

INSPECTION REPORT

Inspection Date:	February 22, 2023	Inspection Announced: No
Time:	Entry: 10:05 AM	Exit: 3:50 PM
Media:	Wastewater and Stormwater	
Statute (s)/Program(s):	Clean Water Act, NPDES, Industrial Stormwater, Direct Discharger Clean Water Act, NPDES, Pretreatment, Indirect Discharger	
Type of inspection:	CEI - Compliance Evaluation Inspection	
Access:	Granted	
Permittee Name:	Caterpillar, Inc.	
Facility or Site Name:	Caterpillar, Inc. – Pontiac, IL	
Facility/Site Physical Address:	1300 4-H Park Road	
(City, State, Zip Code)	Pontiac, Illinois 61764	
County/Parish:	Livingston County	
Permit Numbers:	2022-EP-67798; ILR006863	
SIC or NAICS:	3519	

Inspector Signature and Date: Flatebo, Theodore Digitally signed by Flatebo, Theodore
Date: 2023.04.06 11:54:58 -05'00'

Approver Name and Title: Ryan J. Bahr, Section 2 Supervisor
Water Enforcement and Compliance Assurance Branch

Approver Signature and Date: RYAN BAHR Digitally signed by RYAN BAHR
Date: 2023.04.06 17:19:01 -05'00'

Persons Participating in Inspection:					
Organization/Title	Name	Phone	Email	Present at Opening Conference	Present at Closing Conference
EPA, Environmental Engineer	Ted Flatebo	(312) 886-9402	flatebo.ted@epa.gov	Yes	Yes
EPA, Physical Scientist	Matthew Schulte	(312) 886-2405	schulte.matthew@epa.gov	Yes	Yes
IEPA, Environmental Protection Specialist	Jeffrey Holste	(217) 278-5800	jeffrey.holste@illinois.gov	Yes	Yes
IEPA, Environmental Protection Engineer	Amelia Allen	(217) 278-5800	amelia.allen@illinois.gov	Yes	Yes
IEPA, Environmental Protection Engineer	Chulgi Kim	(217) 278-5800	chulgi.kim@illinois.gov	Yes	Yes
Caterpillar, EHS Manager	Kevin Bennett	(815) 842-6000	bennett_kevin_m@cat.com	Yes	Yes
Caterpillar, EHS Manager	Robert Irwin	(815) 842-6000	irwin.robert@cat.com	Yes	Yes
Caterpillar, Facilities Engineering Manager	Mark Andrews	(815) 842-6000	andrews_mark_d@cat.com	Yes	No
Caterpillar, EHS Professional	Caley Niday	(815) 842-6000	caley.niday@cat.com	Yes	Yes
Caterpillar, EHS Professional	Mackenzie Hickey	(815) 842-6000	mackenzie.hickey@cat.com	No	Yes

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SECTION I – INTRODUCTION

Site Entry and Inspection Objectives

United States Environmental Protection Agency (EPA) Inspectors Ted Flatebo and Matthew Schulte, accompanied by Illinois Environmental Protection Agency (IEPA) inspectors Jeffrey Holste, Amelia Allen, and Chulgi Kim, arrived at Caterpillar, Inc. (the Site or Facility), located at 1300 4-H Park Road, Pontiac, Illinois at 10:05 AM on February 22, 2023 for an unannounced inspection. The five inspectors, collectively referred to as the inspection team, parked their vehicles in the east parking lot and entered the Facility through the entrance in the northeast corner of the building. Mr. Flatebo approached the security desk and informed the security guard that the inspection team was at the Facility for an inspection and requested to speak to a Facility Manager or an EHS Manager. The inspection team waited in the building lobby until approximately 10:35 AM when the inspection team was escorted by Facility personnel to a conference room.

The inspection team presented their individual credentials to site representatives Kevin Bennett, Robert Irwin, Mark Andrews, and Caley Niday. Mr. Flatebo informed the Facility representatives that this was an EPA Region 5 inspection to determine compliance with the Clean Water Act (CWA), the National Pollutant Discharge Elimination System (NPDES) permit program and Categorical Pretreatment regulations. The inspection was conducted under the authority of the CWA NPDES permit program and Section 308 of the CWA. The table above identifies the attendees who participated in the inspection.

This report is based on information supplied by Facility representatives, observations made by the EPA inspectors, and records and reports maintained by the Facility, IEPA, and EPA. These include the following: direct observations made by the EPA inspectors, photographs taken by EPA inspectors, and verbal or written statements made or supplied by Facility representatives during or subsequent to the on-site inspection, and materials, processes, data, photographs, or documents shown, demonstrated, or submitted to the EPA inspectors by Facility representatives during or subsequent to the on-site inspection. In addition, information gathered prior to or subsequent to the inspection from a review of EPA, IEPA, and public records may be

included in this report. During the opening conference, facility representatives were asked if they considered any information confidential business information (CBI). Mr. Bennett stated no information was considered CBI.

Background Information

The inspection team conducted an opening conference with Facility representatives, beginning at approximately 10:40 AM. The team gathered the following Facility information:

Caterpillar, Inc. (Caterpillar) began operations at the Facility in 1978. The Facility was previously owned and occupied by another company before Caterpillar took possession of it. The property covers approximately 100 acres with approximately 879,605 ft² of interior space. The Facility produces fuel system components, including fuel injectors, fuel pumps, and exhaust after treatment components. Operations performed include machining, grinding, heat treatment, and welding. The Facility operates 24 hours a day, 7 days a week and employs approximately 700 Caterpillar employees and approximately 700 contractors.

