20	8:00	81.1	668.93	
5/2/20	8:00	81.6	668.98	
5/3/20	8:00	81.6	668.98	
5/4/20	8:00	81.6	668.98	
5/5/20	8:00	81.6	668.98	
5/6/20	8:00	81.6	668.98	
5/7/20	8:00	81.6	668.98	
5/8/20	8:00	81.6	668.98	
5/9/20	8:00	81.5	668.97	
5/10/20	8:00	81.5	668.97	
5/11/20	8:00	81.5	668.97	
5/12/20	8:00	81.2	668.94	
5/13/20	8:00	81.2	668.94	
5/14/20	8:00	81.1	668.93	
5/15/20	8:00	81.2	668.94	
5/16/20	8:00	81.1	668.93	
5/17/20	8:00	81.1	668.93	
5/18/20	8:00	81.5	668.97	
5/19/20	8:00	81.2	668.94	
5/20/20	8:00	81.2	668.94	
5/21/20	8:00	81.1	668.93	
5/22/20	8:00	81.5	668.97	
5/23/20	8:00	81.5	668.97	
5/24/20	8:00	81.5	668.97	
5/25/20	8:00	81.5	668.97	
5/26/20	8:00	81.2	668.94	
5/27/20	8:00	81.5	668.97	
5/28/20	8:00	81.2	668.94	
5/29/20	8:00	81.6	668.98	
5/30/20	8:00	81.2	668.94	
5/31/20	8:00	81.2	668.94	
6/1/20	8:00	81.3	668.95	
6/2/20	8:00	81.5	668.97	
6/3/20	8:00	81.3	668.95	
6/4/20	8:00	81.3	668.95	
6/5/20	8:00	81.1	668.93	
6/6/20	8:00	80.7	668.90	
6/7/20	8:00	80.7	668.90	
6/8/20	8:00	81.1	668.93	
6/9/20	8:00	81.2	668.94	
6/10/20	8:00	81.1	668.93	
6/11/20	8:00	81.1	668.93	
6/12/20	8:00	81.1	668.93	
6/13/20	8:00	81.2	668.94	
6/14/20	8:00	81.2	668.94	
6/15/20	8:00	81.2	668.94	
6/16/20	8:00	81.1	668.93	

Table 2.3

2020 Summary of Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Time of Measurement	Water Level at PLC [(a)] (inches)	PLC Water Level Converted to Elevation[(2)] (ft. AMSL)	Comments[(1)]
6/17/20	8:00	80.7	668.90	
6/18/20	8:00	80.7	668.90	
6/19/20	8:00	80.7	668.90	
6/20/20	8:00	80.7	668.90	
6/21/20	8:00	80.7	668.90	
6/22/20	8:00	80.7	668.90	
6/23/20	8:00	80.7	668.90	
6/24/20	8:00	80.7	668.90	
6/25/20	8:00	80.7	668.90	
6/26/20	8:00	81.2	668.94	
6/27/20	8:00	81.1	668.93	
6/28/20	8:00	81.1	668.93	
6/29/20	8:00	81.5	668.97	
6/30/20	8:00	81.5	668.97	
7/1/20	8:00	81.0	668.93	
7/2/20	8:00	81.0	668.93	
7/3/20	8:00	80.7	668.90	
7/4/20	8:00	80.5	668.88	
7/5/20	8:00	80.5	668.88	
7/6/20	8:00	80.5	668.88	
7/7/20	8:00	80.0	668.84	
7/8/20	8:00	80.2	668.86	
7/9/20	8:00	80.0	668.84	
7/10/20	8:00	80.2	668.86	
7/11/20	8:00	80.5	668.88	
7/12/20	8:00	80.5	668.88	
7/13/20	8:00	80.5	668.88	
7/14/20	8:00	80.7	668.90	
7/15/20	8:00	81.0	668.93	
7/16/20	8:00	81.2	668.94	
7/17/20	8:00	81.9	669.00	
7/18/20	8:00	82.1	669.02	
7/19/20	8:00	81.5	668.97	
7/20/20	8:00	81.5	668.97	
7/21/20	8:00	80.5	668.88	
7/22/20	8:00	80.2	668.86	
7/23/20	8:00	79.5	668.80	
7/24/20	8:00	79.5	668.78	
7/25/20	8:00	79.3	668.78	
7/26/20	8:00	79.2	668.78	
7/27/20	8:00	79.5	668.80	
7/28/20	8:00	79.5	668.80	
7/29/20	8:00	79.5	668.80	
7/30/20	8:00	79.3	668.78	
7/31/20	8:00	79.5	668.80	
8/1/20	8:00	79.5	668.80	
8/2/20	8:00	79.5	668.80	
8/3/20	8:00	79.3	668.78	
8/4/20	8:00	79.8	668.83	
8/5/20	8:00	80.0	668.84	
8/6/20	8:00	80.1	668.85	
8/7/20	8:00	80.0	668.84	
8/8/20	8:00	79.8	668.83	
8/9/20	8:00	79.8	668.83	
8/10/20	8:00	80.0	668.84	
8/11/20	8:00	80.0	668.84	

Table 2.3

2020 Summary of Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Time of Measurement	Water Level at PLC [(a)] (inches)	PLC Water Level Converted to Elevation[(2)] (ft. AMSL)	Comments[(1)]
8/12/20	8:00	80.0	668.84	
8/13/20	8:00	80.0	668.84	
8/14/20	8:00	79.8	668.83	
8/15/20	8:00	79.8	668.83	
8/16/20	8:00	79.8	668.83	
8/17/20	8:00	79.8	668.83	
8/18/20	8:00	79.9	668.83	
8/19/20	8:00	80.0	668.84	
8/20/20	8:00	80.0	668.84	
8/21/20	8:00	80.0	668.84	
8/22/20	8:00	79.9	668.83	
8/23/20	8:00	79.5	668.80	
8/24/20	8:00	79.8	668.83	
8/25/20	8:00	79.8	668.83	
8/26/20	8:00	79.8	668.83	
8/27/20	8:00	79.6	668.81	
8/28/20	8:00	79.6	668.81	
8/29/20	8:00	79.6	668.81	
8/30/20	8:00	79.6	668.81	
8/31/20	8:00	79.6	668.80	
9/1/20	8:00	79.5	668.80	
9/2/20	8:00	79.5	668.79	
9/3/20	8:00	79.4	668.79	
9/4/20	8:00	79.4	668.80	
9/5/20	8:00	79.5	668.80	
9/6/20	8:00	79.5	668.80	
9/7/20	8:00	79.5	668.78	
9/8/20	8:00	79.2	668.78	
9/9/20	8:00	79.2	668.78	
9/10/20	8:00	79.2	668.78	
9/11/20	8:00	79.2	668.78	
9/12/20	8:00	79.4	668.79	
9/13/20	8:00	79.5	668.80	
9/14/20	8:00	79.3	668.78	
9/15/20	8:00	79.3	668.78	
9/16/20	8:00	79.5	668.80	
9/17/20	8:00	79.6	668.81	
9/18/20	8:00	79.6	668.81	
9/19/20	8:00	79.2	668.78	
9/20/20	8:00	79.2	668.78	
9/21/20	8:00	79.5	668.80	
9/22/20	8:00	79.3	668.78	
9/23/20	8:00	79.5	668.80	
9/24/20	8:00	79.3	668.78	
9/25/20	8:00	79.1	668.71	
9/26/20	8:00	79.0	668.76	
9/27/20	8:00	78.9	668.78	
9/28/20	8:00	79.1	668.77	
9/29/20	8:00	79.3	668.78	
9/30/20	8:00	79.1	668.77	
10/1/20	8:00	79.0	668.76	
10/2/20	8:00	79.0	668.76	
10/3/20	8:00	78.8	668.74	
10/4/20	8:00	79.0	668.76	
10/5/20	8:00	78.8	668.74	
10/6/20	8:00	78.8	668.74	

Table 2.3

2020 Summary of Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Time of Measurement	Water Level at PLC [(a)] (inches)	PLC Water Level Converted to Elevation[(2)] (ft. AMSL)	Comments[(1)]
10/7/20	8:00	78.9	668.75	
10/8/20	8:00	78.9	668.75	
10/9/20	8:00	78.9	668.75	
10/10/20	8:00	78.9	668.75	
10/11/20	8:00	78.9	668.75	
10/12/20	8:00	78.9	668.75	
10/13/20	8:00	78.9	668.75	
10/14/20	8:00	78.9	668.75	
10/15/20	8:00	78.9	668.75	
10/16/20	8:00	78.9	668.75	
10/17/20	8:00	78.5	668.75	
10/18/20	8:00	78.9	668.75	
10/19/20	8:00	78.9	668.75	
10/20/20	8:00	78.9	668.75	
10/21/20	8:00	78.9	668.75	
10/22/20	8:00	78.9	668.75	
10/23/20	8:00	78.9	668.75	
10/24/20	8:00	78.9	668.75	
10/25/20	8:00	78.9	668.75	
10/26/20	8:00	78.9	668.75	
10/27/20	8:00	78.9	668.75	
10/28/20	8:00	78.9	668.75	
10/29/20	8:00	78.9	668.75	
10/30/20	8:00	78.9	668.75	
10/31/20	8:00	78.9	668.75	
11/1/20	8:00	78.9	668.75	
11/2/20	8:00	78.9	668.75	
11/3/20	8:00	78.9	668.75	
11/4/20	8:00	78.9	668.75	
11/5/20	8:00	78.9	668.75	measured in 3.25 inch stainless steel pipe. Total depth of 75.3. depth to water 60.5. GHD pumped dry.
11/6/20	8:00	78.9	668.75	Approximately 2.5 gallons removed.
11/7/20	8:00	78.9	668.75	
11/8/20	8:00	78.9	668.75	
11/9/20	8:00	78.9	668.75	
11/10/20	8:00	78.9	668.75	
11/11/20	8:00	78.9	668.75	
11/12/20	8:00	78.9	668.75	
11/13/20	8:00	78.9	668.75	
11/14/20	8:00	78.9	668.75	
11/15/20	8:00	78.9	668.75	
11/16/20	8:00	78.9	668.75	
11/17/20	8:00	78.9	668.75	
11/18/20	8:00	78.9	668.75	
11/19/20	8:00	78.9	668.75	
11/20/20	8:00	78.9	668.75	
11/21/20	8:00	78.9	668.75	
11/22/20	8:00	78.9	668.75	
11/23/20	8:00	78.9	668.75	
11/24/20	8:00	78.9	668.75	
11/25/20	8:00	78.9	668.75	
11/26/20	8:00	78.9	668.75	
11/27/20	8:00	78.9	668.75	
11/28/20	8:00	78.9	668.75	

Table 2.3

2020 Summary of Gravel Underdrain System Log
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	Time of Measurement	Water Level at PLC [(a)] (inches)	PLC Water Level Converted to Elevation[(2)] (ft. AMSL)	Comments[(1)]
11/29/20	8:00	78.9	668.75	
11/30/20	8:00	78.9	668.75	
12/1/20	8:00	78.9	668.75	
12/2/20	8:00	78.9	668.75	
12/3/20	8:00	78.9	668.75	
12/4/20	8:00	78.9	668.75	
12/5/20	8:00	78.9	668.75	
12/6/20	8:00	78.9	668.75	
12/7/20	8:00	78.9	668.75	
12/8/20	8:00	78.9	668.75	
12/9/20	8:00	78.9	668.75	
12/10/20	8:00	78.9	668.75	
12/11/20	8:00	78.9	668.75	
12/12/20	8:00	78.9	668.75	
12/13/20	8:00	78.9	668.75	
12/14/20	8:00	78.9	668.75	
12/15/20	8:00	78.9	668.75	
12/16/20	8:00	78.9	668.75	
12/17/20	8:00	78.9	668.75	
12/18/20	8:00	78.9	668.75	
12/19/20	8:00	78.9	668.75	
12/20/20	8:00	78.9	668.75	
12/21/20	8:00	78.9	668.75	
12/22/20	8:00	78.9	668.75	
12/23/20	8:00	78.9	668.75	
12/24/20	8:00	84.7	669.24	
12/25/20	8:00	84.7	669.24	
12/26/20	8:00	84.8	669.25	
12/27/20	8:00	85.0	669.24	
12/28/20	8:00	85.0	669.26	
12/29/20	8:00	85.0	669.26	
12/30/20	8:00	85.0	669.26	
12/31/20	8:00	85.0	669.26	
Total				

Notes:

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

[(1)] Pump within sump is not operational

[(2)] Water level in the GUS not to rise above the secondary liner system (667.50 ft AMSL) (equates to more than 63.84 inches of water depth or a water level of 71.99 ft below the top of sump).
Indication of the Indication of the water level in the GUS rising to 667.50 ft AMSL or higher.

[(a)] 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.

Table 2.4

Summary of 2020 Water Elevations Compared to Liner System
East Plant Area TSA Annual Vault Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date (mm/dd/yy)	LCS[1] Water Elevation (Manual) (ft. AMSL)	LCS[1] Water Elevation (PLC) (ft. AMSL)	Lowest Elevation of Primary Liner (ft. AMSL)	LDS[2] Water Elevation (ft. AMSL)	Lowest Elevation of Secondary Liner (ft. AMSL)	GUS[3] Water Elevation (PLC) (ft. AMSL)
1/1/20	--	671.73	669.50	--	667.5	669.03
1/2/20	--	671.73	669.50	--	667.5	669.03
1/3/20	--	671.74	669.50	--	667.5	668.99
1/4/20	--	671.75	669.50	--	667.5	668.99
1/5/20	--	671.75	669.50	--	667.5	669.00
1/6/20	672.83	671.75	669.50	670.9	667.5	669.01
1/7/20	--	671.76	669.50	--	667.5	669.01
1/8/20	--	671.76	669.50	--	667.5	669.02
1/9/20	--	671.77	669.50	--	667.5	669.02
1/10/20	--	671.77	669.50	--	667.5	669.00
1/11/20	--	671.77	669.50	--	667.5	669.00
1/12/20	--	671.77	669.50	--	667.5	669.00
1/13/20	673.49	671.78	669.50	670.8	667.5	669.03
1/14/20	--	671.78	669.50	--	667.5	669.03
1/15/20	--	671.80	669.50	--	667.5	669.03
1/16/20	--	671.80	669.50	--	667.5	669.03
1/17/20	--	671.80	669.50	--	667.5	669.03
1/18/20	--	671.83	669.50	--	667.5	669.03
1/19/20	--	671.83	669.50	--	667.5	669.03
1/20/20	674.14	671.84	669.50	670.7	667.5	669.03
1/21/20	--	671.84	669.50	--	667.5	669.04
1/22/20	--	671.85	669.50	--	667.5	669.06
1/23/20	671.98	671.85	669.50	670.8	667.5	669.04
1/24/20	--	671.44	669.50	--	667.5	669.03
1/25/20	--	671.44	669.50	--	667.5	669.03
1/26/20	--	671.45	669.50	--	667.5	669.02
1/27/20	--	671.45	669.50	--	667.5	669.02
1/28/20	672.47	641.47	669.50	670.8	667.5	669.02
1/29/20	--	671.48	669.50	--	667.5	669.01
1/30/20	--	671.48	669.50	--	667.5	669.01
1/31/20	--	671.48	669.50	--	667.5	669.01
2/1/20	--	671.49	669.50	--	667.5	669.01
2/2/20	--	671.49	669.50	--	667.5	669.01
2/3/20	672.47	671.49	669.50	670.8	667.5	668.98
2/4/20	--	671.50	669.50	--	667.5	668.98
2/5/20	--	671.50	669.50	--	667.5	668.97
2/6/20	--	671.51	669.50	--	667.5	668.98
2/7/20	--	671.51	669.50	--	667.5	668.98
2/8/20	--	671.51	669.50	--	667.5	668.98
2/9/20	--	671.52	669.50	--	667.5	668.98
2/10/20	--	671.52	669.50	670.7	667.5	668.98
2/11/20	672.16	671.15	669.50	--	667.5	668.97
2/12/20	--	671.23	669.50	670.7	667.5	668.97
2/13/20	--	671.25	669.50	--	667.5	668.95
2/14/20	--	671.25	669.50	--	667.5	668.95
2/15/20	--	671.25	669.50	--	667.5	668.95
2/16/20	--	671.26	669.50	--	667.5	669.00
2/17/20	672.22	671.27	669.50	670.7	667.5	669.00
2/18/20	--	671.27	669.50	--	667.5	669.00
2/19/20	--	671.28	669.50	--	667.5	668.98
2/20/20	--	671.28	669.50	--	667.5	668.98
2/21/20	--	671.28	669.50	--	667.5	668.97
2/22/20	--	671.29	669.50	--	667.5	668.97
2/23/20	--	671.30	669.50	--	667.5	668.95
2/24/20	--	671.30	669.50	--	667.5	668.95
2/25/20	--	671.30	669.50	--	667.5	668.91
2/26/20	--	671.30	669.50	--	667.5	668.95
2/27/20	672.28	671.30	669.50	670.7	667.5	668.95
2/28/20	--	671.31	669.50	--	667.5	668.95
2/29/20	--	671.31	669.50	--	667.5	668.95
3/1/20	--	671.31	669.50	--	667.5	668.98
3/2/20	672.28	671.31	669.50	670.7	667.5	668.98
3/3/20	--	671.31	669.50	--	667.5	668.96
3/4/20	--	671.31	669.50	--	667.5	668.93
3/5/20	--	671.31	669.50	--	667.5	668.95
3/6/20	--	671.32	669.50	--	667.5	668.94
3/7/20	--	671.32	669.50	--	667.5	668.94
3/8/20	--	671.32	669.50	--	667.5	668.95

Table 2.4

Summary of 2020 Water Elevations Compared to Liner System
East Plant Area TSA Annual Vault Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date (mm/dd/yy)	LCS[1] Water Elevation (Manual) (ft. AMSL)	LCS[1] Water Elevation (PLC) (ft. AMSL)	Lowest Elevation of Primary Liner (ft. AMSL)	LDS[2] Water Elevation (ft. AMSL)	Lowest Elevation of Secondary Liner (ft. AMSL)	GUS[3] Water Elevation (PLC) (ft. AMSL)
3/9/20	--	671.32	669.50	--	667.5	668.93
3/10/20	672.08	671.10	669.50	670.8	667.5	668.93
3/11/20	--	671.10	669.50	--	667.5	668.93
3/12/20	--	671.11	669.50	--	667.5	668.93
3/13/20	--	671.12	669.50	--	667.5	668.93
3/14/20	--	671.12	669.50	--	667.5	668.95
3/15/20	--	671.13	669.50	--	667.5	668.98
3/16/20	672.1	671.14	669.50	670.8	667.5	668.98
3/17/20	--	671.15	669.50	--	667.5	668.96
3/18/20	--	671.15	669.50	--	667.5	668.96
3/19/20	--	671.14	669.50	--	667.5	668.95
3/20/20	--	671.15	669.50	--	667.5	668.96
3/21/20	672.15	671.15	669.50	670.8	667.5	668.96
3/22/20	--	671.15	669.50	--	667.5	668.96
3/23/20	--	671.15	669.50	--	667.5	668.98
3/24/20	--	671.15	669.50	--	667.5	668.98
3/25/20	--	671.15	669.50	--	667.5	668.98
3/26/20	--	671.17	669.50	--	667.5	669.00
3/27/20	--	671.17	669.50	--	667.5	669.03
3/28/20	672.17	671.17	669.50	670.8	667.5	668.98
3/29/20	--	671.18	669.50	--	667.5	669.00
3/30/20	--	671.18	669.50	--	667.5	668.98
3/31/20	--	671.18	669.50	--	667.5	669.00
4/1/20	--	671.18	669.50	--	667.5	669.02
4/2/20	672.22	671.18	669.50	670.8	667.5	669.00
4/3/20	--	671.18	669.50	--	667.5	669.00
4/4/20	--	671.19	669.50	--	667.5	669.00
4/5/20	--	671.19	669.50	--	667.5	669.00
4/6/20	--	671.19	669.50	--	667.5	668.99
4/7/20	--	671.20	669.50	--	667.5	669.22
4/8/20	671.97	671.20	669.50	670.8	667.5	668.97
4/9/20	--	--	669.50	--	667.5	669.00
4/10/20	--	--	669.50	--	667.5	669.00
4/11/20	--	--	669.50	--	667.5	669.02
4/12/20	--	--	669.50	--	667.5	669.00
4/13/20	671.99	--	669.50	670.9	667.5	669.00
4/14/20	--	--	669.50	--	667.5	668.97
4/15/20	--	--	669.50	--	667.5	668.97
4/16/20	--	--	669.50	--	667.5	668.97
4/17/20	--	--	669.50	--	667.5	668.97
4/18/20	--	671.04	669.50	--	667.5	668.97
4/19/20	--	671.04	669.50	--	667.5	668.97
4/20/20	672.02	671.04	669.50	670.9	667.5	668.97
4/21/20	--	671.04	669.50	--	667.5	668.97
4/22/20	--	671.05	669.50	--	667.5	668.97
4/23/20	--	671.05	669.50	--	667.5	668.96
4/24/20	--	671.05	669.50	--	667.5	668.95
4/25/20	--	671.05	669.50	--	667.5	668.97
4/26/20	--	671.05	669.50	--	667.5	668.97
4/27/20	672.05	671.05	669.50	670.9	667.5	668.96
4/28/20	--	671.05	669.50	--	667.5	668.96
4/29/20	--	671.05	669.50	--	667.5	668.97
4/30/20	--	671.06	669.50	--	667.5	668.97
5/1/20	--	671.05	669.50	--	667.5	668.93
5/2/20	--	671.05	669.50	--	667.5	668.98
5/3/20	--	671.05	669.50	--	667.5	668.98
5/4/20	672.07	671.06	669.50	670.9	667.5	668.98
5/5/20	--	671.07	669.50	--	667.5	668.98
5/6/20	--	671.07	669.50	--	667.5	668.98
5/7/20	--	671.07	669.50	--	667.5	668.98
5/8/20	--	671.07	669.50	--	667.5	668.98
5/9/20	--	671.07	669.50	--	667.5	668.97
5/10/20	--	671.08	669.50	--	667.5	668.97
5/11/20	672.08	671.07	669.50	671.0	667.5	668.97
5/12/20	--	671.07	669.50	--	667.5	668.94
5/13/20	--	671.08	669.50	--	667.5	668.94
5/14/20	--	671.08	669.50	--	667.5	668.93
5/15/20	--	671.10	669.50	--	667.5	668.94

Table 2.4

Summary of 2020 Water Elevations Compared to Liner System
East Plant Area TSA Annual Vault Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date (mm/dd/yy)	LCS[1] Water Elevation (Manual) (ft. AMSL)	LCS[1] Water Elevation (PLC) (ft. AMSL)	Lowest Elevation of Primary Liner (ft. AMSL)	LDS[2] Water Elevation (ft. AMSL)	Lowest Elevation of Secondary Liner (ft. AMSL)	GUS[3] Water Elevation (PLC) (ft. AMSL)
5/16/20	--	671.09	669.50	--	667.5	668.93
5/17/20	--	671.09	669.50	--	667.5	668.93
5/18/20	672.13	671.10	669.50	671.0	667.5	668.97
5/19/20	--	671.10	669.50	--	667.5	668.94
5/20/20	--	671.00	669.50	--	667.5	668.94
5/21/20	--	671.10	669.50	--	667.5	668.93
5/22/20	--	671.13	669.50	--	667.5	668.97
5/23/20	--	671.10	669.50	--	667.5	668.97
5/24/20	--	671.10	669.50	--	667.5	668.97
5/25/20	--	671.10	669.50	--	667.5	668.97
5/26/20	672.15	671.13	669.50	671.0	667.5	668.94
5/27/20	--	671.11	669.50	--	667.5	668.97
5/28/20	--	671.12	669.50	--	667.5	668.94
5/29/20	--	671.12	669.50	--	667.5	668.98
5/30/20	--	671.12	669.50	--	667.5	668.94
5/31/20	--	671.12	669.50	--	667.5	668.94
6/1/20	672.17	671.13	669.50	671.0	667.5	668.95
6/2/20	--	671.14	669.50	--	667.5	668.97
6/3/20	--	671.14	669.50	--	667.5	668.95
6/4/20	--	671.14	669.50	--	667.5	668.95
6/5/20	--	671.15	669.50	--	667.5	668.93
6/6/20	--	671.15	669.50	--	667.5	668.90
6/7/20	--	671.15	669.50	--	667.5	668.90
6/8/20	672.2	671.15	669.50	671.0	667.5	668.93
6/9/20	--	671.15	669.50	--	667.5	668.94
6/10/20	--	671.16	669.50	--	667.5	668.93
6/11/20	--	671.17	669.50	--	667.5	668.93
6/12/20	--	671.15	669.50	--	667.5	668.93
6/13/20	--	671.17	669.50	--	667.5	668.94
6/14/20	--	671.16	669.50	--	667.5	668.94
6/15/20	672.22	671.17	669.50	671.0	667.5	668.94
6/16/20	--	671.17	669.50	--	667.5	668.93
6/17/20	--	671.17	669.50	--	667.5	668.90
6/18/20	--	671.18	669.50	--	667.5	668.90
6/19/20	--	671.18	669.50	--	667.5	668.90
6/20/20	--	671.18	669.50	--	667.5	668.90
6/21/20	--	671.19	669.50	--	667.5	668.90
6/22/20	672.23	671.19	669.50	671.0	667.5	668.90
6/23/20	--	671.19	669.50	--	667.5	668.90
6/24/20	--	671.19	669.50	--	667.5	668.90
6/25/20	--	671.19	669.50	--	667.5	668.90
6/26/20	--	--	669.50	--	667.5	668.94
6/27/20	--	--	669.50	--	667.5	668.93
6/28/20	--	--	669.50	--	667.5	668.93
6/29/20	670.64	--	669.50	671.1	667.5	668.97
6/30/20	--	--	669.50	--	667.5	668.97
7/1/20	670.72	--	669.50	--	667.5	668.93
7/2/20	--	--	669.50	--	667.5	668.93
7/3/20	--	--	669.50	--	667.5	668.90
7/4/20	--	--	669.50	--	667.5	668.88
7/5/20	--	--	669.50	--	667.5	668.88
7/6/20	670.74	--	669.50	671.0	667.5	668.88
7/7/20	--	--	669.50	--	667.5	668.84
7/8/20	--	--	669.50	--	667.5	668.86
7/9/20	--	--	669.50	--	667.5	668.84
7/10/20	--	--	669.50	--	667.5	668.86
7/11/20	--	--	669.50	--	667.5	668.88
7/12/20	--	--	669.50	--	667.5	668.88
7/13/20	670.8	--	669.50	671.1	667.5	668.88
7/14/20	--	--	669.50	--	667.5	668.90
7/15/20	--	--	669.50	--	667.5	668.93
7/16/20	--	--	669.50	--	667.5	668.94
7/17/20	--	--	669.50	--	667.5	669.00
7/18/20	--	--	669.50	--	667.5	669.02
7/19/20	--	--	669.50	--	667.5	668.97
7/20/20	670.81	--	669.50	671.1	667.5	668.97
7/21/20	--	--	669.50	--	667.5	668.88
7/22/20	--	--	669.50	--	667.5	668.86

Table 2.4

Summary of 2020 Water Elevations Compared to Liner System
East Plant Area TSA Annual Vault Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date (mm/dd/yy)	LCS[1] Water Elevation (Manual) (ft. AMSL)	LCS[1] Water Elevation (PLC) (ft. AMSL)	Lowest Elevation of Primary Liner (ft. AMSL)	LDS[2] Water Elevation (ft. AMSL)	Lowest Elevation of Secondary Liner (ft. AMSL)	GUS[3] Water Elevation (PLC) (ft. AMSL)
7/23/20	--	--	669.50	--	667.5	668.80
7/24/20	--	--	669.50	--	667.5	668.78
7/25/20	--	--	669.50	--	667.5	668.78
7/26/20	--	--	669.50	--	667.5	668.78
7/27/20	670.82	--	669.50	671.1	667.5	668.80
7/28/20	--	--	669.50	--	667.5	668.80
7/29/20	--	--	669.50	--	667.5	668.80
7/30/20	--	--	669.50	--	667.5	668.78
7/31/20	--	--	669.50	--	667.5	668.80
8/1/20	--	--	669.50	--	667.5	668.80
8/2/20	--	--	669.50	--	667.5	668.80
8/3/20	670.85	--	669.50	671.1	667.5	668.78
8/4/20	--	--	669.50	--	667.5	668.83
8/5/20	--	--	669.50	--	667.5	668.84
8/6/20	--	--	669.50	--	667.5	668.85
8/7/20	--	--	669.50	--	667.5	668.84
8/8/20	--	--	669.50	--	667.5	668.83
8/9/20	--	--	669.50	--	667.5	668.83
8/10/20	671.43	--	669.50	671.2	667.5	668.84
8/11/20	--	--	669.50	--	667.5	668.84
8/12/20	--	--	669.50	--	667.5	668.84
8/13/20	--	--	669.50	--	667.5	668.84
8/14/20	--	--	669.50	--	667.5	668.83
8/15/20	--	--	669.50	--	667.5	668.83
8/16/20	--	--	669.50	--	667.5	668.83
8/17/20	671.6	--	669.50	671.2	667.5	668.83
8/18/20	--	--	669.50	--	667.5	668.83
8/19/20	--	--	669.50	--	667.5	668.84
8/20/20	--	--	669.50	--	667.5	668.84
8/21/20	--	--	669.50	--	667.5	668.84
8/22/20	--	--	669.50	--	667.5	668.83
8/23/20	--	--	669.50	--	667.5	668.80
8/24/20	--	--	669.50	671.2	667.5	668.83
8/25/20	671.55	--	669.50	--	667.5	668.83
8/26/20	--	--	669.50	--	667.5	668.83
8/27/20	--	--	669.50	--	667.5	668.81
8/28/20	--	--	669.50	--	667.5	668.81
8/29/20	--	--	669.50	--	667.5	668.81
8/30/20	--	--	669.50	--	667.5	668.81
8/31/20	--	--	669.50	--	667.5	668.80
9/1/20	671.56	--	669.50	671.2	667.5	668.80
9/2/20	--	--	669.50	--	667.5	668.79
9/3/20	--	--	669.50	--	667.5	668.79
9/4/20	--	--	669.50	--	667.5	668.80
9/5/20	--	--	669.50	--	667.5	668.80
9/6/20	--	--	669.50	--	667.5	668.80
9/7/20	671.56	--	669.50	671.2	667.5	668.78
9/8/20	--	--	669.50	--	667.5	668.78
9/9/20	--	--	669.50	--	667.5	668.78
9/10/20	--	--	669.50	--	667.5	668.78
9/11/20	--	--	669.50	--	667.5	668.78
9/12/20	--	--	669.50	--	667.5	668.79
9/13/20	--	--	669.50	--	667.5	668.80
9/14/20	--	--	669.50	671.2	667.5	668.78
9/15/20	671.56	--	669.50	--	667.5	668.78
9/16/20	--	--	669.50	--	667.5	668.80
9/17/20	--	--	669.50	--	667.5	668.81
9/18/20	--	--	669.50	--	667.5	668.81
9/19/20	--	--	669.50	--	667.5	668.78
9/20/20	--	--	669.50	--	667.5	668.78
9/21/20	--	--	669.50	--	667.5	668.80
9/22/20	--	--	669.50	--	667.5	668.78
9/23/20	--	--	669.50	--	667.5	668.80
9/24/20	671.7	--	669.50	671.2	667.5	668.78
9/25/20	--	--	669.50	--	667.5	668.71
9/26/20	--	--	669.50	--	667.5	668.76
9/27/20	--	--	669.50	--	667.5	668.78
9/28/20	--	--	669.50	--	667.5	668.77

Table 2.4

Summary of 2020 Water Elevations Compared to Liner System
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GM Bedford Casting Operations Facility
Bedford, Indiana

Date (mm/dd/yy)	LCS[1] Water Elevation (Manual) (ft. AMSL)	LCS[1] Water Elevation (PLC) (ft. AMSL)	Lowest Elevation of Primary Liner (ft. AMSL)	LDS[2] Water Elevation (ft. AMSL)	Lowest Elevation of Secondary Liner (ft. AMSL)	GUS[3] Water Elevation (PLC) (ft. AMSL)
9/29/20	--	--	669.50	--	667.5	668.78
9/30/20	--	--	669.50	--	667.5	668.77
10/1/20	--	--	669.50	--	667.5	668.76
10/2/20	--	--	669.50	--	667.5	668.76
10/3/20	--	--	669.50	--	667.5	668.74
10/4/20	--	--	669.50	--	667.5	668.76
10/5/20	671.70	--	669.50	669.6	667.5	668.74
10/6/20	--	--	669.50	--	667.5	668.74
10/7/20	--	--	669.50	--	667.5	668.75
10/8/20	--	--	669.50	--	667.5	668.75
10/9/20	--	--	669.50	--	667.5	668.75
10/10/20	--	--	669.50	--	667.5	668.75
10/11/20	--	--	669.50	--	667.5	668.75
10/12/20	671.41	--	669.50	669.6	667.5	668.75
10/13/20	--	--	669.50	--	667.5	668.75
10/14/20	--	--	669.50	--	667.5	668.75
10/15/20	--	--	669.50	--	667.5	668.75
10/16/20	--	--	669.50	--	667.5	668.75
10/17/20	--	--	669.50	--	667.5	668.75
10/18/20	671.38	--	669.50	--	667.5	668.75
10/19/20	--	--	669.50	669.2	667.5	668.75
10/20/20	--	--	669.50	--	667.5	668.75
10/21/20	--	--	669.50	--	667.5	668.75
10/22/20	--	--	669.50	--	667.5	668.75
10/23/20	--	--	669.50	--	667.5	668.75
10/24/20	--	--	669.50	--	667.5	668.75
10/25/20	--	--	669.50	--	667.5	668.75
10/26/20	671.43	--	669.50	669.2	667.5	668.75
10/27/20	--	--	669.50	--	667.5	668.75
10/28/20	--	--	669.50	--	667.5	668.75
10/29/20	--	--	669.50	--	667.5	668.75
10/30/20	--	--	669.50	--	667.5	668.75
10/31/20	--	--	669.50	--	667.5	668.75
11/1/20	--	--	669.50	--	667.5	668.75
11/2/20	671.44	--	669.50	669.3	667.5	668.75
11/3/20	--	--	669.50	--	667.5	668.75
11/4/20	--	--	669.50	--	667.5	668.75
11/5/20	--	--	669.50	--	667.5	668.75
11/6/20	--	--	669.50	--	667.5	668.75
11/7/20	--	--	669.50	--	667.5	668.75
11/8/20	--	--	669.50	--	667.5	668.75
11/9/20	--	--	669.50	669.2	667.5	668.75
11/10/20	671.44	--	669.50	--	667.5	668.75
11/11/20	--	--	669.50	--	667.5	668.75
11/12/20	--	--	669.50	--	667.5	668.75
11/13/20	--	--	669.50	--	667.5	668.75
11/14/20	--	--	669.50	--	667.5	668.75
11/15/20	--	--	669.50	--	667.5	668.75
11/16/20	671.48	--	669.50	669.2	667.5	668.75
11/17/20	--	--	669.50	--	667.5	668.75
11/18/20	--	--	669.50	--	667.5	668.75
11/19/20	--	--	669.50	--	667.5	668.75
11/20/20	--	--	669.50	--	667.5	668.75
11/21/20	--	--	669.50	--	667.5	668.75
11/22/20	--	--	669.50	--	667.5	668.75
11/23/20	671.51	--	669.50	669.3	667.5	668.75
11/24/20	--	--	669.50	--	667.5	668.75
11/25/20	--	--	669.50	--	667.5	668.75
11/26/20	--	--	669.50	--	667.5	668.75
11/27/20	--	--	669.50	--	667.5	668.75
11/28/20	--	--	669.50	--	667.5	668.75
11/29/20	--	--	669.50	--	667.5	668.75
11/30/20	671.53	--	669.50	669.3	667.5	668.75
12/1/20	--	--	669.50	--	667.5	668.75
12/2/20	--	--	669.50	--	667.5	668.75
12/3/20	--	--	669.50	--	667.5	668.75
12/4/20	--	--	669.50	--	667.5	668.75
12/5/20	--	--	669.50	--	667.5	668.75

Table 2.4

Summary of 2020 Water Elevations Compared to Liner System
East Plant Area TSA Annual Vault Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date (mm/dd/yy)	LCS[1] Water Elevation (Manual) (ft. AMSL)	LCS[1] Water Elevation (PLC) (ft. AMSL)	Lowest Elevation of Primary Liner (ft. AMSL)	LDS[2] Water Elevation (ft. AMSL)	Lowest Elevation of Secondary Liner (ft. AMSL)	GUS[3] Water Elevation (PLC) (ft. AMSL)
12/6/20	--	--	669.50	--	667.5	668.75
12/7/20	671.56	--	669.50	669.3	667.5	668.75
12/8/20	--	--	669.50	--	667.5	668.75
12/9/20	--	--	669.50	--	667.5	668.75
12/10/20	--	--	669.50	--	667.5	668.75
12/11/20	--	--	669.50	--	667.5	668.75
12/12/20	--	--	669.50	--	667.5	668.75
12/13/20	--	--	669.50	--	667.5	668.75
12/14/20	671.58	--	669.50	669.3	667.5	668.75
12/15/20	--	--	669.50	--	667.5	668.75
12/16/20	--	--	669.50	--	667.5	668.75
12/17/20	--	--	669.50	--	667.5	668.75
12/18/20	--	--	669.50	--	667.5	668.75
12/19/20	--	--	669.50	--	667.5	668.75
12/20/20	--	--	669.50	--	667.5	668.75
12/21/20	671.58	--	669.50	669.3	667.5	668.75
12/22/20	--	--	669.50	--	667.5	668.75
12/23/20	--	--	669.50	--	667.5	668.75
12/24/20	--	--	669.50	--	667.5	669.24
12/25/20	--	--	669.50	--	667.5	669.24
12/26/20	--	--	669.50	--	667.5	669.25
12/27/20	--	--	669.50	--	667.5	669.24
12/28/20	--	--	669.50	--	667.5	669.26
12/29/20	--	--	669.50	--	667.5	669.26
12/30/20	--	--	669.50	--	667.5	669.26
12/31/20	671.6	--	669.50	669.3	667.5	669.26

Notes:
AMSL - Above mean sea level
ft - feet
Diameter of LCS and LDS sumps = 6 feet
Diameter of Underdrain sump = 3 feet
[1] LCS: Top of sump [top of concrete manhole] (feet AMSL): 740.83, Bottom of sump (feet AMSL): 671.00, Total depth of sump manhole (feet): 69.83. Automated pump turns on at 674 ft AMSL and off at 672 ft AMSL.

[2] LDS: Top of sump [top of concrete manhole] (feet AMSL): 741.14, Bottom of sump (feet AMSL): 668.5, Total depth of sump manhole (feet): 72.64
[3] GUS: Top of sump [top of concrete] (feet AMSL): 738.99, Bottom of sump (feet AMSL): 662.18, Total depth of sump manhole (feet): 76.81. Automated pump turns on at 666.5 ft AMSL and off at 664.68 ft AMSL.

Table 2.5

2020 LCS, LDS, and GUS Maximum Water Elevation Summary
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Date	LCS[1]	LCS[1]	LCS[1]	LCS[1]	LDS[2]	LDS[2]	GUS[3]	GUS[3]
	Manual Water Depth (ft.)	Max. Water Surface Elevation (manual) (ft. AMSL)	PLC-Recorded Water Depth (inches)	Max. Water Surface Elevation (PLC) (ft AMSL)	Manual Water Depth (ft.)	Max. Water Surface Elevation (manual) (ft. AMSL)	PLC-Recorded Water Depth (inches)	Max. Water Surface Elevation (PLC) (ft AMSL)
Jan-20	66.69	674.14	10.3	671.86	70.22	670.92	82.60	669.06
Feb-20	68.36	672.47	6.3	671.53	70.34	670.8	82.00	669.01
Mar-20	68.55	672.28	3.9	671.33	70.36	670.78	82.2	669.03
Apr-20	68.78	672.05	2.4	671.20	70.24	670.9	82.1	669.22
May-20	68.68	672.15	1.5	671.13	70.14	671	81.6	668.98
Jun-20	68.6	672.23	2.3	671.19	70.08	671.06	81.1	668.93
Jul-20	70.01	670.82	--	--	70.01	671.13	82.1	669.02
Aug-20	69.23	671.60	--	--	69.97	671.17	80.1	668.85
Sep-20	69.13	671.70	--	--	69.95	671.19	79.6	668.81
Oct-19	69.13	671.70	--	--	71.55	669.59	78.9	668.75
Nov-19	69.3	671.53	--	--	71.85	669.29	78.9	668.75
Dec-19	69.24	671.59	--	--	71.85	669.29	85.0	669.26

Notes:

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

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

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

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

Indication of water level reaching or exceeding the operational limit.

Table 2.6

2020 Summary of Monthly Total Volume of Water Treated
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Month	Groundwater Treatment Plant (GWTP) Number of Operational Days	Volume of Water Treated/Discharged at the GWTP (million gallons)	Daily Average Water Treated/Discharged at the GWTP (million gallons)
Jan-20	31	4.69	0.151
Feb-20	29	3.642	0.126
Mar-20	31	4.853	0.157
Apr-20	30	2.681	0.089
May-20	31	3.767	0.122
Jun-20	30	2.295	0.077
Jul-20	31	1.465	0.047
Aug-20	31	2.109	0.068
Sep-20	30	0.822	0.027
Oct-20	31	1.663	0.054
Nov-20	30	2.798	0.093
Dec-20	31	2.045	0.066
Total	**366**	**32.830**	
Month Average	**-**	**2.736**	
Daily Average	**-**	**0.090**	

Summary of Analytical Results - EI CA750 First Half 2020 Sampling Event
East Plant TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Area		EastPlantArea	A007_EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	MonitoringWell_RFIBoundary_WestPlantArea
Sample Location		9-4	CH-20	CH-42	CH-42A	CH-43	CH-44	MW-X033Y147S
Sample Identification		GW-071520-SS-21	GW-071520-SS-23	GW-071320-KH-02	GW-071320-KH-04	GW-071320-SS-03	GW-071320-SS-01	GW-071420-SS-09
Sample Date		07/15/2020	07/15/2020	07/13/2020	07/13/2020	07/13/2020	07/13/2020	07/14/2020
Sample Type								
	Units							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 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
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	--	--	--	--	--
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	--	--	--	--	--
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	--	--	--	--	--
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	--	--	--	--	--
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	--	--	--	--	--
1,2,4-Trichlorobenzene	ug/L	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	--	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	ug/L	--	--	--	--	--	--	--
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	--	--	--	--	--
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	--	--	--	--	--
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	--	--	--	--	--
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	--	--	--	--	--
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	ug/L	R	10 U	--	--	--	--	--
2-Hexanone	ug/L	--	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	--	--	--	--	--	--	--
Acetone	ug/L	--	--	--	--	--	--	--
Benzene	ug/L	1.0 U	1.0 U	--	--	--	--	--
Bromodichloromethane	ug/L	1.0 U	1.0 U	--	--	--	--	--
Bromoform	ug/L	1.0 U	1.0 U	--	--	--	--	--
Bromomethane (Methyl bromide)	ug/L	1.0 U	1.0 U	--	--	--	--	--
Carbon disulfide	ug/L	--	--	--	--	--	--	--
Carbon tetrachloride	ug/L	1.0 U	1.0 U	--	--	--	--	--
Chlorobenzene	ug/L	1.0 U	1.0 U	--	--	--	--	--
Chloroethane	ug/L	1.0 U	1.0 U	--	--	--	--	--
Chloroform (Trichloromethane)	ug/L	1.0 U	0.30 J	--	--	--	--	--
Chloromethane (Methyl chloride)	ug/L	1.0 U	1.0 U	--	--	--	--	--
cis-1,2-Dichloroethene	ug/L	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	--	--	--	--	--
Cyclohexane	ug/L	--	--	--	--	--	--	--
Dibromochloromethane	ug/L	1.0 U	1.0 U	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 U	1.0 U	--	--	--	--	--
Ethylbenzene	ug/L	1.0 U	1.0 U	--	--	--	--	--

Summary of Analytical Results - EI CA750 First Half 2020 Sampling Event
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GM Bedford Casting Operations Facility
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Sample Location		9-4	CH-20	CH-42	CH-42A	CH-43	CH-44	MW-X033Y147S
Sample Identification		GW-071520-SS-21	GW-071520-SS-23	GW-071320-KH-02	GW-071320-KH-04	GW-071320-SS-03	GW-071320-SS-01	GW-071420-SS-09
Sample Date		07/15/2020	07/15/2020	07/13/2020	07/13/2020	07/13/2020	07/13/2020	07/14/2020
Sample Type								
	Units							
Isopropyl benzene	ug/L	--	--	--	--	--	--	--
Methyl acetate	ug/L	--	--	--	--	--	--	--
Methyl cyclohexane	ug/L	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	ug/L	--	--	--	--	--	--	--
Methylene chloride	ug/L	5.0 U	5.0 U	--	--	--	--	--
Styrene	ug/L	--	--	--	--	--	--	--
Tetrachloroethene	ug/L	1.0 U	1.0 U	--	--	--	--	--
Toluene	ug/L	1.0 U	1.0 U	--	--	--	--	--
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	--	--	--	--	--
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	--	--	--	--	--
Trichloroethene	ug/L	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	--	--	--	--	--
Trifluorotrichloroethane (CFC-113)	ug/L	--	--	--	--	--	--	--
Vinyl chloride	ug/L	1.0 U	1.0 U	--	--	--	--	--
Xylenes (total)	ug/L	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs)								
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	--	--	--	--	--	--	--
2,4-Dichlorophenol	ug/L	--	--	--	--	--	--	--
2,4-Dimethylphenol	ug/L	--	--	--	--	--	--	--
2,4-Dinitrophenol	ug/L	--	--	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	--	--	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	--	--	--	--	--	--	--
2-Chloronaphthalene	ug/L	--	--	--	--	--	--	--
2-Chlorophenol	ug/L	--	--	--	--	--	--	--
2-Methylnaphthalene	ug/L	--	--	--	--	--	--	--
2-Methylphenol	ug/L	--	--	--	--	--	--	--
2-Nitroaniline	ug/L	--	--	--	--	--	--	--
2-Nitrophenol	ug/L	--	--	--	--	--	--	--
3&4-Methylphenol	ug/L	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	--	--	--	--	--	--	--
3-Nitroaniline	ug/L	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	--	--	--	--	--	--	--
4-Chloroaniline	ug/L	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	--	--	--	--	--	--	--
4-Nitroaniline	ug/L	--	--	--	--	--	--	--
4-Nitrophenol	ug/L	--	--	--	--	--	--	--
Acenaphthene	ug/L	--	--	--	--	--	--	--
Acenaphthylene	ug/L	--	--	--	--	--	--	--
Acetophenone	ug/L	--	--	--	--	--	--	--
Anthracene	ug/L	--	--	--	--	--	--	--
Atrazine	ug/L	--	--	--	--	--	--	--
Benzaldehyde	ug/L	--	--	--	--	--	--	--
Benzo(a)anthracene	ug/L	--	--	--	--	--	--	--
Benzo(a)pyrene	ug/L	--	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/L	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/L	--	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/L	--	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	ug/L	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	ug/L	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	ug/L	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	ug/L	--	--	--	--	--	--	--

Table 3.1

Summary of Analytical Results - EI CA750 First Half 2020 Sampling Event
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Sample Location		9-4	CH-20	CH-42	CH-42A	CH-43	CH-44	MW-X033Y147S
Sample Identification		GW-071520-SS-21	GW-071520-SS-23	GW-071320-KH-02	GW-071320-KH-04	GW-071320-SS-03	GW-071320-SS-01	GW-071420-SS-09
Sample Date		07/15/2020	07/15/2020	07/13/2020	07/13/2020	07/13/2020	07/13/2020	07/14/2020
Sample Type								
	Units							
Caprolactam	ug/L	--	--	--	--	--	--	--
Carbazole	ug/L	--	--	--	--	--	--	--
Chrysene	ug/L	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L	--	--	--	--	--	--	--
Dibenzofuran	ug/L	--	--	--	--	--	--	--
Diethyl phthalate	ug/L	--	--	--	--	--	--	--
Dimethyl phthalate	ug/L	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	ug/L	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	ug/L	--	--	--	--	--	--	--
Fluoranthene	ug/L	--	--	--	--	--	--	--
Fluorene	ug/L	--	--	--	--	--	--	--
Hexachlorobenzene	ug/L	--	--	--	--	--	--	--
Hexachlorobutadiene	ug/L	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	--	--	--	--	--	--	--
Hexachloroethane	ug/L	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	--	--	--	--	--	--	--
Isophorone	ug/L	--	--	--	--	--	--	--
Naphthalene	ug/L	--	--	--	--	--	--	--
Nitrobenzene	ug/L	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	ug/L	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	--	--	--	--	--	--	--
Pentachlorophenol	ug/L	--	--	--	--	--	--	--
Phenanthrene	ug/L	--	--	--	--	--	--	--
Phenol	ug/L	--	--	--	--	--	--	--
Pyrene	ug/L	--	--	--	--	--	--	--
General Chemistry								
Chloride	ug/L	--	--	--	--	--	--	--
Field Parameters								
Conductivity, field	mS/cm	0.696	0.571	0.765	0.63	0.87	0.85	1.881
Dissolved oxygen (DO), field	ug/L	390	270	680	7000	700	740	540
Oxidation reduction potential (ORP), field	millivolts	-8.7	-204.1	-0.6	72.2	73	20	7.1
pH, field	s.u.	7.06	7.75	6.8	7.22	6.76	6.87	6.56
Temperature, sample	Deg C	16.08	15.49	17.59	18.19	16.87	16.81	17.93
Turbidity, field	NTU	2.91	18.7	1.43	0.86	2.35	1.34	5.67