Process wastewater generated at the Facility is covered by IEPA Water Pollution Control Permit No. 2022-EP-67798. The effective date of the permit is November 28, 2022, and the permit is scheduled to expire on October 31, 2027. The Permit identifies that the Facility is subject to metal finishing point source categorical pretreatment standards (40 C.F.R. 433). Process wastewaters generated at the Facility include, but are not limited to: water-based coolant waste, deionized water, reverse osmosis water, wash tanks, cooling towers, boilers, parts wash water, quench tank wastewater, oily mop water, and metal coloring wastewater. After use, all of these process wastewaters are sent to the Facility wastewater treatment system and effluent is discharged through a single Outfall to the City of Pontiac (City) combined sewer collection system for treatment at the City's wastewater treatment plant. Sanitary wastewater is discharged directly to the City's combined sewer without treatment.

Stormwater generated at the Facility is covered by IEPA National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharged from Industrial Activities (Stormwater General Permit) number ILR006863. The effective date of the permit is April 5, 2017 and it was scheduled to expire on March 31, 2022. IEPA administratively extended the Stormwater General Permit, and it was in effect on the date of the inspection. The Facility's Storm Water Pollution Prevention Plan (SWPPP) identifies two stormwater Outfalls. Both Outfalls discharge to the North Creek, which runs along the Facility's southeast property line. North Creek is a tributary to the Vermilion River.

SECTION II – INSPECTION

The opening conference concluded at approximately 11:25 AM. Afterwards the inspection team began the Facility walk through while accompanied by Mr. Bennett and Mr. Irwin. Below is a general description of the walk through. Specific observations are documented in Section III of this report.

Interior Manufacturing Area

The Facility walk through began in the interior manufacturing area. Parts move through a variety of production steps including machining, grinding, welding and heat treatment. Parts then undergo a quality control inspection before they are shipped to another Caterpillar facility for further processing. At various stages in the process, the parts do come into direct contact with water. Examples include water-based coolants used in the machining phase and water in the parts washers. Additional manufacturing processes include blasting the surface of parts utilizing using glass beads, which is a dry process. Both gas-based and oil-based quenching is also conducted at the Facility.

All wastewater generated at the Facility is sent to the vault in the basement level for holding until it can be transferred to the wastewater treatment system. Spent coolant is directed to the wastewater treatment system through a pumping system that bypasses the vault. There are approximately five floor drains in the manufacturing area that lead to the vault. These drains function as dump stations for employees to dispose of mop water and various other waste waters as they are generated.

Wastewater Treatment System

Following the walkthrough of the manufacturing area, the inspection team proceeded to the wastewater treatment system. The treatment system is located both indoors and outdoors at the southern end of the Facility. All process wastewater generated is sent to a vault before it is pumped to the Facility's wastewater treatment system. Oil is decanted from the vault as an additional pretreatment step. The treatment system discharges effluent through a single Outfall to the City of Pontiac's (City) combined sewer collection system. Sanitary waste is discharged directly to the City's collection system. The wastewater treatment system is composed of holding tanks, chemical mixing tanks, flocculation tanks, a dissolved air floatation (DAF) system, sludge pit, and a centrifuge. See Pretreatment Diagram in Appendix 2.

The wastewater treatment system operates on a batch treatment process. The Facility contracts out the operation of the treatment system to four operators. Two of the four operators hold IEPA Class K wastewater operator certificates. During the inspection, the inspection team spoke to certified operator Jesse Ranta about the operation of the treatment system. Mr. Ranta walked the treatment train and explained his sampling protocols.

Stormwater

After inspecting the wastewater treatment system, the inspection team continued outdoors to observe the stormwater best management practices (BMPs) and the stormwater Outfalls.

The Facility has developed a site-specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP reviewed by Mr. Flatebo was revised on Oct. 28, 2022. During the opening conference Ms. Niday explained that Caterpillar utilizes a contractor to perform most of its Stormwater General Permit compliance activities such

as routine expectations and sampling. Stormwater BMP inspections are conducted on a weekly, monthly, and annual basis. Ms. Niday stated that she joins the contractor, at minimum, during the monthly inspection.

The United States Geological Survey (USGS) rain gage in the Vermilion River in Pontiac, Illinois measured 0.61 inches of rain between 3:00 AM and 3:00 PM on February 22, 2023. Stormwater that falls on the Facility is conveyed by gravity to one of two oil-water separators before it is discharged to an Outfall into the North Creek. The inspection team observed the Facility while it was raining and observed both stormwater Outfalls actively discharging. The inspection team observed a sheen on a stormwater flow within the Facility. Additionally, the inspection team observed a large pit dug immediately north to the fire suppression system water storage tanks located at the south end of the Facility. Mr. Irwin explained that the pipes that supply the tanks were leaking and were in the process of being repaired. Mr. Flatebo observed the pipes actively leaking at a rate of approximately 10 gallons per minute. There was a sump pump placed in the pit that was collecting the leaked water and discharging it into the stormwater conveyance system. See Photo 18.

Categorical Pretreatment Standards

IEPA permit 2022-EP-67798 identifies discharges from the Facility as subject to metal finishing point source categorical pretreatment standards found in 40 C.F.R. 433. The Facility submitted a permit renewal application to IEPA on Aug. 1, 2022 in which the Facility also identified that they were subject to the metal finishing point source categorical pretreatment standards.

In an email sent on March 16, 2023, Mr. Flatebo requested Mr. Bennett to provide additional information on what processes the Facility conducts that would be subject to the metal finishing point source categorical pretreatment standards. On March 31, 2023, Mr. Bennett provided a response indicating that the Facility performs a cold black oxide coating process. See further information in the observations section.

SECTION III – OBSERVATIONS

Observations may not be in sequential order.

Unique Identifying No.	Observation	Area of Concern?
TF-OB-001	Water-based coolants are generated on site from potable water purchased from the local water utility and a coolant concentrate. There is a well located within the Facility boundaries, but according to Mr. Bennett it has not been in use for a few years. When the coolant is spent, it is piped to one of a few coolant filtering machines located throughout the manufacturing floor. The coolant is filtered and piped back into individual machines for further use. The wastewater generated by the filtering machines is manually transferred to the vault in the basement level for holding until it can be processed by the wastewater treatment system. See Photo 1.	No
TF-OB-002	The Facility has a single flow meter located on site. This is a flow meter used to measure potable water purchased from the water utility. Ms. Niday stated that according to the Facility's water bills, the Facility consumes approximately 2,500 – 3,000 gallons of potable water per hour.	No
TF-OB-003	There are no additional flow meters used within the manufacturing process and the Facility could not provide detailed historical average flow rates for individual processes.	Yes
TF-OB-004	On the manufacturing floor there is designated areas for oil storage and a designated area for additional liquid chemical storage. These areas are both surrounded by a berm that provides secondary containment in the event of a spill. The storage areas were observed to be at capacity and chemicals/oil were stored immediately outside the berm area and did not have secondary containment. See Photo 5.	Yes
TF-OB-005	The oil quench tanks produce a wastestream. A pipe was observed discharging from each oil quench tank to a small floor drain for that individual tank. According to Mr. Bennett, the wastewater is directed to the wastewater treatment system. See Photo 7.	No
TF-OB-006	A 55-gallon drum of Cynamic Alti-Mate 64, a disinfecting agent, was observed to be stored immediately on top of a floor drain leading to the wastewater treatment system. See Photo 10.	Yes
TF-OB-007	In the wastewater lab area, Mr. Ranta showed the inspection team a FMC liquid sampler. See Photo 14. Mr. Ranta explained this is the sampler used for composite effluent compliance sample collection. The sampler collects samples based on a time interval, not a flow interval. The sampler has a built-in refrigeration system. There was no thermometer in the sampler and Mr. Ranta was unable to provide a temperature log.	Yes
TF-OB-008	Mr. Ranta explained that grab effluent compliance samples are collected from the north end of the dissolved air floatation tank (DAF) when it is actively discharging. The DAF effluent is sent to outdoor Tank 3 for holding before it is discharged to the City's combined sewer collection system.	No

TF-OB-009	Mr. Ranta stated that the wastewater treatment system utilizes multiple pH adjustment steps to aid in the treatment process. These steps are accomplished through the use and monitoring of pH probes within treatment tanks. Mr. Ranta stated that there is no process for calibrating the internal pH probes.	No
TF-OB-010	The metal finishing point source categorical pretreatment standard found in 40 C.F.R. 433 is applicable to facilities that perform one or more of six core operations. One of those operations is coatings, including metal coloring. The Facility's August 2022 permit application submitted to IEPA identified that the Facility is subject to the metal finishing point source pretreatment standards. Additionally, in an email sent to Mr. Flatebo on March 31, 2023, Mr. Bennett identified that the Facility performs cold black oxide coating. If a facility performs one or more of the six core operations, the wastewater generated by those operation(s) is subject to the pretreatment standards as well as any wastewater generated by the auxiliary operations identified in the regulation. The Facility performs multiple auxiliary operations, including but not limited to: cleaning, machining, grinding, burnishing, heat treating, welding, and electrochemical machining.	No
TF-OB-010	All process wastewater generated at the Facility is directed to the wastewater treatment system. This includes wastewater generated by metal finishing point source categorial processes as well as non-categorical waste streams such as boiler blow down, cooling tower blowdown, and reverse osmosis reject water. Wastewater is also introduced into the treatment system via the approximately 5 dump stations located in the manufacturing areas. See Photo 4. The Facility does not have an approved combined wastestream formula that would provide new effluent limits which account for the dilution by non-categorical wastestreams.	Yes
TF-OB-011	A sheen was observed in stormwater runoff between the Manufacturing 1 and wastewater treatment areas. See Photo 11.	Yes
TF-OB-012	Turbid stormwater runoff was observed in the gutter immediately east of the fire suppression system water storage tanks. See Photo 19.	Yes
TF-OB-013	Stormwater Outfall 002 and Outfall 003 were observed discharging during the inspection. Both outfalls were discharging water which was discolored and the water immediately downstream of the outfalls was discolored compared to upstream. See Photos 20, 21, 24, and 25.	Yes
TF-OB-014	Stormwater was observed flowing under the Facility fence line and towards the North Creek in two places between Outfall 002 and Outfall 003. Per the Facility's SWPPP, the two afore mentioned outfalls are the only two locations where stormwater discharges are monitored. See Photos 23, 26, and 27,	Yes

TF-OB-015	A pipe was observed in the northeast corner of the tank farm at the Facility. The pipe had stormwater flowing into it.	Yes
TF-OB-016	Softball size chunks of road salt were on the ground in the immediate vicinity of a salt application truck. See Photo 28.	Yes
TF-OB-017	Road salt is stored at the Facility within a covered shed immediately south of the wastewater treatment area.	No

SECTION IV – RECORDS REVIEW

Records may not be in sequential order.