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

Summary of Analytical Results - EI CA750 First Half 2020 Sampling Event
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Area		MonitoringWell_RFIBoundary_WestPlantArea	Plant_property	Plant_property	A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea
Sample Location		MW-X033Y147S	MW-X043Y176	MW-X047Y236	MW-X085Y070S-1	MW-X085Y070S-1
Sample Identification		GW-071420-SS-09~Split	GW-071520-KH-16	GW-071520-KH-14	GW-071420-KH-06	GW-071420-KH-06~Split
Sample Date		07/14/2020	07/15/2020	07/15/2020	07/14/2020	07/14/2020
Sample Type		Replicate				Replicate
	Units					
PCBs						
Aroclor-1016 (PCB-1016)	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.097 U
Aroclor-1221 (PCB-1221)	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.097 U
Aroclor-1232 (PCB-1232)	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.097 U
Aroclor-1242 (PCB-1242)	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.097 U
Aroclor-1248 (PCB-1248)	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.097 U
Aroclor-1254 (PCB-1254)	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.097 U
Aroclor-1260 (PCB-1260)	ug/L	0.095 U	0.19 U	0.19 U	0.19 U	0.097 U
Total PCBs	ug/L	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.099 U	0.19 U	0.19 U	0.19 U	0.10 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.099 U	0.19 U	0.19 U	0.19 U	0.10 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.099 U	0.19 U	0.19 U	0.19 U	0.10 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.099 U	0.19 U	0.19 U	0.19 U	0.10 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.099 U	0.19 U	0.19 U	0.19 U	0.10 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.099 U	0.19 U	0.19 U	0.19 U	0.10 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.099 U	0.19 U	0.19 U	0.19 U	0.10 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	ug/L	--	--	--	--	--
1,1,2,2-Tetrachloroethane	ug/L	--	--	--	--	--
1,1,2-Trichloroethane	ug/L	--	--	--	--	--
1,1-Dichloroethane	ug/L	--	--	--	--	--
1,1-Dichloroethene	ug/L	--	--	--	--	--
1,2,4-Trichlorobenzene	ug/L	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	ug/L	--	--	--	--	--
1,2-Dichlorobenzene	ug/L	--	--	--	--	--
1,2-Dichloroethane	ug/L	--	--	--	--	--
1,2-Dichloropropane	ug/L	--	--	--	--	--
1,3-Dichlorobenzene	ug/L	--	--	--	--	--
1,4-Dichlorobenzene	ug/L	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	--	--	--	--	--
2-Chloroethyl vinyl ether	ug/L	--	--	--	--	--
2-Hexanone	ug/L	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	--	--	--	--	--
Acetone	ug/L	--	--	--	--	--
Benzene	ug/L	--	--	--	--	--
Bromodichloromethane	ug/L	--	--	--	--	--
Bromoform	ug/L	--	--	--	--	--
Bromomethane (Methyl bromide)	ug/L	--	--	--	--	--
Carbon disulfide	ug/L	--	--	--	--	--
Carbon tetrachloride	ug/L	--	--	--	--	--
Chlorobenzene	ug/L	--	--	--	--	--
Chloroethane	ug/L	--	--	--	--	--
Chloroform (Trichloromethane)	ug/L	--	--	--	--	--
Chloromethane (Methyl chloride)	ug/L	--	--	--	--	--
cis-1,2-Dichloroethene	ug/L	--	--	--	--	--
cis-1,3-Dichloropropene	ug/L	--	--	--	--	--
Cyclohexane	ug/L	--	--	--	--	--
Dibromochloromethane	ug/L	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	ug/L	--	--	--	--	--
Ethylbenzene	ug/L	--	--	--	--	--

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Sample Location		MW-X033Y147S	MW-X043Y176	MW-X047Y236	MW-X085Y070S-1	MW-X085Y070S-1
Sample Identification		GW-071420-SS-09~Split	GW-071520-KH-16	GW-071520-KH-14	GW-071420-KH-06	GW-071420-KH-06~Split
Sample Date		07/14/2020	07/15/2020	07/15/2020	07/14/2020	07/14/2020
Sample Type		Replicate				Replicate
	Units					
Isopropyl benzene	ug/L	--	--	--	--	--
Methyl acetate	ug/L	--	--	--	--	--
Methyl cyclohexane	ug/L	--	--	--	--	--
Methyl tert butyl ether (MTBE)	ug/L	--	--	--	--	--
Methylene chloride	ug/L	--	--	--	--	--
Styrene	ug/L	--	--	--	--	--
Tetrachloroethene	ug/L	--	--	--	--	--
Toluene	ug/L	--	--	--	--	--
trans-1,2-Dichloroethene	ug/L	--	--	--	--	--
trans-1,3-Dichloropropene	ug/L	--	--	--	--	--
Trichloroethene	ug/L	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	ug/L	--	--	--	--	--
Trifluorotrichloroethane (CFC-113)	ug/L	--	--	--	--	--
Vinyl chloride	ug/L	--	--	--	--	--
Xylenes (total)	ug/L	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs)						
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	--	--	--	--	--
2,4-Dichlorophenol	ug/L	--	--	--	--	--
2,4-Dimethylphenol	ug/L	--	--	--	--	--
2,4-Dinitrophenol	ug/L	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	--	--	--	--	--
2-Chloronaphthalene	ug/L	--	--	--	--	--
2-Chlorophenol	ug/L	--	--	--	--	--
2-Methylnaphthalene	ug/L	--	--	--	--	--
2-Methylphenol	ug/L	--	--	--	--	--
2-Nitroaniline	ug/L	--	--	--	--	--
2-Nitrophenol	ug/L	--	--	--	--	--
3&4-Methylphenol	ug/L	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	--	--	--	--	--
3-Nitroaniline	ug/L	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	--	--	--	--	--
4-Chloroaniline	ug/L	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	--	--	--	--	--
4-Nitroaniline	ug/L	--	--	--	--	--
4-Nitrophenol	ug/L	--	--	--	--	--
Acenaphthene	ug/L	--	--	--	--	--
Acenaphthylene	ug/L	--	--	--	--	--
Acetophenone	ug/L	--	--	--	--	--
Anthracene	ug/L	--	--	--	--	--
Atrazine	ug/L	--	--	--	--	--
Benzaldehyde	ug/L	--	--	--	--	--
Benzo(a)anthracene	ug/L	--	--	--	--	--
Benzo(a)pyrene	ug/L	--	--	--	--	--
Benzo(b)fluoranthene	ug/L	--	--	--	--	--
Benzo(g,h,i)perylene	ug/L	--	--	--	--	--
Benzo(k)fluoranthene	ug/L	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	ug/L	--	--	--	--	--
bis(2-Chloroethoxy)methane	ug/L	--	--	--	--	--
bis(2-Chloroethyl)ether	ug/L	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	--	--	--	--
Butyl benzylphthalate (BBP)	ug/L	--	--	--	--	--

Table 3.1

Summary of Analytical Results - EI CA750 First Half 2020 Sampling Event
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Sample Location		MW-X033Y147S	MW-X043Y176	MW-X047Y236	MW-X085Y070S-1	MW-X085Y070S-1
Sample Identification		GW-071420-SS-09~Split	GW-071520-KH-16	GW-071520-KH-14	GW-071420-KH-06	GW-071420-KH-06~Split
Sample Date		07/14/2020	07/15/2020	07/15/2020	07/14/2020	07/14/2020
Sample Type		Replicate				Replicate
	Units					
Caprolactam	ug/L	--	--	--	--	--
Carbazole	ug/L	--	--	--	--	--
Chrysene	ug/L	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L	--	--	--	--	--
Dibenzofuran	ug/L	--	--	--	--	--
Diethyl phthalate	ug/L	--	--	--	--	--
Dimethyl phthalate	ug/L	--	--	--	--	--
Di-n-butylphthalate (DBP)	ug/L	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	ug/L	--	--	--	--	--
Fluoranthene	ug/L	--	--	--	--	--
Fluorene	ug/L	--	--	--	--	--
Hexachlorobenzene	ug/L	--	--	--	--	--
Hexachlorobutadiene	ug/L	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	--	--	--	--	--
Hexachloroethane	ug/L	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	--	--	--	--	--
Isophorone	ug/L	--	--	--	--	--
Naphthalene	ug/L	--	--	--	--	--
Nitrobenzene	ug/L	--	--	--	--	--
N-Nitrosodi-n-propylamine	ug/L	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	--	--	--	--	--
Pentachlorophenol	ug/L	--	--	--	--	--
Phenanthrene	ug/L	--	--	--	--	--
Phenol	ug/L	--	--	--	--	--
Pyrene	ug/L	--	--	--	--	--
General Chemistry						
Chloride	ug/L	--	--	--	--	--
Field Parameters						
Conductivity, field	mS/cm	--	1.444	0.626	9.554	--
Dissolved oxygen (DO), field	ug/L	--	1620	2140	1060	--
Oxidation reduction potential (ORP), field	millivolts	--	-95.7	125.1	-153.4	--
pH, field	s.u.	--	7.18	7.18	6.71	--
Temperature, sample	Deg C	--	14.63	16.04	18.52	--
Turbidity, field	NTU	--	7.49	0.7	0.11	--

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

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Area		A001MonitoringWell_WestPlantArea	A001MonitoringWell_WestPlantArea	A001	A001	A001MonitoringWell_WestPlantArea
Sample Location		MW-X085Y070S-2	MW-X085Y070S-2	MW-X146Y084	MW-X146Y084	MW-X169Y058S-1
Sample Identification		GW-071420-KH-08	GW-071420-KH-08~Split	GW-071420-SS-05	GW-071420-SS-07	GW-071420-SS-11
Sample Date		07/14/2020	07/14/2020	07/14/2020	07/14/2020	07/14/2020
Sample Type			Replicate		Duplicate	
	Units					
PCBs						
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.097 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.097 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.097 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.097 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.097 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.13	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.097 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	ND	0.13	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.099 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.099 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.099 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.099 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.099 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	0.099 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.099 U	0.19 U	0.19 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	ug/L	--	--	--	--	--
1,1,2,2-Tetrachloroethane	ug/L	--	--	--	--	--
1,1,2-Trichloroethane	ug/L	--	--	--	--	--
1,1-Dichloroethane	ug/L	--	--	--	--	--
1,1-Dichloroethene	ug/L	--	--	--	--	--
1,2,4-Trichlorobenzene	ug/L	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	ug/L	--	--	--	--	--
1,2-Dichlorobenzene	ug/L	--	--	--	--	--
1,2-Dichloroethane	ug/L	--	--	--	--	--
1,2-Dichloropropane	ug/L	--	--	--	--	--
1,3-Dichlorobenzene	ug/L	--	--	--	--	--
1,4-Dichlorobenzene	ug/L	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	--	--	--	--	--
2-Chloroethyl vinyl ether	ug/L	--	--	--	--	--
2-Hexanone	ug/L	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	--	--	--	--	--
Acetone	ug/L	--	--	--	--	--
Benzene	ug/L	--	--	--	--	--
Bromodichloromethane	ug/L	--	--	--	--	--
Bromoform	ug/L	--	--	--	--	--
Bromomethane (Methyl bromide)	ug/L	--	--	--	--	--
Carbon disulfide	ug/L	--	--	--	--	--
Carbon tetrachloride	ug/L	--	--	--	--	--
Chlorobenzene	ug/L	--	--	--	--	--
Chloroethane	ug/L	--	--	--	--	--
Chloroform (Trichloromethane)	ug/L	--	--	--	--	--
Chloromethane (Methyl chloride)	ug/L	--	--	--	--	--
cis-1,2-Dichloroethene	ug/L	--	--	--	--	--
cis-1,3-Dichloropropene	ug/L	--	--	--	--	--
Cyclohexane	ug/L	--	--	--	--	--
Dibromochloromethane	ug/L	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	ug/L	--	--	--	--	--
Ethylbenzene	ug/L	--	--	--	--	--

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Sample Location		MW-X085Y070S-2	MW-X085Y070S-2	MW-X146Y084	MW-X146Y084	MW-X169Y058S-1
Sample Identification		GW-071420-KH-08	GW-071420-KH-08~Split	GW-071420-SS-05	GW-071420-SS-07	GW-071420-SS-11
Sample Date		07/14/2020	07/14/2020	07/14/2020	07/14/2020	07/14/2020
Sample Type			Replicate		Duplicate	
	Units					
Isopropyl benzene	ug/L	--	--	--	--	--
Methyl acetate	ug/L	--	--	--	--	--
Methyl cyclohexane	ug/L	--	--	--	--	--
Methyl tert butyl ether (MTBE)	ug/L	--	--	--	--	--
Methylene chloride	ug/L	--	--	--	--	--
Styrene	ug/L	--	--	--	--	--
Tetrachloroethene	ug/L	--	--	--	--	--
Toluene	ug/L	--	--	--	--	--
trans-1,2-Dichloroethene	ug/L	--	--	--	--	--
trans-1,3-Dichloropropene	ug/L	--	--	--	--	--
Trichloroethene	ug/L	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	ug/L	--	--	--	--	--
Trifluorotrichloroethane (CFC-113)	ug/L	--	--	--	--	--
Vinyl chloride	ug/L	--	--	1.0 U	1.0 U	1.4
Xylenes (total)	ug/L	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs)						
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	--	--	--	--	--
2,4-Dichlorophenol	ug/L	--	--	--	--	--
2,4-Dimethylphenol	ug/L	--	--	--	--	--
2,4-Dinitrophenol	ug/L	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	--	--	--	--	--
2-Chloronaphthalene	ug/L	--	--	--	--	--
2-Chlorophenol	ug/L	--	--	--	--	--
2-Methylnaphthalene	ug/L	--	--	--	--	--
2-Methylphenol	ug/L	--	--	--	--	--
2-Nitroaniline	ug/L	--	--	--	--	--
2-Nitrophenol	ug/L	--	--	--	--	--
3&4-Methylphenol	ug/L	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	--	--	--	--	--
3-Nitroaniline	ug/L	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	--	--	--	--	--
4-Chloroaniline	ug/L	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	--	--	--	--	--
4-Nitroaniline	ug/L	--	--	--	--	--
4-Nitrophenol	ug/L	--	--	--	--	--
Acenaphthene	ug/L	--	--	--	--	--
Acenaphthylene	ug/L	--	--	--	--	--
Acetophenone	ug/L	--	--	--	--	--
Anthracene	ug/L	--	--	--	--	--
Atrazine	ug/L	--	--	--	--	--
Benzaldehyde	ug/L	--	--	--	--	--
Benzo(a)anthracene	ug/L	--	--	--	--	--
Benzo(a)pyrene	ug/L	--	--	--	--	--
Benzo(b)fluoranthene	ug/L	--	--	--	--	--
Benzo(g,h,i)perylene	ug/L	--	--	--	--	--
Benzo(k)fluoranthene	ug/L	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	ug/L	--	--	--	--	--
bis(2-Chloroethoxy)methane	ug/L	--	--	--	--	--
bis(2-Chloroethyl)ether	ug/L	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	--	--	--	--
Butyl benzylphthalate (BBP)	ug/L	--	--	--	--	--

Table 3.1

Summary of Analytical Results - EI CA750 First Half 2020 Sampling Event
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Sample Location		MW-X085Y070S-2	MW-X085Y070S-2	MW-X146Y084	MW-X146Y084	MW-X169Y058S-1
Sample Identification		GW-071420-KH-08	GW-071420-KH-08~Split	GW-071420-SS-05	GW-071420-SS-07	GW-071420-SS-11
Sample Date		07/14/2020	07/14/2020	07/14/2020	07/14/2020	07/14/2020
Sample Type			Replicate		Duplicate	
	Units					
Caprolactam	ug/L	--	--	--	--	--
Carbazole	ug/L	--	--	--	--	--
Chrysene	ug/L	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L	--	--	--	--	--
Dibenzofuran	ug/L	--	--	--	--	--
Diethyl phthalate	ug/L	--	--	--	--	--
Dimethyl phthalate	ug/L	--	--	--	--	--
Di-n-butylphthalate (DBP)	ug/L	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	ug/L	--	--	--	--	--
Fluoranthene	ug/L	--	--	--	--	--
Fluorene	ug/L	--	--	--	--	--
Hexachlorobenzene	ug/L	--	--	--	--	--
Hexachlorobutadiene	ug/L	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	--	--	--	--	--
Hexachloroethane	ug/L	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	--	--	--	--	--
Isophorone	ug/L	--	--	--	--	--
Naphthalene	ug/L	--	--	--	--	--
Nitrobenzene	ug/L	--	--	--	--	--
N-Nitrosodi-n-propylamine	ug/L	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	--	--	--	--	--
Pentachlorophenol	ug/L	--	--	--	--	--
Phenanthrene	ug/L	--	--	--	--	--
Phenol	ug/L	--	--	--	--	--
Pyrene	ug/L	--	--	--	--	--
General Chemistry						
Chloride	ug/L	--	--	2100000	2100000	--
Field Parameters						
Conductivity, field	mS/cm	4.999	--	5.846	5.846	2.289
Dissolved oxygen (DO), field	ug/L	580	--	360	360	380
Oxidation reduction potential (ORP), field	millivolts	-268.8	--	-199.9	-199.9	-31.9
pH, field	s.u.	7.97	--	7.52	7.52	7.45
Temperature, sample	Deg C	19.14	--	16.9	16.9	17.23
Turbidity, field	NTU	31.4	--	16.9	16.9	1.75

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

Summary of Analytical Results - EI CA750 First Half 2020 Sampling Event
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Area		EastPlantArea	RFIBoundary_P216West	P205	P216GM_P216_east	P209	P209	P006	P006
Sample Location		MW-X227Y054	MW-X261Y356D-3	MW-X277Y100	MW-X297Y305D-2	MW-X300Y199I-1	MW-X300Y199I-2	MW-X315Y115	MW-X315Y115
Sample Identification		GW-071620-SS-25	GW-071520-KH-12	GW-071420-KH-10	GW-071520-KH-18	GW-071620-KH-20	GW-071620-KH-22	GW-071520-SS-13	GW-071520-SS-15
Sample Date		07/16/2020	07/15/2020	07/14/2020	07/15/2020	07/16/2020	07/16/2020	07/15/2020	07/15/2020
Sample Type									Duplicate
	Units								
PCBs									
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.20 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	0.20 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	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	2.9	0.20 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	0.20 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	0.20 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	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs	ug/L	2.9	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)									
1,1,1-Trichloroethane	ug/L	--	--	1.0 U	--	--	--	--	--
1,1,2,2-Tetrachloroethane	ug/L	--	--	1.0 U	--	--	--	--	--
1,1,2-Trichloroethane	ug/L	--	--	1.0 U	--	--	--	--	--
1,1-Dichloroethane	ug/L	--	--	1.0 U	--	--	--	--	--
1,1-Dichloroethene	ug/L	--	--	1.0 U	--	--	--	--	--
1,2,4-Trichlorobenzene	ug/L	--	--	1.0 U	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	--	--	2.0 U	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	ug/L	--	--	1.0 U	--	--	--	--	--
1,2-Dichlorobenzene	ug/L	--	--	1.0 U	--	--	--	--	--
1,2-Dichloroethane	ug/L	--	--	1.0 U	--	--	--	--	--
1,2-Dichloropropane	ug/L	--	--	1.0 U	--	--	--	--	--
1,3-Dichlorobenzene	ug/L	--	--	1.0 U	--	--	--	--	--
1,4-Dichlorobenzene	ug/L	--	--	1.0 U	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	--	--	10 U	--	--	--	--	--
2-Chloroethyl vinyl ether	ug/L	--	--	--	--	--	--	--	--
2-Hexanone	ug/L	--	--	10 U	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	--	--	10 U	--	--	--	--	--
Acetone	ug/L	--	--	10 U	--	--	--	--	--
Benzene	ug/L	--	--	1.0 U	--	--	--	--	--
Bromodichloromethane	ug/L	--	--	1.0 U	--	--	--	--	--
Bromoform	ug/L	--	--	1.0 U	--	--	--	--	--
Bromomethane (Methyl bromide)	ug/L	--	--	1.0 U	--	--	--	--	--
Carbon disulfide	ug/L	--	--	1.0 U	--	--	--	--	--
Carbon tetrachloride	ug/L	--	--	1.0 U	--	--	--	--	--
Chlorobenzene	ug/L	--	--	1.0 U	--	--	--	--	--
Chloroethane	ug/L	--	--	1.0 U	--	--	--	--	--
Chloroform (Trichloromethane)	ug/L	--	--	1.0 U	--	--	--	--	--
Chloromethane (Methyl chloride)	ug/L	--	--	1.0 U	--	--	--	--	--
cis-1,2-Dichloroethene	ug/L	--	--	1.0 U	--	--	--	--	--
cis-1,3-Dichloropropene	ug/L	--	--	1.0 U	--	--	--	--	--
Cyclohexane	ug/L	--	--	1.0 U	--	--	--	--	--
Dibromochloromethane	ug/L	--	--	1.0 U	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	ug/L	--	--	1.0 U	--	--	--	--	--
Ethylbenzene	ug/L	--	--	1.0 U	--	--	--	--	--

Summary of Analytical Results - EI CA750 First Half 2020 Sampling Event
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Sample Location		MW-X227Y054	MW-X261Y356D-3	MW-X277Y100	MW-X297Y305D-2	MW-X300Y199I-1	MW-X300Y199I-2	MW-X315Y115	MW-X315Y115
Sample Identification		GW-071620-SS-25	GW-071520-KH-12	GW-071420-KH-10	GW-071520-KH-18	GW-071620-KH-20	GW-071620-KH-22	GW-071520-SS-13	GW-071520-SS-15
Sample Date		07/16/2020	07/15/2020	07/14/2020	07/15/2020	07/16/2020	07/16/2020	07/15/2020	07/15/2020
Sample Type									Duplicate
	Units								
Isopropyl benzene	ug/L	--	--	1.0 U	--	--	--	--	--
Methyl acetate	ug/L	--	--	10 U	--	--	--	--	--
Methyl cyclohexane	ug/L	--	--	1.0 U	--	--	--	--	--
Methyl tert butyl ether (MTBE)	ug/L	--	--	1.0 U	--	--	--	--	--
Methylene chloride	ug/L	--	--	5.0 U	--	--	--	--	--
Styrene	ug/L	--	--	1.0 U	--	--	--	--	--
Tetrachloroethene	ug/L	--	--	1.0 U	--	--	--	--	--
Toluene	ug/L	--	--	1.0 U	--	--	--	--	--
trans-1,2-Dichloroethene	ug/L	--	--	1.0 U	--	--	--	--	--
trans-1,3-Dichloropropene	ug/L	--	--	1.0 U	--	--	--	--	--
Trichloroethene	ug/L	--	--	1.0 U	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	ug/L	--	--	1.0 U	--	--	--	--	--
Trifluorotrichloroethane (CFC-113)	ug/L	--	--	1.0 U	--	--	--	--	--
Vinyl chloride	ug/L	--	--	1.0 U	--	--	--	--	--
Xylenes (total)	ug/L	--	--	2.0 U	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs)									
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	--	--	9.5 U	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	--	--	9.5 U	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	--	--	9.5 U	--	--	--	--	--
2,4-Dichlorophenol	ug/L	--	--	9.5 U	--	--	--	--	--
2,4-Dimethylphenol	ug/L	--	--	9.5 U	--	--	--	--	--
2,4-Dinitrophenol	ug/L	--	--	48 U	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	--	--	9.5 U	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	--	--	9.5 U	--	--	--	--	--
2-Chloronaphthalene	ug/L	--	--	9.5 U	--	--	--	--	--
2-Chlorophenol	ug/L	--	--	9.5 U	--	--	--	--	--
2-Methylnaphthalene	ug/L	--	--	9.5 U	--	--	--	--	--
2-Methylphenol	ug/L	--	--	9.5 U	--	--	--	--	--
2-Nitroaniline	ug/L	--	--	48 U	--	--	--	--	--
2-Nitrophenol	ug/L	--	--	9.5 U	--	--	--	--	--
3&4-Methylphenol	ug/L	--	--	9.5 U	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	--	--	48 U	--	--	--	--	--
3-Nitroaniline	ug/L	--	--	48 U	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	--	--	48 U	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	--	--	9.5 U	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	--	--	9.5 U	--	--	--	--	--
4-Chloroaniline	ug/L	--	--	9.5 U	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	--	--	9.5 U	--	--	--	--	--
4-Nitroaniline	ug/L	--	--	48 U	--	--	--	--	--
4-Nitrophenol	ug/L	--	--	48 U	--	--	--	--	--
Acenaphthene	ug/L	--	--	9.5 U	--	--	--	--	--
Acenaphthylene	ug/L	--	--	9.5 U	--	--	--	--	--
Acetophenone	ug/L	--	--	9.5 U	--	--	--	--	--
Anthracene	ug/L	--	--	9.5 U	--	--	--	--	--
Atrazine	ug/L	--	--	9.5 U	--	--	--	--	--
Benzaldehyde	ug/L	--	--	9.5 U	--	--	--	--	--
Benzo(a)anthracene	ug/L	--	--	9.5 U	--	--	--	--	--
Benzo(a)pyrene	ug/L	--	--	9.5 U	--	--	--	--	--
Benzo(b)fluoranthene	ug/L	--	--	9.5 U	--	--	--	--	--
Benzo(g,h,i)perylene	ug/L	--	--	9.5 U	--	--	--	--	--
Benzo(k)fluoranthene	ug/L	--	--	9.5 U	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	ug/L	--	--	9.5 U	--	--	--	--	--
bis(2-Chloroethoxy)methane	ug/L	--	--	9.5 U	--	--	--	--	--
bis(2-Chloroethyl)ether	ug/L	--	--	9.5 U	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	--	9.5 U	--	--	--	--	--
Butyl benzylphthalate (BBP)	ug/L	--	--	9.5 U	--	--	--	--	--