Unique Identifying No.	Record	Area of Concern?
TF-RR-001	Water Pollution Control Permit Renewal Application – Dated Aug. 1, 2022 This application was submitted to IEPA in order to renew Permit No. 2017-EP-62654. The application was submitted more than 90 days from the permit expiration date as required by IEPA. The application identifies the Facility's Standard Industrial Classification (SIC) Code as 3519 – Internal Combustion Engines, Not Elsewhere Classified and its North American Industry Classification System (NAICS) Code as 33618 – Other Engine Equipment Manufacturing. The application also identifies that the Facility is subject to the Metal Finishing Point Source Category in 40 CFR 433.	No
TF-RR-002	Waste Treatment Plant Wastewater Collection Flow Diagram, Page 21 of Water Pollution Control Permit Renewal Application – Dated July 2022 The diagram depicts the wastewater sources generated at the Facility and which treatment system each wastestream is directed towards. Examples of wastestreams identified include: -Wash and Phosphate System (1 unit) -Heat Treat Washer (1 unit) -Tumbler (7 units) -Sonic Degreaser (2 units) -Zinc Phosphate Line (1 unit) -Zinc Plating Line (1 unit) The diagram indicates there are two treatment systems:	Yes

Unique Identifying No.	Record	Area of Concern?
	-Oil Waste Treatment System (oily flows) – Discharges to the City of Pontiac Sanitary Treatment Plant. Estimated 100,380 GPD average flow. -Heavy Metals Treatment System (plating flows) – Discharges to the Vermillion River. Estimated 197,080 GPD average flow. During the inspection, the inspection team did not observe a heavy metals treatment system or the presence of a Zinc Phosphate Line or a Zinc Plating Line	
TF-RR-003	In an email sent to Mr. Flatebo on March 31, 2022, Mr. Bennett clarified that the Waste Treatment Plant Wastewater Collection Flow Diagram referenced in TF-RR-002 is incorrect and that the Facility does not have a heavy metals treatment system and the Facility does not have a zinc phosphate line or a zinc plating line.	Yes
TF-RR-004	Annual Facility Site Inspection – Dated Nov. 25, 2021 The annual comprehensive site inspection, conducted on Oct. 21, 2021, does not state whether Outfall 002 and Outfall 003 were discharging at the time of the inspection. In a weekly visual inspection conducted on Nov. 24, 2020, a “light sheen” was observed at Outfall 002. The document states that no corrective action was required. The inspection reports in this annual filing do not include observations of the two stormwater oil-water separators and if they are full or in need of servicing.	Yes
TF-RR-005	Water: Monthly Totals – Document Not Dated The document provides monthly total of flows through processes that utilize water. It is unclear the source of the information. Flows provided include: Potable Water Entering Facility: 4.44 million gallons Effluent from Wastewater Treatment: 2.40 million gallons Reverse Osmosis Influent: 1.94 million gallons Reverse Osmosis Reject: 0.72 million gallons This flow diagram does not align with the Waste Treatment Plant Wastewater Collection Flow Diagram on Page 21 of Water Pollution Control Permit Renewal Application. This diagram indicates that cooling tower blowdown and reverse osmosis reject water bypasses the wastewater treatment system. The Waste Treatment Plant Wastewater Collection Flow Diagram indicate that	Yes

Unique Identifying No.	Record	Area of Concern?
	cooling tower blowdown and reverse osmosis reject are directed to the Heavy Metals Treatment System. See Appendix 3.	
TF-RR-006	IEPA Water Pollution Control Permit No. 2022-EP-97798 – Date Issued Nov. 28, 2022. This permit places a variety of requirements on the Facility, including: -Effluent limits from 40 CFR 433 – Pretreatment Standards for Existing Sources; -Annual sampling requirement; and -Sampling reporting requirements for both IEPA and EPA. The permit also specifically states that the permittee is subject to the Federal Pretreatment standards and regulation, including 40 C.F.R. 403 and that the effluent limit “...numbers do not reflect a reduction in the numerical limitation due to the contributing flows of sanitary wastes, non-contact cooling water, and other dilution wastewaters not regulated...”	No
TF-RR-007	2020 Annual Wastewater Sampling Report – Dated March 1, 2021 The report contains a cover letter and two analytical reports from PDC Laboratories. The first report is dated June 16, 2020 and the second is dated December 22, 2020. Both reports contain wastewater analytical results and a chain of custody. The analytical results indicate that there were not effluent limit violations as compared to limits stated in Permit No. 2017-EP-62654. The analytical reports include pH values as analyzed by PDC Laboratory personnel. A field pH value, analyzed within 15-minutes of grab sample collection, was not provided. Both chains of custody indicate that grab and composite samples were collected. The chains of custody do not indicate how many bottles were used to collect samples, the material of the bottles used, the preservation method for each sample bottle, the start or stop time of the composite sample, and what sample type was used for each analyte. The cover letter of the report was signed by Caley Niday, Caterpillar employee whose title is EHS Professional.	Yes