Summary of Analytical Results - El CA750 First Half 2020 Sampling Event
East Plant TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Sample Location		MW-X227Y054	MW-X261Y356D-3	MW-X277Y100	MW-X297Y305D-2	MW-X300Y199I-1	MW-X300Y199I-2	MW-X315Y115	MW-X315Y115
Sample Identification		GW-071620-SS-25	GW-071520-KH-12	GW-071420-KH-10	GW-071520-KH-18	GW-071620-KH-20	GW-071620-KH-22	GW-071520-SS-13	GW-071520-SS-15
Sample Date		07/16/2020	07/15/2020	07/14/2020	07/15/2020	07/16/2020	07/16/2020	07/15/2020	07/15/2020
Sample Type									Duplicate
	Units								
Caprolactam	ug/L	--	--	9.5 U	--	--	--	--	--
Carbazole	ug/L	--	--	9.5 U	--	--	--	--	--
Chrysene	ug/L	--	--	9.5 U	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L	--	--	9.5 U	--	--	--	--	--
Dibenzofuran	ug/L	--	--	9.5 U	--	--	--	--	--
Diethyl phthalate	ug/L	--	--	9.5 U	--	--	--	--	--
Dimethyl phthalate	ug/L	--	--	9.5 U	--	--	--	--	--
Di-n-butylphthalate (DBP)	ug/L	--	--	9.5 U	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	ug/L	--	--	9.5 U	--	--	--	--	--
Fluoranthene	ug/L	--	--	9.5 U	--	--	--	--	--
Fluorene	ug/L	--	--	9.5 U	--	--	--	--	--
Hexachlorobenzene	ug/L	--	--	9.5 U	--	--	--	--	--
Hexachlorobutadiene	ug/L	--	--	9.5 U	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	--	--	48 U	--	--	--	--	--
Hexachloroethane	ug/L	--	--	9.5 U	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	--	--	9.5 U	--	--	--	--	--
Isophorone	ug/L	--	--	9.5 U	--	--	--	--	--
Naphthalene	ug/L	--	--	9.5 U	--	--	--	--	--
Nitrobenzene	ug/L	--	--	9.5 U	--	--	--	--	--
N-Nitrosodi-n-propylamine	ug/L	--	--	9.5 U	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	--	--	9.5 U	--	--	--	--	--
Pentachlorophenol	ug/L	--	--	9.5 U	--	--	--	--	--
Phenanthrene	ug/L	--	--	9.5 U	--	--	--	--	--
Phenol	ug/L	--	--	9.5 U	--	--	--	--	--
Pyrene	ug/L	--	--	9.5 U	--	--	--	--	--
General Chemistry									
Chloride	ug/L	--	--	--	--	--	--	--	--
Field Parameters									
Conductivity, field	mS/cm	1.43	0.625	0.925	0.678	0.476	0.494	0.498	0.498
Dissolved oxygen (DO), field	ug/L	210	5910	1850	1450	2850	1400	430	430
Oxidation reduction potential (ORP), field	millivolts	-118.3	244.4	35.8	-62.8	-8.5	-20.1	208.7	208.7
pH, field	s.u.	7.35	6.54	6.9	6.56	6.93	7.07	7	7
Temperature, sample	Deg C	15.52	19.12	16.84	16.89	15.98	16.66	15.41	15.41
Turbidity, field	NTU	24.7	2.97	9.83	12.6	1.72	1.19	3.89	3.89

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

Summary of Analytical Results - EI CA750 First Half 2020 Sampling Event
East Plant TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Area		P006	P006	A001	P015		
Sample Location		MW-X315Y150	MW-X315Y150	ST-59	Tributary 3-3	Trip Blank	Trip Blank
Sample Identification		GW-071520-SS-17	GW-071520-SS-19	GW-071620-SS-24	GW-071620-SS-26	TB-071420-KH-01	TB-071520-KH-02
Sample Date		07/15/2020	07/15/2020	07/16/2020	07/16/2020	07/14/2020	07/15/2020
Sample Type			Duplicate				
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Total PCBs	ug/L	ND	ND	ND	ND	--	--
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	--	--
Total PCBs (dissolved)	ug/L	ND	ND	ND	ND	--	--
Volatile Organic Compounds (VOCs)							
1,1,1-Trichloroethane	ug/L	--	--	--	--	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	--	--	--	--	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	--	--	--	--	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	--	--	--	--	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	--	--	--	--	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	--	--	--	--	1.0 U	--
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	--	--	--	--	2.0 U	--
1,2-Dibromoethane (Ethylene dibromide)	ug/L	--	--	--	--	1.0 U	--
1,2-Dichlorobenzene	ug/L	--	--	--	--	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	--	--	--	--	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	--	--	--	--	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	--	--	--	--	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	--	--	--	--	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	--	--	--	--	10 U	--
2-Chloroethyl vinyl ether	ug/L	--	--	--	--	--	10 U
2-Hexanone	ug/L	--	--	--	--	10 U	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	--	--	--	--	10 U	--
Acetone	ug/L	--	--	--	--	10 U	--
Benzene	ug/L	--	--	--	--	1.0 U	1.0 U
Bromodichloromethane	ug/L	--	--	--	--	1.0 U	1.0 U
Bromoform	ug/L	--	--	--	--	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	--	--	--	--	1.0 U	1.0 U
Carbon disulfide	ug/L	--	--	--	--	1.0 U	--
Carbon tetrachloride	ug/L	--	--	--	--	1.0 U	1.0 U
Chlorobenzene	ug/L	--	--	--	--	1.0 U	1.0 U
Chloroethane	ug/L	--	--	--	--	1.0 U	1.0 U
Chloroform (Trichloromethane)	ug/L	--	--	--	--	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	--	--	--	--	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	--	--	--	--	1.0 U	--
cis-1,3-Dichloropropene	ug/L	--	--	--	--	1.0 U	1.0 U
Cyclohexane	ug/L	--	--	--	--	1.0 U	--
Dibromochloromethane	ug/L	--	--	--	--	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	--	--	--	--	1.0 U	1.0 U
Ethylbenzene	ug/L	--	--	--	--	1.0 U	1.0 U

Summary of Analytical Results - EI CA750 First Half 2020 Sampling Event
East Plant TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Sample Location		MW-X315Y150	MW-X315Y150	ST-59	Tributary 3-3	Trip Blank	Trip Blank
Sample Identification		GW-071520-SS-17	GW-071520-SS-19	GW-071620-SS-24	GW-071620-SS-26	TB-071420-KH-01	TB-071520-KH-02
Sample Date		07/15/2020	07/15/2020	07/16/2020	07/16/2020	07/14/2020	07/15/2020
Sample Type			Duplicate				
	Units						
Isopropyl benzene	ug/L	--	--	--	--	1.0 U	--
Methyl acetate	ug/L	--	--	--	--	10 U	--
Methyl cyclohexane	ug/L	--	--	--	--	1.0 U	--
Methyl tert butyl ether (MTBE)	ug/L	--	--	--	--	1.0 U	--
Methylene chloride	ug/L	--	--	--	--	5.0 U	5.0 U
Styrene	ug/L	--	--	--	--	1.0 U	--
Tetrachloroethene	ug/L	--	--	--	--	1.0 U	1.0 U
Toluene	ug/L	--	--	--	--	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	--	--	--	--	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	--	--	--	--	1.0 U	1.0 U
Trichloroethene	ug/L	--	--	--	--	1.0 U	--
Trichlorofluoromethane (CFC-11)	ug/L	--	--	--	--	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	--	--	--	--	1.0 U	--
Vinyl chloride	ug/L	--	--	--	--	1.0 U	1.0 U
Xylenes (total)	ug/L	--	--	--	--	2.0 U	--
Semi-Volatile Organic Compounds (SVOCs)							
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	--	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	--	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	--	--	--	--	--	--
2,4-Dichlorophenol	ug/L	--	--	--	--	--	--
2,4-Dimethylphenol	ug/L	--	--	--	--	--	--
2,4-Dinitrophenol	ug/L	--	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	--	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	--	--	--	--	--	--
2-Chloronaphthalene	ug/L	--	--	--	--	--	--
2-Chlorophenol	ug/L	--	--	--	--	--	--
2-Methylnaphthalene	ug/L	--	--	--	--	--	--
2-Methylphenol	ug/L	--	--	--	--	--	--
2-Nitroaniline	ug/L	--	--	--	--	--	--
2-Nitrophenol	ug/L	--	--	--	--	--	--
3&4-Methylphenol	ug/L	--	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	--	--	--	--	--	--
3-Nitroaniline	ug/L	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	--	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	--	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	--	--	--	--	--	--
4-Chloroaniline	ug/L	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	--	--	--	--	--	--
4-Nitroaniline	ug/L	--	--	--	--	--	--
4-Nitrophenol	ug/L	--	--	--	--	--	--
Acenaphthene	ug/L	--	--	--	--	--	--
Acenaphthylene	ug/L	--	--	--	--	--	--
Acetophenone	ug/L	--	--	--	--	--	--
Anthracene	ug/L	--	--	--	--	--	--
Atrazine	ug/L	--	--	--	--	--	--
Benzaldehyde	ug/L	--	--	--	--	--	--
Benzo(a)anthracene	ug/L	--	--	--	--	--	--
Benzo(a)pyrene	ug/L	--	--	--	--	--	--
Benzo(b)fluoranthene	ug/L	--	--	--	--	--	--
Benzo(g,h,i)perylene	ug/L	--	--	--	--	--	--
Benzo(k)fluoranthene	ug/L	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	ug/L	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	ug/L	--	--	--	--	--	--
bis(2-Chloroethyl)ether	ug/L	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	ug/L	--	--	--	--	--	--

Table 3.1

Summary of Analytical Results - EI CA750 First Half 2020 Sampling Event
East Plant TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
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Sample Location		MW-X315Y150	MW-X315Y150	ST-59	Tributary 3-3	Trip Blank	Trip Blank
Sample Identification		GW-071520-SS-17	GW-071520-SS-19	GW-071620-SS-24	GW-071620-SS-26	TB-071420-KH-01	TB-071520-KH-02
Sample Date		07/15/2020	07/15/2020	07/16/2020	07/16/2020	07/14/2020	07/15/2020
Sample Type			Duplicate				
	Units						
Caprolactam	ug/L	--	--	--	--	--	--
Carbazole	ug/L	--	--	--	--	--	--
Chrysene	ug/L	--	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L	--	--	--	--	--	--
Dibenzofuran	ug/L	--	--	--	--	--	--
Diethyl phthalate	ug/L	--	--	--	--	--	--
Dimethyl phthalate	ug/L	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	ug/L	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	ug/L	--	--	--	--	--	--
Fluoranthene	ug/L	--	--	--	--	--	--
Fluorene	ug/L	--	--	--	--	--	--
Hexachlorobenzene	ug/L	--	--	--	--	--	--
Hexachlorobutadiene	ug/L	--	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	--	--	--	--	--	--
Hexachloroethane	ug/L	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	--	--	--	--	--	--
Isophorone	ug/L	--	--	--	--	--	--
Naphthalene	ug/L	--	--	--	--	--	--
Nitrobenzene	ug/L	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	ug/L	--	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	--	--	--	--	--	--
Pentachlorophenol	ug/L	--	--	--	--	--	--
Phenanthrene	ug/L	--	--	--	--	--	--
Phenol	ug/L	--	--	--	--	--	--
Pyrene	ug/L	--	--	--	--	--	--
General Chemistry							
Chloride	ug/L	--	--	11000	--	--	--
Field Parameters							
Conductivity, field	mS/cm	0.323	0.323	0.526	0.57	--	--
Dissolved oxygen (DO), field	ug/L	930	930	7990	6250	--	--
Oxidation reduction potential (ORP), field	millivolts	45.1	45.1	150.4	90.1	--	--
pH, field	s.u.	7.16	7.16	7.82	8.53	--	--
Temperature, sample	Deg C	15.88	15.88	17.55	27.45	--	--
Turbidity, field	NTU	14.2	14.2	1.88	4.19	--	--

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

Table 3.2

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Area		EastPlantArea	A007_EastPlantArea	A007_EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea	EastPlantArea
Sample Location		9-4	CH-20	CH-20	CH-42	CH-42A	CH-43	CH-44
Sample Identification		GW-111920-DS-21	GW-111920-DS-23	GW-111920-DS-25	GW-111620-DS-01	GW-111620-DS-03	GW-111620-KH-04	GW-111620-KH-02
Sample Date		11/19/2020	11/19/2020	11/19/2020	11/16/2020	11/16/2020	11/16/2020	11/16/2020
Sample Type				Duplicate				
	Units							
PCBs								
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.19 U	0.19 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	0.19 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	0.19 U	0.19 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.19 U	0.19 U	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	0.19 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	0.19 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	0.19 U	0.19 U	0.20 U
Total PCBs	µg/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U
Total PCBs (dissolved)	µg/L	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
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	1.0 U	1.0 U	1.0 U	--	--	--	--
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
1,4-Dichlorobenzene	µg/L	1.0 U	0.20 J	1.0 U	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	µg/L	R	R	R	--	--	--	--
2-Hexanone	µg/L	--	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	--	--	--	--	--	--
Acetone	µg/L	--	--	--	--	--	--	--
Benzene	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Bromodichloromethane	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Bromoform	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Bromomethane (Methyl bromide)	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Carbon disulfide	µg/L	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Chlorobenzene	µg/L	1.0 U	0.26 J	0.28 J	--	--	--	--
Chloroethane	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Chloromethane (Methyl chloride)	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
cis-1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Cyclohexane	µg/L	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Sample Location		9-4	CH-20	CH-20	CH-42	CH-42A	CH-43	CH-44
Sample Identification		GW-111920-DS-21	GW-111920-DS-23	GW-111920-DS-25	GW-111620-DS-01	GW-111620-DS-03	GW-111620-KH-04	GW-111620-KH-02
Sample Date		11/19/2020	11/19/2020	11/19/2020	11/16/2020	11/16/2020	11/16/2020	11/16/2020
Sample Type				Duplicate				
	Units							
Ethylbenzene	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Isopropyl benzene	µg/L	--	--	--	--	--	--	--
Methyl acetate	µg/L	--	--	--	--	--	--	--
Methyl cyclohexane	µg/L	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/L	--	--	--	--	--	--	--
Methylene chloride	µg/L	5.0 U	5.0 U	5.0 U	--	--	--	--
Styrene	µg/L	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Toluene	µg/L	1.0 U	0.16 J	0.15 J	--	--	--	--
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Trichloroethene	µg/L	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
Trifluorotrichloroethane (CFC-113)	µg/L	--	--	--	--	--	--	--
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U	--	--	--	--
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	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--

Table 3.2

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Sample Location		9-4	CH-20	CH-20	CH-42	CH-42A	CH-43	CH-44
Sample Identification		GW-111920-DS-21	GW-111920-DS-23	GW-111920-DS-25	GW-111620-DS-01	GW-111620-DS-03	GW-111620-KH-04	GW-111620-KH-02
Sample Date		11/19/2020	11/19/2020	11/19/2020	11/16/2020	11/16/2020	11/16/2020	11/16/2020
Sample Type				Duplicate				
	Units							
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	--	--	--	--	--	--	--
General Chemistry								
Chloride	µg/L	--	--	--	--	--	--	--
Field Parameters								
Conductivity, field	mS/cm	0.399	0.456	0.456	0.72	0.55	0.754	0.776
Dissolved oxygen (DO), field	µg/L	2730	2560	2560	2770	3110	980	2720
Oxidation reduction potential (ORP), field	millivolts	41.1	-127.9	-127.9	-51.1	-31.2	-47.8	68.2
pH, field	s.u.	7.22	11.19	11.19	6.87	7.22	6.8	6.71
Temperature, sample	Deg C	14.6	13.91	13.9	13.57	12.85	14.09	14.82
Turbidity, field	NTU	6.23	4.43	4.43	5.5	0.69	2.33	1.28

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

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
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Bedford, Indiana

Area		MonitoringWell_RFIBoundary_WestPlantArea	MonitoringWell_RFIBoundary_WestPlantArea	Plant_property	Plant_property	A001MonitoringWell_WestPlantArea
Sample Location		**MW-X033Y147S**	**MW-X033Y147S**	**MW-X043Y176**	**MW-X047Y236**	**MW-X085Y070S-2**
Sample Identification		**GW-111820-DS-17**	**GW-111820-DS-17~Split**	**GW-111920-KH-20**	**GW-111820-KH-18**	**GW-111820-KH-14**
Sample Date		**11/18/2020**	**11/18/2020**	**11/19/2020**	**11/18/2020**	**11/18/2020**
Sample Type			**Replicate**			
	Units					
PCBs						
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.095 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.095 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.095 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.095 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.095 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.095 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.095 U	0.20 U	0.20 U	0.20 U
Total PCBs	µg/L	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.19 U	0.097 U	0.19 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.19 U	0.097 U	0.19 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.19 U	0.097 U	0.19 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.19 U	0.097 U	0.19 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.19 U	0.097 U	0.19 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.19 U	0.097 U	0.19 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.19 U	0.097 U	0.19 U	0.20 U	0.20 U
Total PCBs (dissolved)	µg/L	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-Chloroethyl vinyl ether	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	--	--	--	--	--

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
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GM Bedford Casting Operations Facility
Bedford, Indiana

Sample Location		MW-X033Y147S	MW-X033Y147S	MW-X043Y176	MW-X047Y236	MW-X085Y070S-2
Sample Identification		GW-111820-DS-17	GW-111820-DS-17~Split	GW-111920-KH-20	GW-111820-KH-18	GW-111820-KH-14
Sample Date		11/18/2020	11/18/2020	11/19/2020	11/18/2020	11/18/2020
Sample Type			Replicate			
	Units					
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 (CFC-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	--	--	--	--	--
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	--	--	--	--	--

Table 3.2

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
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Sample Location		MW-X033Y147S	MW-X033Y147S	MW-X043Y176	MW-X047Y236	MW-X085Y070S-2
Sample Identification		GW-111820-DS-17	GW-111820-DS-17~Split	GW-111920-KH-20	GW-111820-KH-18	GW-111820-KH-14
Sample Date		11/18/2020	11/18/2020	11/19/2020	11/18/2020	11/18/2020
Sample Type			Replicate			
	Units					
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	--	--	--	--	--
General Chemistry						
Chloride	µg/L	--	--	--	--	--
Field Parameters						
Conductivity, field	mS/cm	0.606	--	1.722	0.69	5.375
Dissolved oxygen (DO), field	µg/L	1730	--	2050	2530	780
Oxidation reduction potential (ORP), field	millivolts	-15.4	--	-72.3	-66.3	-301
pH, field	s.u.	6.89	--	6.55	6.75	7.89
Temperature, sample	Deg C	14.59	--	14.15	13.69	16.99
Turbidity, field	NTU	4.43	--	3.41	2.09	9.11

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

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
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Area		A001MonitoringWell_WestPlantArea	A001	A001	A001MonitoringWell_WestPlantArea	EastPlantArea	RFIBoundary_P216West
Sample Location		MW-X085Y070S-2	MW-X146Y084	MW-X146Y084	MW-X169Y058S-1	MW-X227Y054	MW-X261Y356D-3
Sample Identification		GW-111820-KH-14~Split	GW-111820-DS-13	GW-111820-DS-15	GW-111820-KH-16	GW-111820-DS-19	GW-111720-KH-06
Sample Date		11/18/2020	11/18/2020	11/18/2020	11/18/2020	11/18/2020	11/17/2020
Sample Type		Replicate		Duplicate			
	Units						
PCBs							
Aroclor-1016 (PCB-1016)	µg/L	0.10 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	µg/L	0.10 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	µg/L	0.10 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	µg/L	0.10 U	0.19 U	0.19 U	0.20 U	11	0.19 U
Aroclor-1248 (PCB-1248)	µg/L	0.10 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	µg/L	0.10 U	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	µg/L	0.10 U	0.19 U	0.19 U	0.20 U	0.27	0.19 U
Total PCBs	µg/L	ND	ND	ND	ND	11.27	ND
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.096 U	0.19 U	0.19 U	0.20 U	0.19 U	0.23 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.096 U	0.19 U	0.19 U	0.20 U	0.19 U	0.23 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.096 U	0.19 U	0.19 U	0.20 U	0.19 U	0.23 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.096 U	0.19 U	0.19 U	0.20 U	0.19 U	0.23 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.096 U	0.19 U	0.19 U	0.20 U	0.19 U	0.23 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.096 U	0.19 U	0.19 U	0.20 U	0.19 U	0.23 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.096 U	0.19 U	0.19 U	0.20 U	0.19 U	0.23 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-Chloroethyl vinyl ether	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	--	--	--	--	--	--

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
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GM Bedford Casting Operations Facility
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Sample Location		MW-X085Y070S-2	MW-X146Y084	MW-X146Y084	MW-X169Y058S-1	MW-X227Y054	MW-X261Y356D-3
Sample Identification		GW-111820-KH-14~Split	GW-111820-DS-13	GW-111820-DS-15	GW-111820-KH-16	GW-111820-DS-19	GW-111720-KH-06
Sample Date		11/18/2020	11/18/2020	11/18/2020	11/18/2020	11/18/2020	11/17/2020
Sample Type		Replicate		Duplicate			
	Units						
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 (CFC-113)	µg/L	--	--	--	--	--	--
Vinyl chloride	µg/L	--	1.0 U	1.0 U	0.58 J	--	--
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	--	--	--	--	--	--
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	--	--	--	--	--	--

Table 3.2

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
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Sample Location		MW-X085Y070S-2	MW-X146Y084	MW-X146Y084	MW-X169Y058S-1	MW-X227Y054	MW-X261Y356D-3
Sample Identification		GW-111820-KH-14~Split	GW-111820-DS-13	GW-111820-DS-15	GW-111820-KH-16	GW-111820-DS-19	GW-111720-KH-06
Sample Date		11/18/2020	11/18/2020	11/18/2020	11/18/2020	11/18/2020	11/17/2020
Sample Type		Replicate		Duplicate			
	Units						
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	--	--	--	--	--	--
General Chemistry							
Chloride	µg/L	--	2100000	2000000	--	--	--
Field Parameters							
Conductivity, field	mS/cm	--	1.594	1.594	2.12	0.49	0.559
Dissolved oxygen (DO), field	µg/L	--	2890	2890	890	430	3420
Oxidation reduction potential (ORP), field	millivolts	--	23.1	23.1	-168.7	-130	102
pH, field	s.u.	--	6.33	6.33	7.94	7.38	6.92
Temperature, sample	Deg C	--	12.38	12.38	14.06	12.83	13.72
Turbidity, field	NTU	--	9.81	9.81	6.19	4.98	1.9