Unique Identifying No.	Record	Area of Concern?
TF-RR-008	2021 Annual Wastewater Sampling Report – Dated May 4, 2022 The report contains a cover letter and two analytical reports from PDC Laboratories. The first report is dated May 28, 2021 and the second is dated December 30, 2021. Both reports contain wastewater analytical results and a chain of custody. The analytical results indicate that there were not effluent limit violations as compared to limits stated in Permit No. 2017-EP-62654. The analytical reports include pH values as analyzed by PDC Laboratory personnel. A field pH value, analyzed within 15-minutes of grab sample collection, was not provided. Both chains of custody indicate that grab and composite samples were collected. The chains of custody do not indicate how many bottles were used to collect samples, the material of the bottles used, the preservation method for each sample bottle, the start or stop time of the composite sample, and what sample type was used for each analyte. The cover letter of the report was signed by Caley Niday, Caterpillar employee whose title is EHS Professional.	Yes
TF-RR-009	Waste Water Treatment Work Instructions – Printed on April 23, 2012. The Records Section (Page 5) states that wastewater test sample records sheets should be shredded after one year of retention. Records should be maintained for at a minimum of 3 years.	Yes
TF-RR-010	Stormwater Pollution Prevention Plan (SWPPP) – Revised on Oct. 28, 2022 The SWPPP does not contain a topographic map. The SWPPP's facility map is not legible. The stormwater pollution prevention team members do not have email addresses provided. The Facility discharges stormwater to North Creek, which is a tributary of the Vermilion River. The Vermilion River is impaired and has a Total Maximum Daily Loading as approved by IEPA. The SWPPP does not note the receiving water is impaired. The percent of impervious surfaces at the Facility is not identified.	Yes

Unique Identifying No.	Record	Area of Concern?
	The pollutants expected to be present in stormwater discharge are not identified.	
TF-RR-011	Jeremiah Johnson has an IEPA Class K wastewater operator certificate – Dated Dec. 4, 2007.	No
TF-RR-012	The Facility is subject to the metal finishing point source categorical pretreatment regulations found in 40 C.F.R. 433, therefore the general pretreatment regulations found in 40 C.F.R. 403 are also applicable. The general pretreatment regulations require categorical facilities submit periodic reports on continued compliance in June and December annually to the Control Authority. EPA Region 5 is this Facility's Control Authority. The Facility submitted reports to IEPA and EPA reports once annually, in May 2021 and May 2022. Semi-annual reports must be signed by someone who satisfies the pretreatment program signatory requirements.	Yes

SECTION V – SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

No samples were collected as part of this NPDES inspection.

SECTION VI - AREAS OF CONCERN

The presentation of areas of concern does not constitute a formal compliance determination or violation.

Unique Identifying No.	Record
TF-OB-003	There are no additional flow meters used within the manufacturing process and the Facility could not provide detailed historical average flow rates for individual processes. 40 C.F.R. 403.12(b)(4)
TF-OB-004	On the manufacturing floor there is designated areas for oil storage and a designated area for additional liquid chemical storage. These areas are both surrounded by a berm that provides secondary containment in the event of a spill. The storage areas were observed to be at capacity with and chemicals/oil were stored immediately outside the berm area and did not have secondary containment. See Photo 5. 40 C.F.R. 112

TF-OB-006	A 55-gallon drum of Cynamic Alti-Mate 64, a disinfecting agent, was observed to be stored immediately on top of a floor drain leading to the wastewater treatment system. See Photo 10. 40 C.F.R. 112
TF-OB-007	In the wastewater lab area, Mr. Ranta showed the inspection team a FMC liquid sampler. See Photo 14. Mr. Ranta explained this is the sampler used for composite effluent compliance sample collection. The sampler collects compliance samples on a time-proportional basis, not a flow proportional. 40 C.F.R. 403(g)(3) The sampler has a built-in refrigeration system. There was no thermometer in the sampler and Mr. Ranta was unable to provide a temperature log. 40 C.F.R. 136
TF-OB-010	All process wastewater generated at the Facility is directed to the wastewater treatment system. This includes wastewater generated by metal finishing point source categorical processes as well as non-categorical waste streams such boiler blow down, cooling tower blowdown, and reverse osmosis reject water. Wastewater is also introduced into the treatment system via the approximately 5 dump stations located in the manufacturing areas. See Photo 4. 40 C.F.R. 403.6(d) The Facility does not have an approved combined wastestream formula that would provide new effluent limits which account for the dilution by non-categorical wastestreams. 40 C.F.R. 403.6(e)
TF-OB-011	A sheen was observed in stormwater runoff between the Manufacturing 1 and wastewater treatment areas. See Photo 11. Permit No. ILR006863 – Section H.1.d
TF-OB-012	Turbid stormwater runoff was observed in the gutter immediately east of the fire suppression system water storage tanks. See Photo 19. Permit No. ILR006863 – Section H.1.d
TF-OB-013	Stormwater Outfall 002 and Outfall 003 were observed discharging during the inspection. Both outfalls were discharging water which was discolored and the water immediately downstream of the outfalls was discolored compared to upstream. See Photos 20, 21, 24, and 25.

	Permit No. ILR006863 – Section H.1.d
TF-OB-014	Stormwater was observed flowing under the Facility fence line and towards the North Creek in two places between Outfall 002 and Outfall 003. Per the Facility's SWPPP, the two aforementioned outfalls are the only two locations where stormwater discharges are monitored. See Photos 23, 26, and 27, Permit No. ILR006863 – Section F.f
TF-OB-015	A pipe was observed in the northeast corner of the tank farm at the Facility. The pipe had stormwater flowing into it. Permit No. ILR006863 – Section G
TF-OB-016	Softball size chunks of road salt were on the ground in the immediate vicinity of a salt application truck. See Photo 28. Permit No. ILR006863 – Section G
TF-RR-002	Waste Treatment Plant Wastewater Collection Flow Diagram, Page 21 of Water Pollution Control Permit Renewal Application – Dated July 2022 The diagram depicts the wastewater sources generated at the Facility and which treatment system each wastestream is directed towards. -The diagram indicates there are two treatment systems: -Oil Waste Treatment System (oily flows) – Discharges to the City of Pontiac Sanitary Treatment Plant. Estimated 100,380 GPD average flow. -Heavy Metals Treatment System (plating flows) – Discharges to the Vermillion River. Estimated 197,080 GPD average flow. During the inspection, the inspection team did not observe a heavy metals treatment system or the presence of a Zinc Phosphate Line or a Zinc Plating Line. In an email sent to Mr. Flatebo on March 31, 2022, Mr. Bennett clarified that the Waste Treatment Plant Wastewater Collection Flow Diagram referenced in TF-RR-002 is incorrect and that the Facility does not have a heavy metals treatment system and the Facility does not have a zinc phosphate line or a zinc plating line.
TF-RR-003	In an email sent to Mr. Flatebo on March 31, 2022, Mr. Bennett clarified that the Waste Treatment Plant Wastewater Collection Flow Diagram referenced in TF-RR-002 is incorrect

	and that the Facility does not have a heavy metals treatment system and the Facility does not have a zinc phosphate line or a zinc plating line.
TF-RR-004	Annual Facility Site Inspection – Dated Nov. 25, 2021 The annual comprehensive site inspection, conducted on Oct. 21, 2021, does not state whether Outfall 002 and Outfall 003 were discharging at the time of the inspection. Permit No. ILR006863 – Section G In a weekly visual inspection conducted on Nov. 24, 2020, a “light sheen” was observed at Outfall 002. The document states that no corrective action was required. Permit No. ILR006863 – Section H.h.1 The inspection reports in this annual filing do not include observations of the two-oil water separators and if they are full or in need of servicing. Permit No. ILR006863 – Section G
TF-RR-005	Water: Monthly Totals – Document Not Dated The document provides monthly total of flows through processes that utilize water. It is unclear the source of the information. Flow provided include: Potable Water Entering Facility: 4.44 million gallons Effluent from Wastewater Treatment: 2.40 million gallons Reverse Osmosis Influent: 1.94 million gallons Reverse Osmosis Reject: 0.72 million gallons This flow diagram does not align with the Waste Treatment Plant Wastewater Collection Flow Diagram on Page 21 of Water Pollution Control Permit Renewal Application. This diagram indicates that cooling tower blowdown and reverse osmosis reject water bypasses the wastewater treatment system. The Waste Treatment Plant Wastewater Collection Flow Diagram indicates that cooling tower blowdown and reverse osmosis reject water are directed to the Heavy Metals Treatment System. In an email sent to Mr. Flatebo on March 31, 2022, Mr. Bennett clarified that the Waste Treatment Plant Wastewater Collection Flow Diagram referenced in TF-RR-005 is incorrect and that the Facility will work to update the diagram.

TF-RR-007	2020 Annual Wastewater Sampling Report – Dated March 1, 2021 The report contains a cover letter and two analytical reports from PDC Laboratories. The first report is dated June 16, 2020 and the second is dated December 22, 2020. Both reports contain wastewater analytical results and a chain of custody. The analytical results indicate that there were not effluent limit violations as compared to limits stated in Permit No. 2017-EP-62654. The analytical reports include pH values as analyzed by PDC Laboratory personnel. A field pH value, analyzed within 15-minutes of grab sample collection, was not provided. Permit No. 2022-EP-67798 – Special Condition 5(A) and 40 C.F.R. 136 Both chains of custody indicate that grab and composite samples were collected. The chains of custody do not indicate how many bottles were used to collect samples, the material of the bottles used, the preservation method for each sample bottle, the start or stop time of the composite sample, and what sample type was used for each analyte. 40 C.F.R. 136 The cover letter of the report was signed by Caley Niday, Caterpillar employee whose title is EHS Professional. 40 C.F.R. 403.12(I)
TF-RR-008	2021 Annual Wastewater Sampling Report – Dated May 4, 2022 The report contains a cover letter and two analytical reports from PDC Laboratories. The first report is dated May 28, 2021 and the second is dated December 30, 2021. Both reports contain wastewater analytical results and a chain of custody. The analytical results indicate that there were not effluent limit violations as compared to limits stated in Permit No. 2017-EP-62654. The analytical reports include pH values as analyzed by PDC Laboratory personnel. A field pH value, analyzed within 15-minutes of grab sample collection, was not provided. Permit No. 2022-EP-67798 – Special Condition 5(A) and 40 C.F.R. 136 Both chains of custody indicate that grab and composite samples were collected. The chains of custody do not indicate how many bottles were used to collect samples, the material of the bottles used, the preservation method for each sample bottle, the start or stop time of the composite sample, and what sample type was used for each analyte. 40 C.F.R. 136