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 Analytical Results - EI CA750 Second Half 2020 Sampling Event
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Area		P205	P205	P216GM_P216_east	P209	P209	P006	P006	A001
Sample Location		MW-X277Y100	MW-X277Y100	MW-X297Y305D-2	MW-X300Y199I-1	MW-X300Y199I-2	MW-X315Y115	MW-X315Y150	ST-59
Sample Identification		GW-111720-DS-09	GW-111720-DS-11	GW-111720-KH-08	GW-111720-KH-12	GW-111720-KH-10	GW-111720-DS-05	GW-111720-DS-07	GW-111920-KH-22
Sample Date		11/17/2020	11/17/2020	11/17/2020	11/17/2020	11/17/2020	11/17/2020	11/17/2020	11/19/2020
Sample Type			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	0.20 U	0.20 U	0.19 U	0.38	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	ND	ND	ND	0.38	ND
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.19 U	0.19 U	0.19 U	0.19 U	0.20 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	0.19 U	0.20 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	0.19 U	0.20 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	0.19 U	0.20 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	0.19 U	0.20 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	0.19 U	0.20 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	0.19 U	0.20 U	0.19 U	0.19 U	0.20 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	1.0 U	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	2.0 U	2.0 U	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
1,3-Dichlorobenzene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	10 U	--	--	--	--	--	--
2-Chloroethyl vinyl ether	µg/L	--	--	--	--	--	--	--	--
2-Hexanone	µg/L	10 U	10 U	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	10 U	--	--	--	--	--	--
Acetone	µg/L	10 U	10 U	--	--	--	--	--	--
Benzene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Bromodichloromethane	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Bromoform	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Bromomethane (Methyl bromide)	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Carbon disulfide	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Carbon tetrachloride	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Chlorobenzene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Chloroethane	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Cyclohexane	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Dibromochloromethane	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	1.0 U	--	--	--	--	--	--

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
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GM Bedford Casting Operations Facility
Bedford, Indiana

Sample Location		MW-X277Y100	MW-X277Y100	MW-X297Y305D-2	MW-X300Y199I-1	MW-X300Y199I-2	MW-X315Y115	MW-X315Y150	ST-59
Sample Identification		GW-111720-DS-09	GW-111720-DS-11	GW-111720-KH-08	GW-111720-KH-12	GW-111720-KH-10	GW-111720-DS-05	GW-111720-DS-07	GW-111920-KH-22
Sample Date		11/17/2020	11/17/2020	11/17/2020	11/17/2020	11/17/2020	11/17/2020	11/17/2020	11/19/2020
Sample Type			Duplicate						
	Units								
Ethylbenzene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Isopropyl benzene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Methyl acetate	µg/L	10 U	10 U	--	--	--	--	--	--
Methyl cyclohexane	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Methylene chloride	µg/L	5.0 U	5.0 U	--	--	--	--	--	--
Styrene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Tetrachloroethene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Toluene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Trichloroethene	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Vinyl chloride	µg/L	1.0 U	1.0 U	--	--	--	--	--	--
Xylenes (total)	µg/L	2.0 U	2.0 U	--	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs)									
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
2,4,6-Trichlorophenol	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
2,4-Dichlorophenol	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
2,4-Dimethylphenol	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
2,4-Dinitrophenol	µg/L	48 U	48 U	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
2-Chloronaphthalene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
2-Chlorophenol	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
2-Methylphenol	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
2-Nitroaniline	µg/L	48 U	48 U	--	--	--	--	--	--
2-Nitrophenol	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
3&4-Methylphenol	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	48 U	48 U	--	--	--	--	--	--
3-Nitroaniline	µg/L	48 U	48 U	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	µg/L	48 U	48 U	--	--	--	--	--	--
4-Bromophenyl phenyl ether	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
4-Chloroaniline	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
4-Nitroaniline	µg/L	48 U	48 U	--	--	--	--	--	--
4-Nitrophenol	µg/L	48 U	48 U	--	--	--	--	--	--
Acenaphthene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Acenaphthylene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Acetophenone	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Anthracene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Atrazine	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Benzaldehyde	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Benzo(g,h,i)perylene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	9.5 U	9.5 U	--	--	--	--	--	--

Table 3.2

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Sample Location		MW-X277Y100	MW-X277Y100	MW-X297Y305D-2	MW-X300Y199I-1	MW-X300Y199I-2	MW-X315Y115	MW-X315Y150	ST-59
Sample Identification		GW-111720-DS-09	GW-111720-DS-11	GW-111720-KH-08	GW-111720-KH-12	GW-111720-KH-10	GW-111720-DS-05	GW-111720-DS-07	GW-111920-KH-22
Sample Date		11/17/2020	11/17/2020	11/17/2020	11/17/2020	11/17/2020	11/17/2020	11/17/2020	11/19/2020
Sample Type			Duplicate						
	Units								
bis(2-Chloroethyl)ether	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Caprolactam	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Carbazole	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Chrysene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Dibenzofuran	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Diethyl phthalate	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Dimethyl phthalate	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Fluoranthene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Fluorene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Hexachlorobenzene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Hexachlorobutadiene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/L	48 U	48 U	--	--	--	--	--	--
Hexachloroethane	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Isophorone	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Naphthalene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Nitrobenzene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Pentachlorophenol	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Phenanthrene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Phenol	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
Pyrene	µg/L	9.5 U	9.5 U	--	--	--	--	--	--
General Chemistry									
Chloride	µg/L	--	--	--	--	--	--	--	13000
Field Parameters									
Conductivity, field	mS/cm	0.31	0.31	0.692	0.491	0.526	0.157	0.076	0.528
Dissolved oxygen (DO), field	µg/L	6180	6180	2130	4060	1710	1840	1130	8900
Oxidation reduction potential (ORP), field	millivolts	37.4	37.4	-86.7	-40.2	-41.8	-94.4	-65.7	57.3
pH, field	s.u.	6.79	6.79	6.84	6.75	6.97	7.01	7.25	8.04
Temperature, sample	Deg C	12.87	12.87	14.28	13.89	14.21	13.2	14.02	16
Turbidity, field	NTU	7.62	7.62	1.33	1.16	1.12	6.56	58.9	2.16

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

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
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GM Bedford Casting Operations Facility
Bedford, Indiana

Area		P015			
Sample Location		Tributary 3-3	Trip Blank	Trip Blank	Trip Blank
Sample Identification		GW-111920-KH-24	TB-111720-DS-01	TB-111820-DS-02	TB-111920-DS-03
Sample Date		11/19/2020	11/17/2020	11/18/2020	11/19/2020
Sample Type					
	Units				
PCBs					
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	--	--	--
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	--	--	--
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	--	--	--
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	--	--	--
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	--	--	--
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	--	--	--
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	--	--	--
Total PCBs	µg/L	ND	--	--	--
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.19 U	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.19 U	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.19 U	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.19 U	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.19 U	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.19 U	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.19 U	--	--	--
Total PCBs (dissolved)	µg/L	ND	--	--	--
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	µg/L	--	1.0 U	--	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	--	1.0 U	--	1.0 U
1,1,2-Trichloroethane	µg/L	--	1.0 U	--	1.0 U
1,1-Dichloroethane	µg/L	--	1.0 U	--	1.0 U
1,1-Dichloroethene	µg/L	--	1.0 U	--	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	--	1.0 U
1,2-Dichloroethane	µg/L	--	1.0 U	--	1.0 U
1,2-Dichloropropane	µg/L	--	1.0 U	--	1.0 U
1,3-Dichlorobenzene	µg/L	--	1.0 U	--	1.0 U
1,4-Dichlorobenzene	µg/L	--	1.0 U	--	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	--	10 U	--	--
2-Chloroethyl vinyl ether	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	--	1.0 U
Bromodichloromethane	µg/L	--	1.0 U	--	1.0 U
Bromoform	µg/L	--	1.0 U	--	1.0 U
Bromomethane (Methyl bromide)	µg/L	--	1.0 UJ	--	1.0 U
Carbon disulfide	µg/L	--	1.0 U	--	--
Carbon tetrachloride	µg/L	--	1.0 U	--	1.0 U
Chlorobenzene	µg/L	--	1.0 U	--	1.0 U
Chloroethane	µg/L	--	1.0 U	--	1.0 U
Chloroform (Trichloromethane)	µg/L	--	1.0 U	--	1.0 U
Chloromethane (Methyl chloride)	µg/L	--	1.0 U	--	1.0 U
cis-1,2-Dichloroethene	µg/L	--	1.0 U	--	--
cis-1,3-Dichloropropene	µg/L	--	1.0 U	--	1.0 U
Cyclohexane	µg/L	--	1.0 U	--	--
Dibromochloromethane	µg/L	--	1.0 U	--	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	--	1.0 U	--	1.0 U

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
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Sample Location		Tributary 3-3	Trip Blank	Trip Blank	Trip Blank
Sample Identification		GW-111920-KH-24	TB-111720-DS-01	TB-111820-DS-02	TB-111920-DS-03
Sample Date		11/19/2020	11/17/2020	11/18/2020	11/19/2020
Sample Type					
	Units				
Ethylbenzene	µg/L	--	1.0 U	--	1.0 U
Isopropyl benzene	µg/L	--	1.0 U	--	--
Methyl acetate	µg/L	--	10 U	--	--
Methyl cyclohexane	µg/L	--	1.0 U	--	--
Methyl tert butyl ether (MTBE)	µg/L	--	1.0 U	--	--
Methylene chloride	µg/L	--	5.0 U	--	5.0 U
Styrene	µg/L	--	1.0 U	--	--
Tetrachloroethene	µg/L	--	1.0 U	--	1.0 U
Toluene	µg/L	--	1.0 U	--	1.0 U
trans-1,2-Dichloroethene	µg/L	--	1.0 U	--	1.0 U
trans-1,3-Dichloropropene	µg/L	--	1.0 U	--	1.0 U
Trichloroethene	µg/L	--	1.0 U	--	--
Trichlorofluoromethane (CFC-11)	µg/L	--	1.0 U	--	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	--	1.0 U	--	--
Vinyl chloride	µg/L	--	1.0 U	1.0 U	1.0 U
Xylenes (total)	µg/L	--	2.0 U	--	--
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	--	--	--	--
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	--	--	--	--

Summary of Analytical Results - EI CA750 Second Half 2020 Sampling Event
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Sample Location		Tributary 3-3	Trip Blank	Trip Blank	Trip Blank
Sample Identification		GW-111920-KH-24	TB-111720-DS-01	TB-111820-DS-02	TB-111920-DS-03
Sample Date		11/19/2020	11/17/2020	11/18/2020	11/19/2020
Sample Type					
	Units				
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	--	--	--	--
General Chemistry					
Chloride	µg/L	--	--	--	--
Field Parameters					
Conductivity, field	mS/cm	0.43	--	--	--
Dissolved oxygen (DO), field	µg/L	9350	--	--	--
Oxidation reduction potential (ORP), field	millivolts	94.3	--	--	--
pH, field	s.u.	6.77	--	--	--
Temperature, sample	Deg C	11.6	--	--	--
Turbidity, field	NTU	6.16	--	--	--

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

Table 3.3

2020 LCS and LDS Analytical Results
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Area		A007	A007	A007	A007	A007
Sample Location		EPA LCS	EPA LDS	EPA LCS	EPA LDS	EPA LCS
Sample Identification		WW-A007-012320-MC-41088	WW-A007-012320-MC-41089	WW-A007-021120-MC-41105	WW-A007-021120-MC-41106	WW-A007-031020-MC-41118
Sample Date		01/23/2020	01/23/2020	02/11/2020	02/11/2020	03/10/2020
Sample Type						
	Units					
PCBs						
Aroclor-1016 (PCB-1016)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1248 (PCB-1248)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Total PCBs	mg/L	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	mg/L	0.001 U	--	0.001 U	--	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.001 U	--	0.001 U	--	0.001 U
1,1,2-Trichloroethane	mg/L	0.001 U	--	0.001 U	--	0.001 U
1,1-Dichloroethane	mg/L	0.001 U	--	0.001 U	--	0.001 U
1,1-Dichloroethene	mg/L	0.001 U	--	0.001 U	--	0.001 U
1,2-Dichlorobenzene	mg/L	0.001 U	--	0.001 U	--	0.001 U
1,2-Dichloroethane	mg/L	0.001 U	--	0.001 U	--	0.001 U
1,2-Dichloropropane	mg/L	0.001 U	--	0.001 U	--	0.001 U
1,3-Dichlorobenzene	mg/L	0.001 U	--	0.001 U	--	0.001 U
1,4-Dichlorobenzene	mg/L	0.001 U	--	0.001 U	--	0.001 U
2-Chloroethyl vinyl ether	mg/L	0.01 U	--	0.01 U	--	0.01 U
Benzene	mg/L	0.001 U	--	0.001 U	--	0.001 U
Bromodichloromethane	mg/L	0.001 U	--	0.001 U	--	0.001 U
Bromoform	mg/L	0.001 U	--	0.001 U	--	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.001 U	--	0.001 U	--	0.001 U
Carbon tetrachloride	mg/L	0.001 U	--	0.001 U	--	0.001 U
Chlorobenzene	mg/L	0.001 U	--	0.001 U	--	0.001 U
Chloroethane	mg/L	0.001 U	--	0.001 U	--	0.001 U
Chloroform (Trichloromethane)	mg/L	0.001 U	--	0.001 U	--	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.001 U	--	0.001 U	--	0.001 U
cis-1,3-Dichloropropene	mg/L	0.001 U	--	0.001 U	--	0.001 U
Dibromochloromethane	mg/L	0.001 U	--	0.001 U	--	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.001 U	--	0.001 U	--	0.001 U
Ethylbenzene	mg/L	0.001 U	--	0.001 U	--	0.001 U
Methylene chloride	mg/L	0.005 U	--	0.005 U	--	0.005 U
Tetrachloroethene	mg/L	0.001 U	--	0.001 U	--	0.001 U
Toluene	mg/L	0.001 U	--	0.001 U	--	0.001 U
trans-1,2-Dichloroethene	mg/L	0.001 U	--	0.001 U	--	0.001 U
trans-1,3-Dichloropropene	mg/L	0.001 U	--	0.001 U	--	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.001 U	--	0.001 U	--	0.001 U
Vinyl chloride	mg/L	0.001 U	--	0.00041 J	--	0.001 U
Field Parameters						
Conductivity, field	mS/cm	3.84	2.71	2.87	2.85	0.410
Dissolved oxygen (DO), field	mg/L	4.3	6.08	6.62	8.25	7.19
Oxidation reduction potential (ORP), field	millivolts	-17	48	-15	55	34
pH, field	s.u.	6.4	7.1	6.6	6.8	6.3
Temperature, sample	Deg F	57.95	56.66	53.5	51.5	57

Notes:

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

Table 3.3

2020 LCS and LDS Analytical Results
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Area		A007	A007	A007	A007	A007
Sample Location		EPA LDS	EPA LDS	EPA LCS	EPA LCS	EPA LDS
Sample Identification		WW-A007-031020-MC-41119	WW-A007-031020-MC-41120	WW-A007-040820-MC-41138	WW-A007-040820-MC-41139	WW-A007-040820-MC-41140
Sample Date		03/10/2020	03/10/2020	04/08/2020	04/08/2020	04/08/2020
Sample Type			Duplicate		Duplicate	
	Units					
PCBs						
Aroclor-1016 (PCB-1016)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1221 (PCB-1221)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1232 (PCB-1232)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1242 (PCB-1242)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1248 (PCB-1248)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1254 (PCB-1254)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Aroclor-1260 (PCB-1260)	mg/L	0.00019 U	0.00019 U	0.00019 U	0.00019 U	0.00019 U
Total PCBs	mg/L	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	mg/L	--	--	0.001 U	0.001 U	--
1,1,2,2-Tetrachloroethane	mg/L	--	--	0.001 U	0.001 U	--
1,1,2-Trichloroethane	mg/L	--	--	0.001 U	0.001 U	--
1,1-Dichloroethane	mg/L	--	--	0.001 U	0.001 U	--
1,1-Dichloroethene	mg/L	--	--	0.001 U	0.001 U	--
1,2-Dichlorobenzene	mg/L	--	--	0.001 U	0.001 U	--
1,2-Dichloroethane	mg/L	--	--	0.001 U	0.001 U	--
1,2-Dichloropropane	mg/L	--	--	0.001 U	0.001 U	--
1,3-Dichlorobenzene	mg/L	--	--	0.001 U	0.001 U	--
1,4-Dichlorobenzene	mg/L	--	--	0.001 U	0.001 U	--
2-Chloroethyl vinyl ether	mg/L	--	--	0.01 U	0.01 U	--
Benzene	mg/L	--	--	0.001 U	0.001 U	--
Bromodichloromethane	mg/L	--	--	0.001 U	0.001 U	--
Bromoform	mg/L	--	--	0.001 U	0.001 U	--
Bromomethane (Methyl bromide)	mg/L	--	--	0.001 U	0.001 U	--
Carbon tetrachloride	mg/L	--	--	0.001 U	0.001 U	--
Chlorobenzene	mg/L	--	--	0.001 U	0.001 U	--
Chloroethane	mg/L	--	--	0.001 U	0.001 U	--
Chloroform (Trichloromethane)	mg/L	--	--	0.001 U	0.001 U	--
Chloromethane (Methyl chloride)	mg/L	--	--	0.001 U	0.001 U	--
cis-1,3-Dichloropropene	mg/L	--	--	0.001 U	0.001 U	--
Dibromochloromethane	mg/L	--	--	0.001 U	0.001 U	--
Dichlorodifluoromethane (CFC-12)	mg/L	--	--	0.001 U	0.001 U	--
Ethylbenzene	mg/L	--	--	0.001 U	0.001 U	--
Methylene chloride	mg/L	--	--	0.005 U	0.005 U	--
Tetrachloroethene	mg/L	--	--	0.001 U	0.001 U	--
Toluene	mg/L	--	--	0.001 U	0.001 U	--
trans-1,2-Dichloroethene	mg/L	--	--	0.001 U	0.001 U	--
trans-1,3-Dichloropropene	mg/L	--	--	0.001 U	0.001 U	--
Trichlorofluoromethane (CFC-11)	mg/L	--	--	0.001 U	0.001 U	--
Vinyl chloride	mg/L	--	--	0.001 U	0.001 U	--
Field Parameters						
Conductivity, field	mS/cm	0.231	0.231	3.19	3.19	2.97
Dissolved oxygen (DO), field	mg/L	8.27	8.27	7.29	7.29	4.02
Oxidation reduction potential (ORP), field	millivolts	-29	-29	-37	-37	213
pH, field	s.u.	6.6	6.6	7.4	7.4	6.5
Temperature, sample	Deg F	56.5	56.5	66.1	66.1	64.9

Notes:

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

Table 3.4

2020 Groundwater Treatment Plant Monitoring Analytical Results
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Area		P412	P412	P412	P412	P412
Sample Location		HV-6021A	HV-6021A	HV-6021A	HV-6021A	HV-6021A
Sample Identification		WW-412-011320-MC-41075	WW-412-021120-MC-41092	WW-412-031020-MC-41108	WW-412-040820-MC-41128	WW-412-050620-MC-41145
Sample Date		01/13/2020	02/11/2020	03/10/2020	04/08/2020	05/06/2020
Sample Type						
	Units					
PCBs						
Aroclor-1016 (PCB-1016)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Aroclor-1221 (PCB-1221)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Aroclor-1232 (PCB-1232)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Aroclor-1242 (PCB-1242)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Aroclor-1248 (PCB-1248)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Aroclor-1254 (PCB-1254)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Aroclor-1260 (PCB-1260)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Total PCBs	mg/L	ND	ND	ND	ND	ND
General Chemistry						
Total Suspended Solids	mg/L	0.83 U	1.6	0.50 U	0.7	0.50 U
Field Parameters						
pH, field	s.u.	7.2	7.1	7.1	7.1	7.1

Notes:

U - Not detected at the associated reporting limit.

Table 3.4

2020 Groundwater Treatment Plant Monitoring Analytical Results
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Area		P412	P412	P412	P412	P412
Sample Location		HV-6021A	HV-6021A	HV-6021A	HV-6021A	HV-6021A
Sample Identification		WW-412-061120-MC-41164	WW-412-071620-MC-41178	WW-412-081720-MC-41192	WW-412-091020-MC-41205	WW-412-101520-MC-41218
Sample Date		06/11/2020	07/16/2020	08/17/2020	09/10/2020	10/15/2020
Sample Type						
	Units					
PCBs						
Aroclor-1016 (PCB-1016)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Aroclor-1221 (PCB-1221)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Aroclor-1232 (PCB-1232)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Aroclor-1242 (PCB-1242)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Aroclor-1248 (PCB-1248)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Aroclor-1254 (PCB-1254)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Aroclor-1260 (PCB-1260)	mg/L	0.000094 U	0.000094 U	0.000095 U	0.000094 U	0.000094 U
Total PCBs	mg/L	ND	ND	ND	ND	ND
General Chemistry						
Total Suspended Solids	mg/L	0.50 U	0.60	0.50 U	0.50	0.50 U
Field Parameters						
pH, field	s.u.	7.1	7.1	--	7	7

Notes:

U - Not detected at the associated reporting limit.

Table 3.4

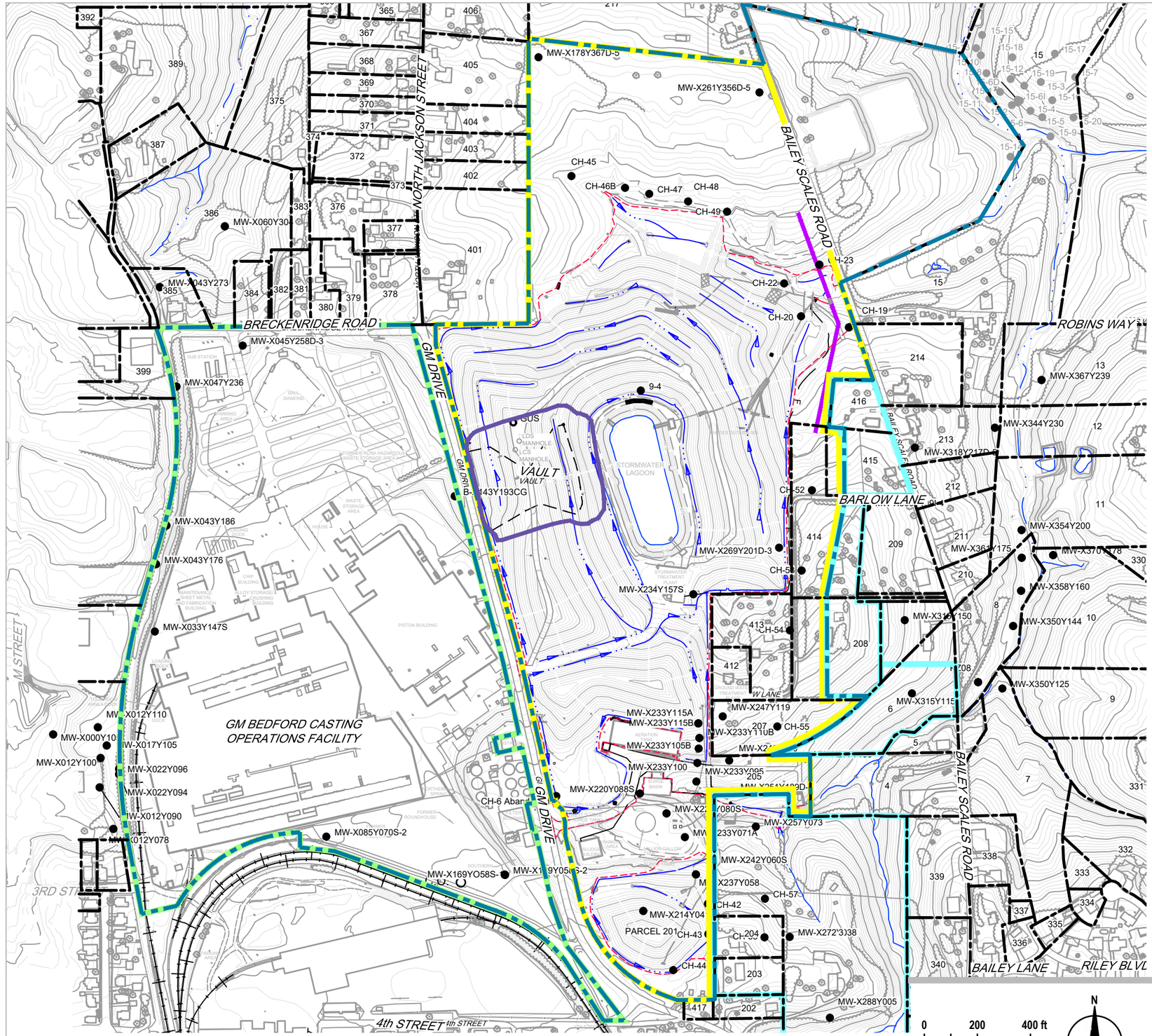
2020 Groundwater Treatment Plant Monitoring Analytical Results
East Plant Area TSCA Vault Annual Report, Calendar Year 2020
GM Bedford Casting Operations Facility
Bedford, Indiana

Area		**P412**	**P412**
Sample Location		**HV-6021A**	**HV-6021A**
Sample Identification		**WW-412-111220-MC-41232**	**WW-412-120320-MC-41244**
Sample Date		**11/12/2020**	**12/03/2020**
Sample Type			
	Units		
PCBs			
Aroclor-1016 (PCB-1016)	mg/L	0.000094 U	0.000094 U
Aroclor-1221 (PCB-1221)	mg/L	0.000094 U	0.000094 U
Aroclor-1232 (PCB-1232)	mg/L	0.000094 U	0.000094 U
Aroclor-1242 (PCB-1242)	mg/L	0.000094 U	0.000094 U
Aroclor-1248 (PCB-1248)	mg/L	0.000094 U	0.000094 U
Aroclor-1254 (PCB-1254)	mg/L	0.000094 U	0.000094 U
Aroclor-1260 (PCB-1260)	mg/L	0.000094 U	0.000094 U
Total PCBs	mg/L	ND	ND
General Chemistry			
Total Suspended Solids	mg/L	0.50 U	0.50 U
Field Parameters			
pH, field	s.u.	7	7

Notes:

U - Not detected at the associated reporting limit.

Figures



LEGEND

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

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

0 200 400 ft

N

GM BEDFORD CASTING OPERATIONS FACILITY
BEDFORD, INDIANA
2020 EAST PLANT AREA VAULT
ANNUAL MONITORING REPORT

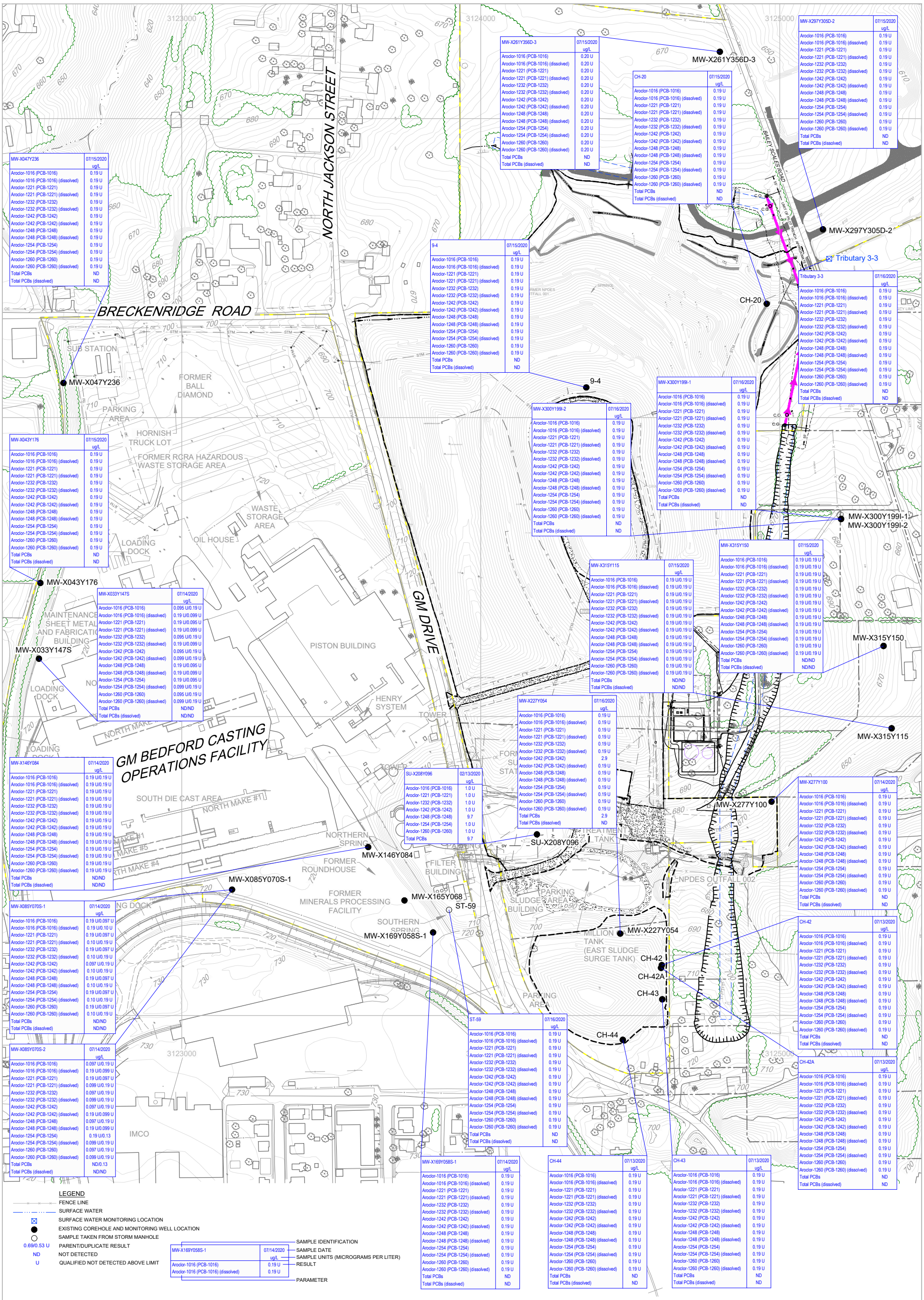
Project No. **11228036**
Date **January 2022**

GROUNDWATER SAMPLING LOCATIONS

FIGURE 3.1

Filename: N:\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT004\11228036-GHD-0000-RPT-EN-0101_WA-004.DWG
Plot Date: 24 January 2022 8:30 AM

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



MW-X047Y236	07/15/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X043Y176	07/15/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X033Y147S	07/14/2020 ug/L
Aroclor-1016 (PCB-1016)	0.095 U/0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.099 U
Aroclor-1221 (PCB-1221)	0.19 U/0.095 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.099 U
Aroclor-1232 (PCB-1232)	0.095 U/0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.099 U
Aroclor-1242 (PCB-1242)	0.095 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.099 U/0.19 U
Aroclor-1248 (PCB-1248)	0.19 U/0.095 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.099 U
Aroclor-1254 (PCB-1254)	0.19 U/0.095 U
Aroclor-1254 (PCB-1254) (dissolved)	0.099 U/0.19 U
Aroclor-1260 (PCB-1260)	0.095 U/0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.099 U/0.19 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

MW-X146Y084	07/14/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U/0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U/0.19 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

MW-X085Y070S-1	07/14/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U/0.097 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.10 U
Aroclor-1221 (PCB-1221)	0.19 U/0.097 U
Aroclor-1221 (PCB-1221) (dissolved)	0.10 U/0.19 U
Aroclor-1232 (PCB-1232)	0.19 U/0.097 U
Aroclor-1232 (PCB-1232) (dissolved)	0.10 U/0.19 U
Aroclor-1242 (PCB-1242)	0.097 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.10 U/0.19 U
Aroclor-1248 (PCB-1248)	0.19 U/0.097 U
Aroclor-1248 (PCB-1248) (dissolved)	0.10 U/0.19 U
Aroclor-1254 (PCB-1254)	0.19 U/0.097 U
Aroclor-1254 (PCB-1254) (dissolved)	0.10 U/0.19 U
Aroclor-1260 (PCB-1260)	0.19 U/0.097 U
Aroclor-1260 (PCB-1260) (dissolved)	0.10 U/0.19 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

MW-X085Y070S-2	07/14/2020 ug/L
Aroclor-1016 (PCB-1016)	0.097 U/0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.099 U
Aroclor-1221 (PCB-1221)	0.19 U/0.097 U
Aroclor-1221 (PCB-1221) (dissolved)	0.099 U/0.19 U
Aroclor-1232 (PCB-1232)	0.097 U/0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.099 U/0.19 U
Aroclor-1242 (PCB-1242)	0.097 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.099 U
Aroclor-1248 (PCB-1248)	0.097 U/0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.099 U
Aroclor-1254 (PCB-1254)	0.19 U/0.13
Aroclor-1254 (PCB-1254) (dissolved)	0.099 U/0.19 U
Aroclor-1260 (PCB-1260)	0.097 U/0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.099 U/0.19 U
Total PCBs	ND/0.13
Total PCBs (dissolved)	ND/ND

MW-X261Y356D-3	07/15/2020 ug/L
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U
Aroclor-1232 (PCB-1232)	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U
Aroclor-1242 (PCB-1242)	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U
Aroclor-1248 (PCB-1248)	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U
Aroclor-1254 (PCB-1254)	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	0.20 U
Aroclor-1260 (PCB-1260)	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-20	07/15/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X297Y305D-2	07/15/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

Tributary 3-3	07/16/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

9-4	07/15/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X300Y199I-2	07/16/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X300Y199I-1	07/16/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X315Y115	07/15/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U/0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U/0.19 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

MW-X315Y150	07/15/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U/0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221)	0.19 U/0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232)	0.19 U/0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242)	0.19 U/0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248)	0.19 U/0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254)	0.19 U/0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260)	0.19 U/0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U/0.19 U
Total PCBs	ND/ND
Total PCBs (dissolved)	ND/ND

MW-X227Y054	07/16/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	2.9
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	2.9
Total PCBs (dissolved)	ND

SU-X208Y096	02/13/2020 ug/L
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)	9.7
Aroclor-1254 (PCB-1254)	1.0 U
Aroclor-1260 (PCB-1260)	1.0 U
Total PCBs	9.7

MW-X277Y100	07/14/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-42	07/13/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-42A	07/13/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

ST-59	07/16/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X169Y058S-1	07/14/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-44	07/13/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

CH-43	07/13/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U
Aroclor-1221 (PCB-1221)	0.19 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U
Aroclor-1232 (PCB-1232)	0.19 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U
Aroclor-1242 (PCB-1242)	0.19 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U
Total PCBs	ND
Total PCBs (dissolved)	ND

LEGEND

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

MW-X169Y058S-1	07/14/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U

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

0 75 150 300 ft

N

GHD

GM BEDFORD CASTING OPERATIONS FACILITY
BEDFORD, INDIANA
2020 EAST PLANT AREA VAULT
ANNUAL MONITORING REPORT

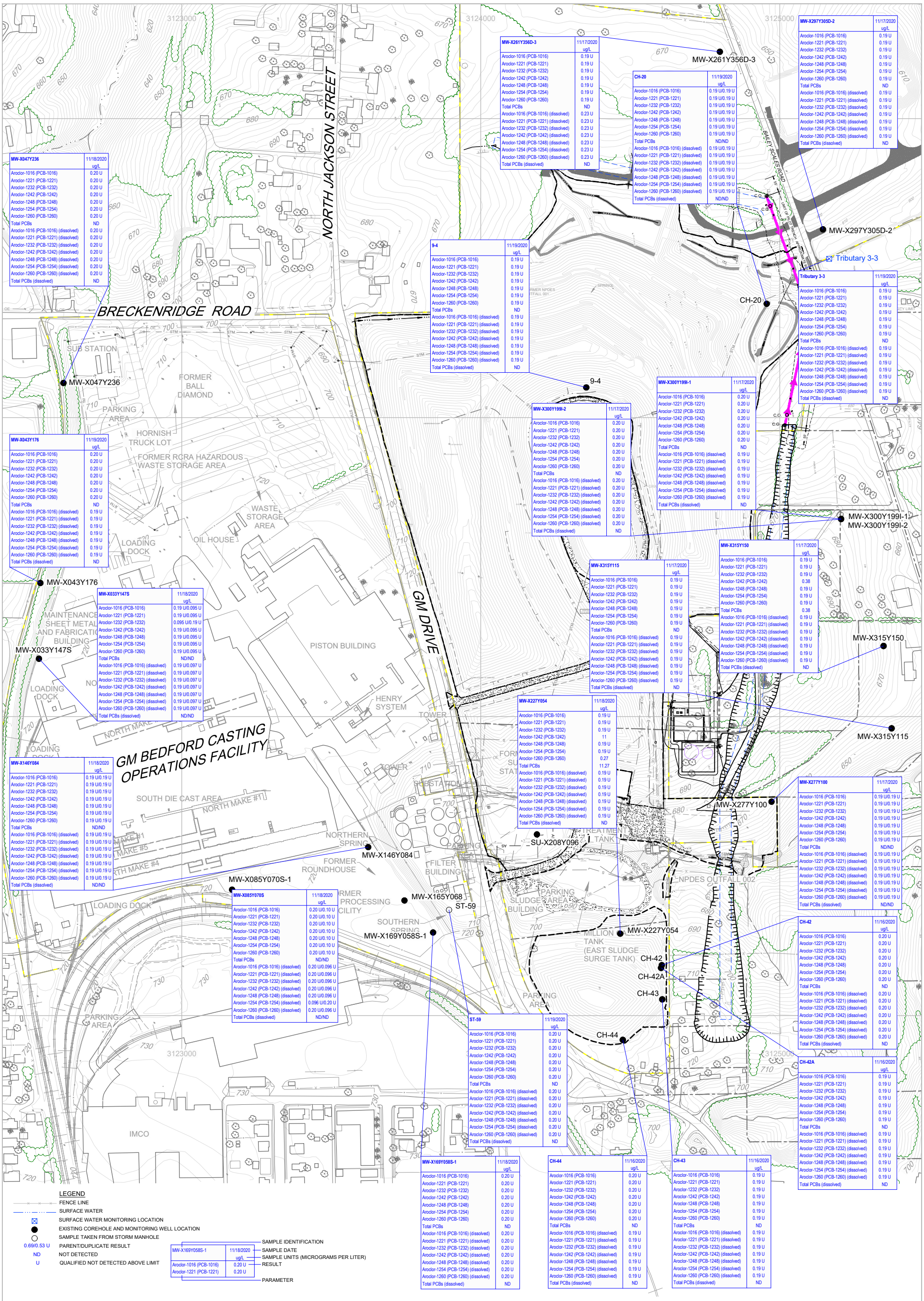
PCBS ANALYTICAL RESULTS
JULY 2020

Project No. **11228036**
Date **January 2022**

FIGURE 3.2

Filename: N:\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT004\11228036-GHD-0000-RPT-EN-0102_WA-004.DWG
Plot Date: 24 January 2022 8:31 AM

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



MW-X047Y236	11/18/2020 ug/L
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 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs (dissolved)	ND

MW-X261Y356D-3	11/17/2020 ug/L
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)	0.23 U
Aroclor-1221 (PCB-1221) (dissolved)	0.23 U
Aroclor-1232 (PCB-1232) (dissolved)	0.23 U
Aroclor-1242 (PCB-1242) (dissolved)	0.23 U
Aroclor-1248 (PCB-1248) (dissolved)	0.23 U
Aroclor-1254 (PCB-1254) (dissolved)	0.23 U
Aroclor-1260 (PCB-1260) (dissolved)	0.23 U
Total PCBs (dissolved)	ND

CH-20	11/19/2020 ug/L
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-X297Y305D-2	11/17/2020 ug/L
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

Tributary 3-3	11/19/2020 ug/L
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

9-4	11/19/2020 ug/L
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-X300Y199I-1	11/17/2020 ug/L
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-2	11/17/2020 ug/L
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 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs (dissolved)	ND

MW-X043Y176	11/19/2020 ug/L
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-X033Y147S	11/18/2020 ug/L
Aroclor-1016 (PCB-1016)	0.19 U/0.095 U
Aroclor-1221 (PCB-1221)	0.19 U/0.095 U
Aroclor-1232 (PCB-1232)	0.095 U/0.19 U
Aroclor-1242 (PCB-1242)	0.19 U/0.095 U
Aroclor-1248 (PCB-1248)	0.19 U/0.095 U
Aroclor-1254 (PCB-1254)	0.19 U/0.095 U
Aroclor-1260 (PCB-1260)	0.19 U/0.095 U
Total PCBs	ND/ND
Aroclor-1016 (PCB-1016) (dissolved)	0.19 U/0.097 U
Aroclor-1221 (PCB-1221) (dissolved)	0.19 U/0.097 U
Aroclor-1232 (PCB-1232) (dissolved)	0.19 U/0.097 U
Aroclor-1242 (PCB-1242) (dissolved)	0.19 U/0.097 U
Aroclor-1248 (PCB-1248) (dissolved)	0.19 U/0.097 U
Aroclor-1254 (PCB-1254) (dissolved)	0.19 U/0.097 U
Aroclor-1260 (PCB-1260) (dissolved)	0.19 U/0.097 U
Total PCBs (dissolved)	ND/ND

MW-X315Y115	11/17/2020 ug/L
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-X315Y150	11/17/2020 ug/L
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)	0.38
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1260 (PCB-1260)	0.19 U
Total PCBs	0.38
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	11/18/2020 ug/L
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)	11
Aroclor-1248 (PCB-1248)	0.19 U
Aroclor-1254 (PCB-1254)	0.19 U
Aroclor-1260 (PCB-1260)	0.27
Total PCBs	11.27
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	11/17/2020 ug/L
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-X146Y084	11/18/2020 ug/L
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-X085Y070S	11/18/2020 ug/L
Aroclor-1016 (PCB-1016)	0.20 U/0.10 U
Aroclor-1221 (PCB-1221)	0.20 U/0.10 U
Aroclor-1232 (PCB-1232)	0.20 U/0.10 U
Aroclor-1242 (PCB-1242)	0.20 U/0.10 U
Aroclor-1248 (PCB-1248)	0.20 U/0.10 U
Aroclor-1254 (PCB-1254)	0.20 U/0.10 U
Aroclor-1260 (PCB-1260)	0.20 U/0.10 U
Total PCBs	ND/ND
Aroclor-1016 (PCB-1016) (dissolved)	0.20 U/0.096 U
Aroclor-1221 (PCB-1221) (dissolved)	0.20 U/0.096 U
Aroclor-1232 (PCB-1232) (dissolved)	0.20 U/0.096 U
Aroclor-1242 (PCB-1242) (dissolved)	0.20 U/0.096 U
Aroclor-1248 (PCB-1248) (dissolved)	0.20 U/0.096 U
Aroclor-1254 (PCB-1254) (dissolved)	0.096 U/0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U/0.096 U
Total PCBs (dissolved)	ND/ND

ST-59	11/19/2020 ug/L
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 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs (dissolved)	ND

CH-42	11/16/2020 ug/L
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 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs (dissolved)	ND

CH-42A	11/16/2020 ug/L
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-X169Y058S-1	11/18/2020 ug/L
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 U
Aroclor-1260 (PCB-1260) (dissolved)	0.20 U
Total PCBs (dissolved)	ND

CH-44	11/16/2020 ug/L
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

CH-43	11/16/2020 ug/L
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

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

MW-X169Y058S-1	11/18/2020 ug/L
Aroclor-1016 (PCB-1016)	0.20 U
Aroclor-1221 (PCB-1221)	0.20 U

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

0 75 150 300 ft

N

GM BEDFORD CASTING OPERATIONS FACILITY
BEDFORD, INDIANA
2020 EAST PLANT AREA VAULT
ANNUAL MONITORING REPORT

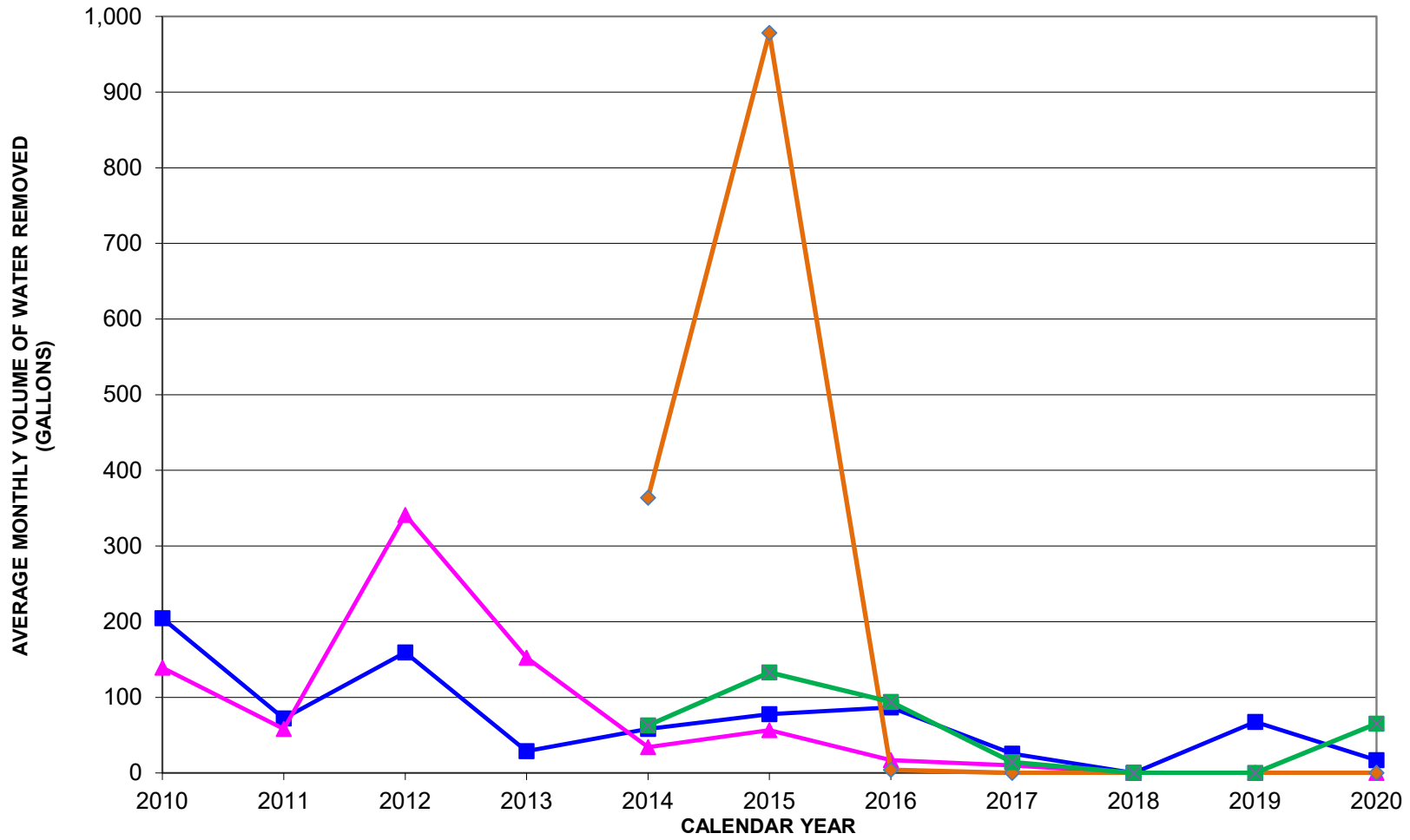
PCBS ANALYTICAL RESULTS
NOVEMBER 2020

Project No. 11228036
Date January 2022

FIGURE 3.3

Filename: N:\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT004\11228036-GHD-0000-RPT-EN-0103_WA-004.DWG
Plot Date: 24 January 2022 8:31 AM

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



LEGEND

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

NOTES

(1) Operation of the LCS and LDS commenced on Aug. 30, 2006.
(2) 2016 - 2018 LCS flow meter readings have been excluded due to the flow meter being by-passed while temporary pump in place.
(3) Spike in LCS volume removed in 2015 as shown on the LCS flow meter is a result of pumping water level below the normal operating threshold.

figure 5.1

SUMMARY OF AVERAGE MONTHLY VOLUME OF WATER REMOVED FROM LCS AND LDS
EAST PLANT AREA TSCA VAULT ANNUAL REPORT, CALENDAR YEAR 2020
GM BEDFORD CASTING OPERATIONS FACILITY
Bedford, Indiana

Appendices

Appendix A

LCS Sump Logs, LDS Sump Logs, GUS Sump Logs

YEAR: 2020 MONTH: JANUARY

LEACHATE COLLECTION SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	8.8	671.73	0			1567410	
2	0805	8.8	671.73	0			1567410	
3	0805	8.9	671.74	0			1567410	
4	0805	9.0	671.75	0			1567410	
5	0805	9.0	671.75	0			1567410	
6	0805	9.1	671.75	0	68.0	672.83	1567410	
7	0805	9.2	671.76	0			1567410	
8	0805	9.2	671.76	0			1567410	
9	0805	9.3	671.77	0			1567410	
10	0805	9.3	671.77	0			1567410	
11	0805	9.3	671.77	0			1567410	
12	0805	9.3	671.77	0			1567410	
13	0805	9.4	671.78	0	67.34	673.49	1567410	
14	0805	9.4	671.78	0			1567410	
15	0805	9.6	671.80	0			1567410	
16	0805	9.7	671.80	0			1567410	
17	0805	9.7	671.80	0			1567410	
18	0805	10.0	671.83	0			1567410	
19	0805	10.0	671.83	0			1567410	
20	0805	10.1	671.84	0	66.69	674.14	1567410	
21	0805	10.1	671.84	0			1567410	
22	0805	10.3	671.85	0			1567410	
23	0805	10.3	671.85	0 ?	68.85	671.98	1567410	← sampled and pumped down no flowmeter reading
24	0805	5.3	671.44	0			1567410	
25	0805	5.3	671.44	0			1567410	
26	0805	5.4	671.45	0			1567410	
27	0805	5.5	671.45	0			1567410	
28	0805	5.7	671.47	0	68.36	672.47	1567410	
29	0805	5.8	671.48	0			1567410	
30	0805	5.8	671.48	0			1567410	
31	0805	5.8	671.48	0			1567410	