	The cover letter of the report was signed by Caley Niday, Caterpillar employee whose title is EHS Professional. 40 C.F.R. 403.12(I)
TF-RR-009	Waste Water Treatment Work Instructions – Printed on April 23, 2012. The Records Section (Page 5) states that wastewater test sample records sheets should be shredded after one year of retention. Records should be maintained for at a minimum of 3 years. 40 C.F.R. 403.12(o)
TF-RR-010	Stormwater Pollution Prevention Plan (SWPPP) – Revised on Oct. 28, 2022 The SWPPP does not contain a topographic map. Permit No. ILR006863 – Section E.5.a The SWPPP’s facility map is not legible. Permit No. ILR006863 – Section E.5.b The stormwater pollution prevention team members do not have email addresses provided. Permit No. ILR006863 – Section E.7 The Facility discharges stormwater to North Creek, which is a tributary of the Vermilion River. The Vermilion River is impaired and has a Total Maximum Daily Loading as approved by IEPA. The SWPPP does not note the receiving water is impaired. Permit No. ILR006863 – Section C.1 The percent of impervious surfaces at the Facility is not identified. Permit No. ILR006863 – Section E.5.b The pollutants expected to be present in stormwater discharge are not identified. Permit No. ILR006863 – Section E.5
TF-RR-012	The Facility is subject to the metal finishing point source categorical pretreatment regulations found in 40 C.F.R. 433, therefore the general pretreatment regulations found in 40 C.F.R. 403 are also applicable. The general pretreatment regulations require categorical facilities submit periodic reports on continued compliance in June and December annually to the Control Authority. EPA

	Region 5 is this Facility’s Control Authority. The Facility submitted reports to IEPA and EPA reports once annually, in May 2021 and May 2022. 40 C.F.R. 403.12(e)(1) Semi-annual reports must be signed by someone who satisfies the pretreatment program signatory requirements. 40 C.F.R. 403.12(l)
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SECTION VII – CLOSING CONFERENCE

Closing Conference

The inspection team held a closing conference with Facility personnel beginning at approximately 3:00 PM. During the closing conference, inspectors discussed the observations and Areas of Concern identified during the inspection. Observations and Areas of Concern have not yet been evaluated for a formal compliance determination.

SECTION VIII – LIST OF APPENDICES

Appendix 1 – Photo Log

Appendix 2 – Wastewater Treatment Flow Diagram

Appendix 3 – Facility Water Volume Diagram

Appendix 1 – Photo Log

Caterpillar, Inc. - Pontiac, IL

EPA Inspection February 22, 2023

All photos taken by Ted Flatebo, Environmental Engineer, U.S. EPA

Camera: Ricoh WG-4



1: RIMG0124

Description: Coolant filtering machine. Spent filter cloth exiting machine in foreground. Waste liquid is stored in blue bin in the center of the photo.

Location: Manufacturing 2

Date/Time: February 22, 2023, 11:41 AM



2: RIMG0125

Description: Lubricant exiting machine.

Location: Manufacturing 2

Date/Time: February 22, 2023, 11:45 AM



3: RIMG0126

Description: Part washing machine. Washing occurs on the left side of the machine and rinsing on the right side of the machine.

Location: Manufacturing 2

Date/Time: February 22, 2023, 11:48 AM



4: RIMG0127

Description: Liquid waste disposal area.

Location: Manufacturing 2

Date/Time: February 22, 2023, 11:51 AM



5: RIMG0128

Description: New oil stored outside of the white cinderblock oil storage room. This room is immediately behind the wall in the background of the photo. The blue oval depicts secondary containment for the oil totes. The red circle depicts the lack of secondary containment for the 55 gallon drum.

Location: Oil storage area.

Date/Time: February 22, 2023, 11:59 AM



6: RIMG0129

Description: Heat treatment and oil quench. Drain under equipment goes to storage vault in the basement.

Location: Heat Treatment

Date/Time: February 22, 2023, 12:03 PM



7: RIMG0130

Description: Steam condensate line draining to floor drain which flows to basement vault.