YEAR: 2020 MONTH: February

LEACHATE COLLECTION SYSTEM

REV. 4
January 13, 2016
Page 1 of 1

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	5.9	671.49				1567410	
2	0805	5.9	671.49				1567410	
3	0805	5.9	671.49		68.36	672.47	1567410	
4	0805	6.1	671.50				1567410	
5	0805	6.1	671.50				1567410	
6	0805	6.2	671.51				1567410	
7	0805	6.2	671.51				1567410	
8	0805	6.2	671.51				1567410	
9	0805	6.3	671.52				1567410	
10	0805	6.3	671.52				1567410	
11	0805	1.8	671.15	? *	68.67	672.16	1567410	sampled
12	0805	2.8	671.23				1567410	
13	0805	3.0	671.25				1567410	
14	0805	3.0	671.25				1567410	
15	0805	3.1	671.25				1567410	
16	0805	3.2	671.26				1567410	
17	0805	3.3	671.27		68.61	672.22	1567410	
18	0805	3.3	671.27				1567410	
19	0805	3.4	671.28				1567410	
20	0805	3.4	671.28				1567410	
21	0805	3.4	671.28				1567410	
22	0805	3.5	671.29				1567410	
23	0805	3.6	671.30				1567410	
24	0805	3.7	671.30				1567410	
25	0805	3.7	671.30				1567410	
26	0805	3.7	671.30				1567410	
27	0805	3.7	671.30		68.55	672.28	1567410	
28	0805	3.8	671.31				1567410	
29	0805	3.8	671.31				1567410	
~~30~~								
~~31~~								

* Flowmeter not reading @ P/C

YEAR: 2020 MONTH: March

LEACHATE COLLECTION SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	3.8	671.31				1567410	
2	0925	3.8	671.31		68.55	672.28	1567410	
3	0805	3.8	671.31				1567410	
4	0805	3.8	671.31				1567410	
5	0805	3.8	671.31				1567410	
6	0805	3.9	671.32				1567410	
7	0805	3.9	671.32				1567410	
8	0805	3.9	671.32				1567410	
9	0805	3.9	671.32				1567410	
10	1215	1.2	671.10	* ?	68.75	672.08	1567410	- sampled + pumped
11	0805	1.3	671.10				1567410	
12	0805	1.4	671.11				1567410	
13	0805	1.5	671.12				1567410	
14	0805	1.5	671.12				1567410	
15	0805	1.6	671.13				1567410	
16	0805	1.7	671.14		68.73	672.10	1567410	
17	0805	1.8	671.15				1567410	
18	0805	1.8	671.15				1567410	
19	0805	1.7	671.14				1567410	
20	0805	1.8	671.15				1567410	
21	0805	1.8	671.15		68.68	672.15	1567410	
22	0805	1.8	671.15				1567410	
23	0805	1.8	671.15				1567410	
24	0805	1.9	671.15				1567410	
25	0805	1.9	671.15				1567410	
26	0805	2.1	671.17				1567410	
27	0805	2.1	671.17				1567410	
28	0805	2.1	671.17		68.66	672.17	1567410	
29	0805	2.2	671.18				1567410	
30	0805	2.2	671.18				1567410	
31	0805	2.2	671.18				1567410	

* NO readings at PLC

YEAR: 2020 MONTH: April

LEACHATE COLLECTION SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	2.2	671.18				1567410	
2	0805	2.2	671.18		68.61	672.22	1567410	
3	0805	2.2	671.18				1567410	
4	0805	2.3	671.19				1567410	
5	0805	2.3	671.19				1567410	
6	0805	2.3	671.19				1567410	
7	0805	2.4	671.20				1567410	
8	0805	2.4	671.20	?	68.86	671.97	1567410	- sampled + pumped
9	0805	? NO DATA	—				1567410	
10	0805	NO Data	—				1567410	
11	0805	NO Data	—				1567410	
12	0805	NO Data	—				1567410	
13	0805	NO Data	—		68.84	671.99	1567410	
14	0805	NO Data	—				1567410	
15	0805	NO Data	—				1567410	
16	0805	NO Data	—				1567410	
17	0805	NO Data	—				1567410	
18	0805	0.5	671.04				1567410	
19	0805	0.5	671.04				1567410	
20	0805	0.5	671.04		68.81	672.02	1567410	
21	0805	0.5	671.04				1567410	
22	0805	0.6	671.05				1567410	
23	0805	0.6	671.05				1567410	
24	0805	0.6	671.05				1567410	
25	0805	0.6	671.05				1567410	
26	0805	0.6	671.05				1567410	
27	0805	0.6	671.05		68.78	672.05	1567410	
28	0805	0.6	671.05				1567410	
29	0805	0.7	671.05				1567410	
30	0805	0.8	671.06				1567410	
31								

YEAR: 2020 MONTH: MAY

LEACHATE COLLECTION SYSTEM

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	0.6	671.05	0			1567410	
2	0805	0.7	671.05	0			1567410	
3	0805	0.7	671.05	0			1567410	
4	0805	0.8	671.06	0	68.76	672.07	1567410	
5	0805	0.9	671.07	0			1567410	
6	0805	0.9	671.07	0			1567410	
7	0805	0.9	671.07	0			1567410	
8	0805	0.9	671.07	0			1567410	
9	0805	0.9	671.07	0			1567410	
10	0805	1.0	671.08	0			1567410	
11	0805	0.9	671.07	0	68.75	672.08	1567410	
12	0805	0.9	671.07	0			1567410	
13	0805	1.0	671.08	0			1567410	
14	0805	1.0	671.08	0			1567410	
15	0805	1.2	671.10	0			1567410	
16	0805	1.1	671.09	0			1567410	
17	0805	1.1	671.09	0			1567410	
18	0805	1.2	671.10	0	68.70	672.13	1567410	
19	0805	1.2	671.10	0			1567410	
20	0805	1.2	671.10	0			1567410	
21	0805	1.2	671.10	0			1567410	
22	0805	1.3	671.13	0			1567410	
23	0805	1.2	671.10	0			1567410	
24	0805	1.2	671.10	0			1567410	
25	0805	1.2	671.10	0			1567410	
26	0805	1.3	671.13	0	68.68	672.15	1567410	
27	0805	1.4	671.11	0			1567410	
28	0805	1.5	671.12	0			1567410	
29	0805	1.5	671.12	0			1567410	
30	0805	1.5	671.12	0			1567410	
31	0805	1.5	671.12	0			1567410	

YEAR: 2020 MONTH: June

LEACHATE COLLECTION SYSTEM

REV. 4
January 13, 2016
Page 1 of 1

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	1.6	671.13		68.66	672.17	1567410	
2	0805	1.7	671.14				1567412	
3	0805	1.7	671.14				1567410	
4	0805	1.7	671.14				1567410	
5	0805	1.8	671.15				1567410	
6	0805	1.8	671.15				1567410	
7	0805	1.8	671.15				1567410	
8	0805	1.9	671.15		68.63	672.20	1567410	
9	0805	1.9	671.15				1567412	
10	0805	2.0	671.16				1567410	
11	0805	2.1	671.17				1567410	
12	0805	1.9	671.15				1567410	
13	0805	2.1	671.17				1567410	
14	0805	2.0	671.16				1567460	
15	0805	2.1	671.17		68.61	672.22	1567410	
16	0805	2.1	671.17				1567410	
17	0805	2.1	671.17				1567410	
18	0805	2.2	671.18				1567410	
19	0805	2.2	671.18				1567410	
20	0805	2.2	671.18				1567410	
21	0805	2.3	671.19				1567410	
22	0805	2.3	671.19		68.60	672.23	1567410	
23	0805	2.3	671.19				1567410	
24	0805	2.3	671.19				1567410	
25	0805	2.3	671.19				1567410	
26	0805	? *	—				1567410	
27	0805	? *	—				1567410	
28	0805	? *	—				1567410	
29	0805	? *	—		70.19	670.64	1567410	
30	0805	? *	—				1567410	
31								

* NO data

YEAR: 2020 MONTH: July

LEACHATE COLLECTION SYSTEM

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	?	—	0	70.11	670.72	156710	
2	0805	?	—	0			156710	
3	0805	?	—	0			156710	
4	0805	?	—	0			156710	
5	0805	?	—	0			156710	
6	0805	?	—	0	70.09	670.74	156710	
7	0805	?	—	0			156710	
8	0805	?	—	0			156710	
9	0805	?	—	0			156710	
10	0805	?	—	0			156710	
11	0805	?	—	0			156710	
12	0805	?	—	0			156710	
13	0805	?	—	0	70.03	670.80	156710	
14	0805	?	—	0			156710	
15	0805	?	—	0			156710	
16	0805	?	—	0			156710	
17	0805	?	—	0			156710	
18	0805	?	—	0			156710	
19	0805	?	—	0			156710	
20	0805	?	—	0	70.02	670.81	156710	
21	0805	?	—	0			156710	
22	0805	?	—	0			156710	
23	0805	?	—	0			156710	
24	0805	?	—	0			156710	
25	0805	?	—	0			156710	
26	0805	?	—	0			156710	
27	0805	?	—	0	70.01	670.82	156710	
28	0805	?	—	0			156710	
29	0805	?	—	0			156710	
30	0805	?	—	0			156710	
31	0805	?	—	0			156710	

* NO reading @ PLC

YEAR: 2020 MONTH: August

LEACHATE COLLECTION SYSTEM

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	?	–	0			1567410	
2	0805	?	–	0			1567410	
3	0805	?	–	0	69.98	670.85	1567410	
4	0805	?	–	0			1567410	
5	0805	?	–	0			1567410	
6	0805	?	–	0			1567410	
7	0805	?	–	0			1567410	
8	0805	?	–	0			1567410	
9	0805	?	–	0			1567410	
10	0805	?	–	0	69.40	671.43	1567410	
11	0805	?	–	0			1567410	
12	0805	?	–	0			1567410	
13	0805	?	–	0			1567410	
14	0805	?	–	0			1567410	
15	0805	?	–	0			1567410	
16	0805	?	–	0			1567410	
17	0805	?	–	0	69.23	671.60	1567410	
18	0805	?	–	0			1567410	
19	0805	?	–	0			1567410	
20	0805	?	–	0			1567410	
21	0805	?	–	0			1567410	
22	0805	?	–	0			1567410	
23	0805	?	–	0			1567410	
24	0805	?	–	0			1567410	
25	0805	?	–	0	69.28	671.55	1567410	
26	0805	?	–	0			1567410	
27	0805	?	–	0			1567410	
28	0805	?	–	0			1567410	
29	0805	?	–	0			1567410	
30	0805	?	–	0			1567410	
31	0805	?	–	0			1567410	

YEAR: 2020 MONTH: September

LEACHATE COLLECTION SYSTEM

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	?		0	69.27	671.56	1567410	
2	0805	?		0			1567410	
3	0805	?		0			1567410	
4	0805	?		0			1567410	
5	0805	?		0			1567410	
6	0805	?		0			1567410	
7	0805	?		0	69.27	671.56	1567410	
8	0805	?		0			1567410	
9	0805	?		0			1567410	
10	0805	?		0			1567410	
11	0805	?		0			1567410	
12	0805	?		0			1567410	
13	0805	?		0			1567410	
14	0805	?		0	69.27	671.56	1567410	
15	0805	?		0			1567410	
16	0805	?		0			1567410	
17	0805	?		0			1567410	
18	0805	?		0			1567410	
19	0805	?		0			1567410	
20	0805	?		0			1567410	
21	0805	?		0			1567410	
22	0805	?		0			1567410	
23	0805	?		0			1567410	
24	0805	?		0	69.13	671.70	1567410	- New water level meter
25	8:05	?		0			1567410	
26	8:05	?		0			1567410	
27	8:05	?		0			1567410	
28	8:04	?		0			1567410	
29	8:07	?		0			1567410	
30	8:02	?		0			1567410	
31								

YEAR: 2020 MONTH: October

LEACHATE COLLECTION SYSTEM

REV. 4
January 13, 2016
Page 1 of 1

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	805	?		0			1567410	
2	805	?		0			1567410	
3	805	?		0			1567410	
4	805	?		0			1567410	
5	0805	?		0	69.13	671.70	1567410	
6	0805	?		0			1567410	
7	0805	?		0			1567410	
8	0805	?		0			1567410	
9	0805	?		0			1567410	
10	0805	?		0			1567410	
11	0805	?		0			1567410	
12	0805	?		?*	69.42	671.41	1567410	* Pumped in HAND - NO flow data 10/12/20
13	0805	?		0			1567410	
14	0805	?		0			1567410	
15	0805	?		0			1567410	
16	0805	?		0			1567410	
17	0805	?		0			1567410	
18	0805	?		0			1567410	
19	0805	?		0	69.45	671.38	1567410	
20	0805	?		0			1567410	
21	0805	?		0			1567410	
22	0805	?		0			1567410	
23	0805	?		0			1567410	
24	0805	?		0			1567410	
25	0805	?		0			1567410	
26	0805	?		0	69.40	671.43	1567410	
27	0805	?		0			1567410	
28	0805	?		0			1567410	
29	0805	?		0			1567410	
30	0805	?		0			1567410	
31	0805	?		0			1567410	

* Pumped in HAND NO flow data

YEAR: 2020 MONTH: November

LEACHATE COLLECTION SYSTEM

REV. 4
January 13, 2016
Page 1 of 1

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	?		0			1567410	
2	0805	?		0	69.39	671.44	1567410	
3	0805	?		0			1567410	
4	0805	?		0			1567410	
5	0805	?		0			1567410	
6	0805	?		0			1567410	
7	0805	?		0			1567410	
8	0805	?		0			1567410	
9	0805	?		0			1567410	
10	0805	?		0	69.39	671.44	1567410	
11	0805	?		0			1567410	
12	0805	?		0			1567410	
13	0805	?		0			1567410	
14	0805	?		0			1567410	
15	0805	?		0			1567410	
16	0805	?		0	69.35	671.48	1567410	
17	0805	?		0			1567410	
18	805	?		0			1567410	
19	805	?		0			1567410	
20	8:05	?		0			1567410	
21	8:05	?		0			1567410	
22	8:05	?		0			1567410	
23	8:05	?		0	69.32	671.51	1567410	
24	8:05	?		0			1567410	
25	8:05	?		0			1567410	
26	8:05	?		0			1567410	
27	8:05	?		0			1567410	
28	8:05	?		0			1567410	
29	8:05	?		0			1567410	
30	0800	?		0	69.30	671.53	1567410	
31	—							

YEAR: 2020 MONTH: December

LEACHATE COLLECTION SYSTEM

REV. 4
January 13, 2016
Page 1 of 1

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 36 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 671.00 *should not be more than 674.00 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 66.83 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 740.83 - (X) *should not be more than 674.00 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0805	?		0			156710	
2	0805	?		0			156710	
3	0805	?		0			156710	
4	0805	?		0			156710	
5	0805	?		0			156710	
6	0805	?		0			156710	
7	0805	?		0	69.27	671.56	156710	
8	0805	?		0			156710	
9	0805	?		0			156710	
10	0805	?		0			156710	
11	0805	?		0			156710	
12	0805	?		0			156710	
13	0805	?		0			156710	
14	0805	?		0	69.25	671.58	156710	
15	0805	?		0			156710	
16	0805	?		0			156710	
17	0805	?		0			156710	
18	0805	?		0			156710	
19	0805	?		0			156710	
20	0805	?		0			156710	
21	0805	?		0	69.25	671.58	156710	
22	0805	?		0			156710	
23	0805	?		0			156710	
24	0805	?		0			156710	
25	8:05	?		0			156710	
26	8:05	?		0			156710	
27	8:05	?		0			156710	
28	8:05	?		0			156710	
29	8:05	?		0			156710	
30	805	?		0			156710	
31	8:05	?		0	69.24	671.59	156710	

YEAR: 2020 MONTH: JANUARY

LEAK DETECTION SYSTEM

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

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2									
3									
4									
5									
6	0830	70.22							
7									
8									
9									
10									
11									
12									
13	0845	70.31							
14									
15									
16									
17									
18									
19									
20	0822	70.40							
21									
22									
23	1050	70.34							→ Sample by bailing
24									
25									
26									
27									
28	1030	70.34							
29									
30									
31									

YEAR: 2020 MONTH: February

LEAK DETECTION SYSTEM

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

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2									
3	0915	70.34							
4									
5									
6									
7									
8									
9									
10	917	70.43							
11									
12	1300	70.43	"	"	"	"	"	"	Bailed Sample pump fail
13									
14									
15									
16									
17	1020	70.42							
18									
19									
20									
21									
22									
23									
24									
25									
26									
27	1630	70.42							
28									
29									
30									
31									

YEAR: 2020 MONTH: March

LEAK DETECTION SYSTEM

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

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2	0932	70.42							
3									
4									
5									
6									
7									
8									
9									
10	1202	70.38							- sampled + Bailed
11									
12									
13									
14									
15									
16	1002	70.38							
17									
18									
19									
20									
21	0930	70.36							
22									
23									
24									
25									
26									
27									
28	0955	70.36							
29									
30									
31									

YEAR: 2020 MONTH: April

LEAK DETECTION SYSTEM

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

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts etc.
1									
2	1030	70.30							
3									
4									
5									
6									
7									
8	1020	70.30							- sampled by bailer
9									
10									
11									
12									
13	0947	70.29							
14									
15									
16									
17									
18									
19									
20	0920	70.26							
21									
22									
23									
24									
25									
26									
27	0742	70.24							
28									
29									
30									
31									

YEAR: 2020 MONTH: MAY

LEAK DETECTION SYSTEM

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

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2									
3									
4	1020	70.20							
5									
6									
7									
8									
9									
10									
11	1046	70.17							
12									
13									
14									
15									
16									
17									
18	1002	70.15							
19									
20									
21									
22									
23									
24									
25									
26	1105	70.14							
27									
28									
29									
30									
31									

YEAR: 2020 MONTH: June

LEAK DETECTION SYSTEM

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

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1	0900	70.12							
2									
3									
4									
5									
6									
7									
8	0910	70.12							
9									
10									
11									
12									
13									
14									
15	1115	70.12							
16									
17									
18									
19									
20									
21									
22	1202	70.10							
23									
24									
25									
26									
27									
28									
29	1025	70.08							
30									
31									

YEAR: 2020 MONTH: July

LEAK DETECTION SYSTEM

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

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2									
3									
4									
5									
6	0742	70.10							
7									
8									
9									
10									
11									
12									
13	0910	70.03							
14									
15									
16									
17									
18									
19									
20	1022	70.03							
21									
22									
23									
24									
25									
26									
27	1019	70.01							
28									
29									
30									
31									

YEAR: 2020 MONTH: August

LEAK DETECTION SYSTEM

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

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2									
3	0825	70.00							
4									
5									
6									
7									
8									
9									
10	0820	69.95							
11									
12									
13									
14									
15									
16									
17	0822	69.97							
18									
19									
20									
21									
22									
23	8-24-20 MK								
24	0830								
25	0830	69.97							
26									
27									
28									
29									
30									
31									

YEAR: 2020 MONTH: September

LEAK DETECTION SYSTEM

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

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1	0900	69.97							
2									
3									
4									
5									
6									
7	0820	69.95							
8									
9									
10									
11									
12									
13									
14	0922	69.97							
15									
16									
17									
18									
19									
20									
21									
22									
23									
24	1410	69.97	1420	71.89			589		+New Pump installed * Portable flowmeter start 4380.7 END 4969.7
25									
26									
27									
28									
29									
30									
31									

YEAR: 2020 MONTH: October

LEAK DETECTION SYSTEM

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

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2									
3									
4									
5	1405	71.58							
6									
7									
8									
9									
10									
11									
12	0838	71.55	0845	72.27	~~194.7~~ mL 10/2/20		194.7		- Pumped with portable flow meter start - 4969.7 END - 5164.4
13									
14									
15									
16									
17									
18									
19	1602	71.92							
20									
21									
22									
23									
24									
25									
26	1055	71.91							
27									
28									
29									
30									
31									

YEAR: 2020 MONTH: November

LEAK DETECTION SYSTEM

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

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2	1005	71.89							
3									
4									
5									
6									
7									
8									
9	0952	71.90							
10									
11									
12									
13									
14									
15									
16	1025	71.90							
17									
18									
19									
20									
21									
22									
23	1104	71.89							
24									
25									
26									
27									
28									
29									
30	1400	71.85							
31									

YEAR: 2020 MONTH: December

LEAK DETECTION SYSTEM

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

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

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

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

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

DAY	TIME OF MANUAL MEASUREMENT #1 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #1 [a, b] BEFORE PUMPING (ft below top of sump) *should not be less than 71.14 ft*	TIME OF MANUAL MEASUREMENT #2 (hh:mm)	MANUAL DEPTH TO WATER LEVEL #2 [a, b] AFTER PUMPING (ft below top of sump) *should not be less than 71.14 ft*	(X) LOCAL FLOW METER READING [c] (gallons)	(Y) ELAPSED TIME BETWEEN PUMPING EVENTS (days)	(Z) VOLUME PUMPED (gallons) = $X_2 - X_1$	AVERAGE DAILY FLOW RATE [c, d] (gal/day/ac) = (Z / Y) / 7	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc.
1									
2									
3									
4									
5									
6									
7	1002	71.85							
8									
9									
10									
11									
12									
13									
14	1115	71.87							
15									
16									
17									
18									
19									
20									
21	1020	71.85							
22									
23									
24									
25									
26									
27									
28									
29									
30									
31	1632	71.85							

YEAR: 2020 MONTH: JANUARY

GRAVEL UNDERDRAIN SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	82.3	669.03		*		1567410	
2	0800	82.3	669.03		*		1567410	
3	0800	81.8	668.99		*		1567410	
4	0800	81.8	668.99		*		1567410	
5	0800	81.9	669.00		*		1567410	
6	0800	82.0	669.01		*		1567410	
7	0800	82.0	669.01		*		1567410	
8	0800	82.1	669.02		*		1567410	
9	0800	82.1	669.02		*		1567410	
10	0800	81.9	669.00		*		1567410	
11	0800	81.9	669.00		*		1567410	
12	0800	81.9	669.00		*		1567410	
13	0800	82.3	669.03		*		1567410	
14	0800	82.3	669.03		*		1567410	
15	0800	82.2	669.03		*		1567410	
16	0800	82.2	669.03		*		1567410	
17	0800	82.2	669.03		*		1567410	
18	0800	82.2	669.03		*		1567410	
19	0800	82.3	669.03		*		1567410	
20	0800	82.3	669.03		*		1567410	
21	0800	82.4	669.04		*		1567410	
22	0800	82.6	669.06		*		1567410	
23	0800	82.4	669.04		*		1567410	
24	0800	82.3	669.03		*		1567410	
25	0800	82.3	669.03		*		1567410	
26	0800	82.1	669.02		*		1567410	
27	0800	82.1	669.02		*		1567410	
28	0800	82.1	669.02		*		1567410	
29	0800	82.0	669.01		*		1567410	
30	0800	82.0	669.01		*		1567410	
31	0800	82.0	669.01		*		1567410	

* NO MANUAL MEASUREMENT CAN BE TAKEN

YEAR: 2020 MONTH: February

GRAVEL UNDERDRAIN SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	82.0	669.01		*		1567410	
2	0800	82.0	669.01		*		1567410	
3	0800	81.6	668.98		*		1567410	
4	0800	81.6	668.98		*		1567410	
5	0800	81.5	668.97		*		1567410	
6	0800	81.6	668.98		*		1567410	
7	0800	81.6	668.98		*		1567410	
8	0800	81.6	668.98		*		1567410	
9	0800	81.6	668.98		*		1567410	
10	0800	81.6	668.98		*		1567410	
11	0800	81.5	668.97		*		1567410	
12	0800	81.5	668.97		*		1567410	
13	0800	81.3	668.95		*		1567410	
14	0800	81.3	668.95		*		1567410	
15	0800	81.3	668.95		*		1567410	
16	0800	81.9	669.00		*		1567410	
17	0800	81.9	669.00		*		1567410	
18	0800	81.9	669.00		*		1567410	
19	0800	81.6	668.98		*		1567410	
20	0800	81.6	668.98		*		1567410	
21	0800	81.5	668.97		*		1567410	
22	0800	81.5	668.97		*		1567410	
23	0800	81.3	668.95		*		1567410	
24	0800	81.3	668.95		*		1567410	
25	0800	80.8	668.91		*		1567410	
26	0800	81.3	668.95		*		1567410	
27	0800	81.3	668.95		*		1567410	
28	0800	81.3	668.95		*		1567410	
29	0800	81.3	668.95		*		1567410	
~~30~~								
~~31~~								

* NO MANUAL MEASUREMENT CAN be taken.

YEAR: 2020 MONTH: MARCH

GRAVEL UNDERDRAIN SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	81.6	668.98		*		1567410	
2	0800	81.4	668.96		*		1567410	
3	0800	81.4	668.96		*		1567410	
4	0800	81.1	668.93		*		1567410	
5	0800	81.3	668.95		*		1567410	
6	0800	81.2	668.94		*		1567410	
7	0800	81.2	668.94		*		1567410	
8	0800	81.3	668.95		*		1567410	
9	0800	81.1	668.93		*		1567410	
10	0800	81.1	668.93		*		1567410	
11	0800	81.1	668.93		*		1567410	
12	0800	81.1	668.93		*		1567410	
13	0800	81.1	668.93		*		1567410	
14	0800	81.3	668.95		*		1567410	
15	0800	81.6	668.98		*		1567410	
16	0800	81.6	668.98		*		1567410	
17	0800	81.4	668.96		*		1567410	
18	0800	81.4	668.96		*		1567410	
19	0800	81.3	668.95		*		1567410	
20	0800	81.4	668.96		*		1567410	
21	0800	81.4	668.96		*		1567410	
22	0800	81.4	668.96		*		1567410	
23	0800	81.6	668.98		*		1567410	
24	0800	81.6	668.98		*		1567410	
25	0800	81.6	668.98		*		1567410	
26	0800	81.9	669.00		*		1567410	
27	0800	82.2	669.03		*		1567410	
28	0800	81.6	668.98		*		1567410	
29	0800	81.9	669.00		*		1567410	
30	0800	81.6	668.98		*		1567410	
31	0800	81.9	669.00		*		1567410	

* NO MANUAL MEASUREMENT CAN BE TAKEN

YEAR: 2020 MONTH: April

GRAVEL UNDERDRAIN SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	82.1	669.02		*		1567410	
2	0800	81.9	669.00		*		1567410	
3	0800	81.9	669.00		*		1567410	
4	0800	81.9	669.00		*		1567410	
5	0800	81.9	669.00		*		1567410	
6	0800	81.8	668.99		*		1567410	
7	0800	82.1	669.02		*		1567410	
8	0800	81.5	668.97		*		1567410	
9	0800	81.9	669.00		*		1567410	
10	0800	81.9	669.00		*		1567410	
11	0800	82.1	669.02		*		1567410	
12	0800	81.9	669.00		*		1567410	
13	0800	81.9	669.00		*		1567410	
14	0800	81.5	668.97		*		1567410	
15	0800	81.5	668.97		*		1567410	
16	0800	81.5	668.97		*		1567410	
17	0800	81.5	668.97		*		1567410	
18	0800	81.5	668.97		*		1567410	
19	0800	81.5	668.97		*		1567410	
20	0800	81.5	668.97		*		1567410	
21	0800	81.5	668.97		*		1567410	
22	0800	81.5	668.97		*		1567410	
23	0800	81.4	668.96		*		1567410	
24	0800	81.3	668.95		*		1567410	
25	0800	81.5	668.97		*		1567410	
26	0800	81.5	668.97		*		1567410	
27	0800	81.4	668.96		*		1567410	
28	0800	81.4	668.96		*		1567410	
29	0800	81.5	668.97		*		1567410	
30	0800	81.5	668.97		*		1567410	
~~31~~								

* NO MANUAL MEASUREMENT CAN be TAKEN

YEAR: 2020 MONTH: MAY

GRAVEL UNDERDRAIN SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	81.1	668.93		*		1567410	
2	0800	81.6	668.98		*		1567410	
3	0800	81.6	668.98		*		1567410	
4	0800	81.6	668.98		*		1567410	
5	0800	81.6	668.98		*		1567410	
6	0800	81.6	668.98		*		1567410	
7	0800	81.6	668.98		*		1567410	
8	0800	81.6	668.98		*		1567410	
9	0800	81.5	668.97		*		1567410	
10	0800	81.5	668.97		*		1567410	
11	0800	81.5	668.97		*		1567410	
12	0800	81.2	668.94		*		1567410	
13	0800	81.2	668.94		*		1567410	
14	0800	81.1	668.93		*		1567410	
15	0800	81.2	668.94		*		1567410	
16	0800	81.1	668.93		*		1567410	
17	0800	81.1	668.93		*		1567410	
18	0800	81.5	668.97		*		1567410	
19	0800	81.2	668.94		*		1567410	
20	0800	81.2	668.94		*		1567410	
21	0800	81.1	668.93		*		1567410	
22	0800	81.5	668.97		*		1567410	
23	0800	81.5	668.97		*		1567410	
24	0800	81.5	668.97		*		1567410	
25	0800	81.5	668.97		*		1567410	
26	0800	81.2	668.94		*		1567410	
27	0800	81.5	668.97		*		1567410	
28	0800	81.2	668.94		*		1567410	
29	0800	81.6	668.98		*		1567410	
30	0800	81.2	668.94		*		1567410	
31	0800	81.2	668.94		*		1567410	

* NO MANUAL MEASUREMENT CAN be taken

YEAR: 2020 MONTH: June

GRAVEL UNDERDRAIN SYSTEM

REV. 4
December 9, 2015
Page 1 of 1

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	81.3	668.95	0	*		1567410	
2	0800	81.5	668.97	0	*		1567410	
3	0800	81.3	668.95	0	*		1567410	
4	0800	81.3	668.95	0	*		1567410	
5	0800	81.1	668.93	0	*		1567410	
6	0800	80.7	668.90	0	*		1567410	
7	0800	80.7	668.90	0	*		1567410	
8	0800	81.1	668.93	0	*		1567410	
9	0800	81.2	668.94	0	*		1567410	
10	0800	81.1	668.93	0	*		1567410	
11	0800	81.1	668.93	0	*		1567410	
12	0800	81.1	668.93	0	*		1567410	
13	0800	81.2	668.94	0	*		1567410	
14	0800	81.2	668.94	0	*		1567410	
15	0800	81.2	668.94	0	*		1567410	
16	0800	81.1	668.93	0	*		1567410	
17	0800	80.7	668.90	0	*		1567410	
18	0800	80.7	668.90	0	*		1567410	
19	0800	80.7	668.90	0	*		1567410	
20	0800	80.7	668.90	0	*		1567410	
21	0800	80.7	668.90	0	*		1567410	
22	0800	80.7	668.90	0	*		1567410	
23	0800	80.7	668.90	0	*		1567410	
24	0800	80.7	668.90	0	*		1567410	
25	0800	80.7	668.90	0	*		1567410	
26	0800	81.2	668.94	0	*		1567410	
27	0800	81.1	668.93	0	*		1567410	
28	0800	81.1	668.93	0	*		1567410	
29	0800	81.5	668.97	0	*		1567410	
30	0800	81.5	668.97	0	*		1567410	
31								

* NO MANUAL MEASUREMENT CAN be TAKEN

YEAR: 2020 MONTH: Jul/4

GRAVEL UNDERDRAIN SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	81.0	668.93	0	*		1567410	
2	0800	81.0	668.93	0	*		1567410	
3	0800	80.7	668.90	0	*		1567410	
4	0800	80.5	668.88	0	*		1567410	
5	0800	80.5	668.88	0	*		1567410	
6	0800	80.5	668.88	0	*		1567410	
7	0800	80.0	668.84	0	*		1567410	
8	0800	80.2	668.86	0	*		1567410	
9	0800	80.0	668.84	0	*		1567410	
10	0800	80.2	668.86	0	*		1567410	
11	0800	80.5	668.88	0	*		1567410	
12	0800	80.5	668.88	0	*		1567410	
13	0800	80.5	668.88	0	*		1567410	
14	0800	80.7	668.90	0	*		1567410	
15	0800	81.0	668.93	0	*		1567410	
16	0800	81.2	668.94	0	*		1567410	
17	0800	81.9	669.00	0	*		1567410	
18	0800	82.1	669.02	0	*		1567410	
19	0800	81.5	668.97	0	*		1567410	
20	0800	81.5	668.94	0	*		1567410	
21	0800	80.5	668.88	0	*		1567410	
22	0800	80.2	668.86	0	*		1567410	
23	0800	79.5	668.80	0	*		1567410	
24	0800	79.5	668.78	0	*		1567410	
25	0800	79.3	668.78	0	*		1567410	
26	0800	79.2	668.78	0	*		1567410	
27	0800	79.5	668.80	0	*		1567410	
28	0800	79.5	668.80	0	*		1567410	
29	0800	79.5	668.80	0	*		1567410	
30	0800	79.3	668.78	0	*		1567410	
31	0800	79.5	668.80	0	*		1567410	

* NO MANUAL MEASUREMENT CAN BE TAKEN

YEAR: 2020 MONTH: August

GRAVEL UNDERDRAIN SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	79.5	668.80	0	*		1567410	
2	0800	79.5	668.80	0	*		1567410	
3	0800	79.3	668.78	0	*		1567410	
4	0800	79.8	668.83	0	*		1567410	
5	0800	80.0	668.84	0	*		1567410	
6	0800	80.1	668.85	0	*		1567410	
7	0800	80.0	668.84	0	*		1567410	
8	0800	79.8	668.83	0	*		1567410	
9	0800	79.8	668.83	0	*		1567410	
10	0800	80.0	668.84	0	*		1567410	
11	0800	80.0	668.84	0	*		1567410	
12	0800	80.0	668.84	0	*		1567410	
13	0800	80.0	668.84	0	*		1567410	
14	0800	79.8	668.83	0	*		1567410	
15	0800	79.8	668.83	0	*		1567410	
16	0800	79.8	668.83	0	*		1567410	
17	0800	79.8	668.83	0	*		1567410	
18	0800	79.9	668.83	0	*		1567410	
19	0800	80.0	668.84	0	*		1567410	
20	0800	80.0	668.84	0	*		1567410	
21	0800	80.0	668.84	0	*		1567410	
22	0800	79.9	668.83	0	*		1567410	
23	0800	79.5	668.80	0	*		1567410	
24	0800	79.8	668.83	0	*		1567410	
25	0800	79.8	668.83	0	*		1567410	
26	0800	79.8	668.83	0	*		1567410	
27	0800	79.6	668.81	0	*		1567410	
28	0800	79.6	668.81	0	*		1567410	
29	0800	79.6	668.81	0	*		1567410	
30	0800	79.6	668.81	0	*		1567410	
31	0800	79.6	668.81	0	*		1567410	

GHD 013968 NO MANUAL MEASUREMENT CAN be TAKEN

YEAR: 2020 MONTH: September

GRAVEL UNDERDRAIN SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	79.5	668.80		*		1567410	
2	0800	79.5	668.80		*		1567410	
3	0800	79.4	668.79		*		1567410	
4	0800	79.4	668.79		*		1567410	
5	0800	79.5	668.80		*		1567410	
6	0800	79.5	668.80		*		1567410	
7	0800	79.5	668.80		*		1567410	
8	0800	79.2	668.78		*		1567410	
9	0800	79.2	668.78		*		1567410	
10	0800	79.2	668.78		*		1567410	
11	0800	79.2	668.78		*		1567410	
12	0800	79.4	668.79		*		1567410	
13	0800	79.5	668.80		*		1567410	
14	0800	79.3	668.78		*		1567410	
15	0800	79.3	668.78		*		1567410	
16	0800	79.5	668.80		*		1567410	
17	0800	79.6	668.81		*		1567410	
18	0800	79.6	668.81		*		1567410	
19	0800	79.2	668.78		*		1567410	
20	0800	79.2	668.78		*		1567410	
21	0800	79.5	668.80		*		1567410	
22	0800	79.3	668.78		*		1567410	
23	0800	79.5	668.80		*		1567410	
24	8:00	79.3	668.78		*		1567410	
25	8:00	79.1	668.77		*		1567410	
26	8:00	79.0	668.76		*		1567410	
27	8:00	78.9	668.75		*		1567410	
28	8:00	79.1	668.77		*		1567410	
29	8:00	79.3	668.78		*		1567410	
30	8:00	79.1	668.77		*		1567410	
31								

* NO MANUAL MEASUREMENT CAN be TAKEN

YEAR: 2020 MONTH: October

GRAVEL UNDERDRAIN SYSTEM

REV. 4
December 9, 2015
Page 1 of 1

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	9:00	79.0	668.76		*		1567410	
2	8:00	79.0	668.76		*		1567410	
3	9:00	78.8	668.74		*		1567410	
4	8:00	79.0	668.76		*		1567410	
5	0800	78.8	668.74		*		1567410	
6	0800	78.8	668.74		*		1567410	
7	0800	78.9	668.75		*		1567410	
8	0800	78.9	668.75		*		1567410	
9	0800	78.9	668.75		*		1567410	
10	0800	78.9	668.75		*		1567410	
11	0800	78.9	668.75		*		1567410	
12	0800	78.9	668.75		*		1567410	
13	0800	78.9	668.75		*		1567410	
14	0800	78.9	668.75		*		1567410	
15	0800	78.9	668.75		*		1567410	
16	0800	78.9	668.75		*		1567410	
17	0800	78.9	668.75		*		1567410	
18	0800	78.9	668.75		*		1567410	
19	0800	78.9	668.75		*		1567410	
20	0800	78.9	668.75		*		1567410	
21	0800	78.9	668.75		*		1567410	
22	0800	78.9	668.75		*		1567410	
23	0800	78.9	668.75		*		1567410	
24	0800	78.9	668.75		*		1567410	
25	0800	78.9	668.75		*		1567410	
26	0800	78.9	668.75		*		1567410	
27	0800	78.9	668.75		*		1567410	
28	0800	78.9	668.75		*		1567410	
29	0800	78.9	668.75		*		1567410	
30	0800	78.9	668.75		*		1567410	
31	0800	78.9	668.75		*		1567410	

* NO MANUAL MEASUREMENT CAN be taken

YEAR: 2020 MONTH: November

GRAVEL UNDERDRAIN SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	78.9	668.75		*		1567410	
2	0800	78.9	668.75		*		1567410	
3	0800	78.9	668.75		*		1567410	
4	0800	78.9	668.75		*		1567410	
5	0800	78.9	668.75		*		1567410	
6	0800	78.9	668.75	2.5	60.5	—	1567410	- measured in 3.25 inch stainless steel pipe. Total depth of pipe 75.3 depth to water 60.5 GHD Pumped dry
7	0800	78.9	668.75		*		1567410	
8	0800	78.9	668.75		*		1567410	
9	0800	78.9	668.75		*		1567410	
10	0800	78.9	668.75		*		1567410	
11	0800	78.9	668.75		*		1567410	
12	0800	78.9	668.75		*		1567410	
13	0800	78.9	668.75		*		1567410	
14	0800	78.9	668.75		*		1567410	
15	0800	78.9	668.75		*		1567410	
16	0800	78.9	668.75		*		1567410	
17	8:00	78.9	668.75		*		1567410	
18	8:00	78.9	668.75		*		1567410	
19	8:00	78.9	668.75		*		1567410	
20	8:00	78.9	668.75		*		1567410	
21	8:00	78.9	668.75		*		1567410	
22	8:00	78.9	668.75		*		1567410	
23	8:00	78.9	668.75		*		1567410	
24	8:00	78.9	668.75		*		1567410	
25	8:00	78.9	668.75		*		1567410	
26	8:00	78.9	668.75		*		1567410	
27	8:00	78.9	668.75		*		1567410	
28	8:00	78.9	668.75		*		1567410	
29	8:00	78.9	668.75		*		1567410	
30	0800	78.9	668.75		*		1567410	
31								

* MANUAL MEASUREMENT CAN NOT be taken

YEAR: 2020 MONTH: December

GRAVEL UNDERDRAIN SYSTEM

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

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

DAY	TIME OF MANUAL MEASUREMENT (hh:mm)	(Y) WATER LEVEL DEPTH AT PLC [a] (inches) *should not be more than 52 inches*	(1) CONVERT PLC WATER DEPTH TO ELEVATION [a] (ft AMSL) =[(Y)/12] + 662.18 *should not be more than 666.5 ft AMSL*	QUANTITY PUMPED @ PLC (gallons removed)	(X) MANUAL DEPTH TO WATER LEVEL [b] (ft below top of sump) *should not be less than 72.49 ft*	(2) CONVERT MANUAL DEPTH TO WATER LEVEL TO ELEVATION [b] (ft AMSL) = 738.99 - (X) *should not be more than 666.5 ft AMSL*	LOCAL FLOW METER READING [c] (gallons)	COMMENTS Note when samples are collected, any maintenance activities occur, any calibration/reprogramming efforts, etc. ** (1) and (2) should be compared and any discrepancies between measurements explained here.
1	0800	78.9	668.75		*		1567410	
2	0800	78.9	668.75		*		1567410	
3	0800	78.9	668.75		*		1567410	
4	0800	78.9	668.75		*		1567410	
5	0800	78.9	668.75		*		1567410	
6	0800	78.9	668.75		*		1567410	
7	0800	78.9	668.75		*		1567410	
8	0800	78.9	668.75		*		1567410	
9	0800	78.9	668.75		*		1567410	
10	0800	78.9	668.75		*		1567410	
11	0800	78.9	668.75		*		1567410	
12	0800	78.9	668.75		*		1567410	
13	0800	78.9	668.75		*		1567410	
14	0800	78.9	668.75		*		1567410	
15	0800	78.9	668.75		*		1567410	
16	0800	78.9	668.75		*		1567410	
17	0800	78.9	668.75		*		1567410	
18	0800	78.9	668.75		*		1567410	
19	0800	78.9	668.75		*		1567410	
20	0800	78.9	668.75		*		1567410	
21	0800	78.9	668.75		*		1567410	
22	0800	78.9	668.75		*		1567410	
23	0800	78.9	668.75		*		1567410	
24	8:00	84.7	669.24		*		1567410	
25	8:00	84.7	669.24		*		1567410	
26	8:00	84.8	669.25		*		1567410	
27	8:00	85.0	669.24		*		1567410	
28	8:00	85.0	669.24		*		1567410	
29	8:00	85.00	669.24		*		1567410	
30	8:00	85.00	669.24		*		1567410	
31	8:00	85.00	669.24		*		1567410	

* MANUAL MEASUREMENT CAN NOT BE TAKEN

Appendix B

Cover System Inspection Log

TABLE D.1

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

Date of Inspection: 11/12/20 **Weather:** Clear

Inspector: Scott Sholar, Tim Pranger **Temperature:** 50F

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED			
VEGETATED SOIL COVER SYSTEM							
	Transect EV1	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS		✔	Mowing the area.	Length of grass/plants around 4ft in areas.	
		- EXPPOSURE OF LINER	✔				
		- EROSION	✔				
		- LOCALIZED SETTLEMENT/SLUMPING	✔				
		- PONDING OF WATER/DRAINAGE	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES		✔	Removal of saplings.		11/12/20
	Transect EV2	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EXPPOSURE OF LINER	✔				
		- EROSION	✔				
		- LOCALIZED SETTLEMENT/SLUMPING	✔				
		- PONDING OF WATER/DRAINAGE	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES		✔	Removal of saplings.		11/12/20

TABLE D.1

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

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED			
VEGETATED SOIL COVER SYSTEM (CONTINUED)							
	Transect EV3	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EXPPOSURE OF LINER	✔				
		- EROSION	✔				
		- LOCALIZED SETTLEMENT/SLUMPING	✔				
		- PONDING OF WATER/DRAINAGE	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				
	Transect EV4	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EXPPOSURE OF LINER	✔				
		- EROSION	✔				
		- LOCALIZED SETTLEMENT/SLUMPING	✔				
		- PONDING OF WATER/DRAINAGE	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES		✔	Removal of saplings.		11/12/2020
	Transect EV5	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EXPPOSURE OF LINER	✔				
		- EROSION	✔				
		- LOCALIZED SETTLEMENT/SLUMPING	✔				
		- PONDING OF WATER/DRAINAGE	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				

TABLE D.1

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

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED			
VEGETATED SOIL COVER SYSTEM (CONTINUED)							
	Transect EV6	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS		✔	Mowing of grass.	Safety concerns while walking.	
		- EXPPOSURE OF LINER	✔				
		- EROSION	✔				
		- LOCALIZED SETTLEMENT/SLUMPING	✔				
		- PONDING OF WATER/DRAINAGE	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				
	Transect EV7	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EXPPOSURE OF LINER	✔				
		- EROSION	✔				
		- LOCALIZED SETTLEMENT/SLUMPING	✔				
		- PONDING OF WATER/DRAINAGE	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				
	Transect EV8	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EXPPOSURE OF LINER	✔				
		- EROSION	✔				
		- LOCALIZED SETTLEMENT/SLUMPING	✔				
		- PONDING OF WATER/DRAINAGE	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				

TABLE D.1

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

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED			
VEGETATED SOIL COVER SYSTEM (CONTINUED)							
	Transect EV9	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EXPPOSURE OF LINER	✔				
		- EROSION	✔				
		- LOCALIZED SETTLEMENT/SLUMPING	✔				
		- PONDING OF WATER/DRAINAGE	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES		✔	Removal of saplings.		11/12/2020
	Transect WV1	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EXPPOSURE OF LINER	✔				
		- EROSION	✔				
		- LOCALIZED SETTLEMENT/SLUMPING	✔				
		- PONDING OF WATER/DRAINAGE	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				

TABLE D.1

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

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED			
HARD SURFACE COVER SYSTEMS							
	Transect EA1	- QUALITY OF ASPHALT COVER	✔				
		- PRESENCE OF CRACKING OR DISCOLORATION		✔		Slight cracking.	
	Transect EA2	- QUALITY OF ASPHALT COVER	✔				
		- PRESENCE OF CRACKING OR DISCOLORATION		✔		Asphalt cut by Boldt	
	Transect WA1	- QUALITY OF ASPHALT COVER	✔				
		- PRESENCE OF CRACKING OR DISCOLORATION	✔				
ACCESS ROAD							
	ACCESS ROAD	- EROSION		✔		Slight erosion along edge.	
		- OBSTRUCTIONS/DEBRIS	✔				
		- POTHOLES	✔				
		- DAMAGE CAUSED BY VEHICULAR TRAFFIC		✔			

TABLE D.1

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

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED			
SWALE/DRAINAGE DITCHES							
	Transect ES1	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				
	Transect ES2	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS		✔		4ft tall grass in areas.	
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				
	Transect ES3	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS		✔		4ft tall grass in areas.	
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES		✔	Removal of saplings.		11/12/2020

TABLE D.1

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

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED			
SWALE/DRAINAGE DITCHES (CONTINUED)							
	Transect ES4	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS		✔		4ft tall grass in areas.	
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES		✔	Removal of saplings.		11/12/2020
	Transect ES5	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS		✔		4ft tall grass in areas.	
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES		✔	Removal of saplings		11/12/2020
	Transect ES6	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS		✔		4ft tall grass in areas.	
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES		✔	Removal of saplings		11/12/2020

TABLE D.1

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

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED			
SWALE/DRAINAGE DITCHES (CONTINUED)							
	Transect ES7	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS		✔		4ft tall grass in areas.	
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES		✔	Removal of saplings		11/12/2020
	Transect ES8	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS		✔		4ft tall grass in areas.	
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				
	Transect ES9	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔			Clear of obstructions.	
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				

TABLE D.1

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

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED			
SWALE/DRAINAGE DITCHES (CONTINUED)							
	Transect ES10	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				
	Transect ES11	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				
	Transect ES12	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS		✔		4ft tall grass in areas.	
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES		✔	Removal of saplings.		11/12/2020

TABLE D.1

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

ITEM		TYPES OF PROBLEMS	CHECKED		DETAILED ACTIONS REQUIRED	NOTES	DATE AND NATURE OF ACTIONS COMPLETED
			NO PROBLEMS	CORRECTIVE ACTION REQUIRED			
SWALE/DRAINAGE DITCHES (CONTINUED)							
	Transect ES13	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS	✔				
		- ROOTING OF TREES	✔				
	Transect ES13	- QUALITY OF VEGETATIVE COVER - LENGTH OF GRASS - DEAD/DYING GRASS - GRASS COVERAGE - NOXIOUS WEEDS	✔				
		- EROSION	✔				
		- OBSTRUCTIONS	✔				
		- CULVERT/CATCH BASIN - OBSTRUCTIONS - SEDIMENT ACCUMULATION	✔				
		- SIGNS OF BURROWING BY ANIMALS		✔	Filling in of holes.		11/12/2020
		- ROOTING OF TREES		✔	Removal of Saplings.		11/12/2020