Location: Manufacturing 4

Date/Time: February 22, 2023, 12:08 PM

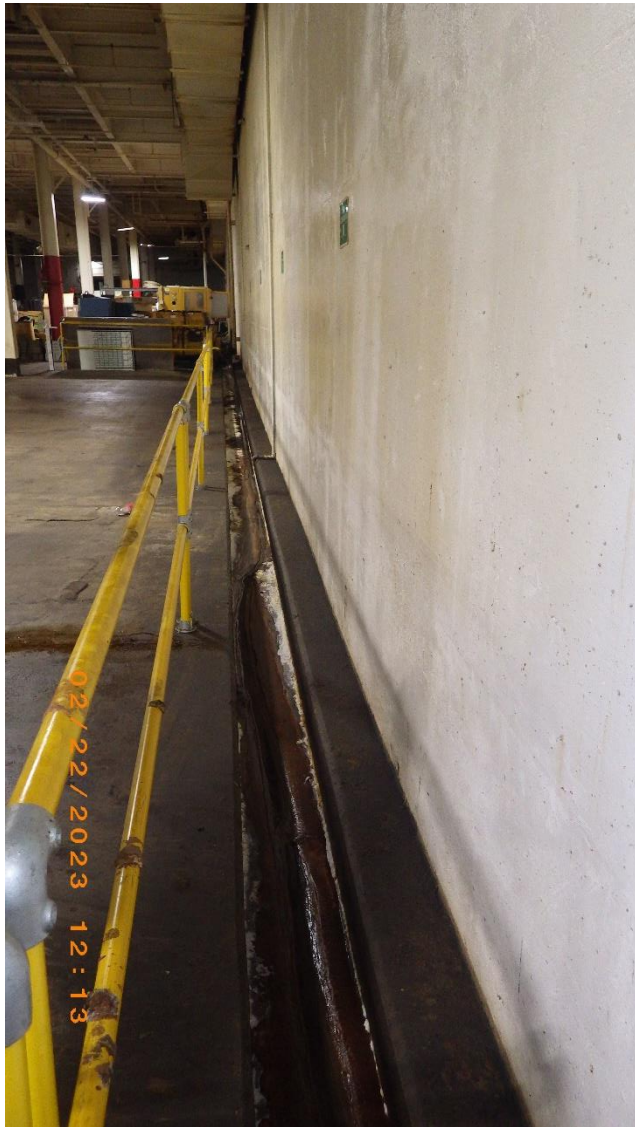


8: RIMG0131

Description: Wastewater vault overview.

Location: Basement.

Date/Time: February 22, 2023, 12:10 PM



9: RIMG0132

Description: Trench drain that flows to vault.

Location: Basement

Date/Time: February 22, 2023, 12:13 PM



10: RIMG0133

Description: Liquid waste disposal area. Note storage of Cynamic Alti-Mate 64 in blue container directly above drain.

Location: Manufacturing 1

Date/Time: February 22, 2023, 12:27 PM



11: RIMG0134

Description: Stormwater flow with visible sheen.

Location: Outside between Manufacturing 1 and wastewater treatment area

Date/Time: February 22, 2023, 12:29 PM



12: RIMG0135

Description: Overview of ODP (oxygen deprive product) tank.

Location: Outdoor section of wastewater treatment area – northwest tank.

Date/Time: February 22, 2023, 12:35 PM



13: RIMG0136

Description: Overview of DAF (dissolved air floatation) tank.

Location: East end of indoor wastewater treatment area.

Date/Time: February 22, 2023, 12:41 PM



14: RIMG0137

Description: Effluent composite sampler.

Location: Lab section of wastewater treatment area.

Date/Time: February 22, 2023, 12:58 PM



15: RIMG0138

Description: Tank 2 - Wastewater influent storage tank.

Location: Outdoor section of wastewater treatment area – south center tank.

Date/Time: February 22, 2023, 1:16 PM



16: RIMG0139

Description: Tank 3 - Wastewater effluent storage tank.

Location: Outdoor section of wastewater treatment area – southeast tank.

Date/Time: February 22, 2023, 1:17 PM



17: RIMG0140

Description: Weir at the north end of the DAF unit. This is the grab sample compliance sampling location.

Location: East end of indoor wastewater treatment area.

Date/Time: February 22, 2023, 1:20 PM



18: RIMG0141

Description: Valve assembly that feeds potable water to the two fire suppression system storage tanks. Blue circle denotes active leak in the valve assembly. Red circle denotes sump pump actively draining water.

Location: North of the two fire suppression system tanks located at southern end of the Facility. Date/Time: February 22, 2023, 13:28 PM



19: RIMG0142

Description: Turbid stormwater flowing through gutter towards storm drain.

Location: Intersection of the two roads immediately east of the fire suppression system water tanks.

Date/Time: February 22, 2023, 1:32 PM



20: RIMG0143

Description: Stormwater Outfall 002. Note brown streak of brown material in North Creek originating at the Outfall.

Location: North Creek, southern of two Outfalls identified in SWPPP.

Date/Time: February 22, 2023m 2:00 PM



21: RIMG0144

Description: Stormwater Outfall 002.

Location: North Creek, southern of two Outfalls identified in SWPPP.

Date/Time: February 22, 2023, 2:00 PM



22: RIMG0145

Description: Stormwater flowing through Facility fence towards North Creek.

Location: Along Facility fence line between Outfalls 002 and 003

Date/Time: February 22, 2023, 2:03 PM



23: RIMG0146

Description: Overview of stormwater flow depicted in Photo 22. Blue circle denotes erosion of material under Facility fence line.

Location: Along Facility fence line between Outfalls 002 and 003.

Date/Time: February 22, 2023, 2:04 PM



24: RIMG0147

Description: Stormwater Outfall 003. Note brown streak of material in North Creek originating at the Outfall.

Location: North Creek, northern of two Outfalls identified in SWPPP.

Date/Time: February 22, 2023, 2:05 PM



25: RIMG0148

Description: Stormwater Outfall 003.

Location: North Creek, northern of two Outfalls identified in SWPPP.

Date/Time: February 22, 2023, 2:06 PM



26: RIMG0149

Description: Stormwater flow through Facility fence towards North Creek.

Location: Along Facility fence line between Outfalls 002 and 003.

Date/Time: February 22, 2023, 2:08 PM



27: RIMG0150

Description: Overview of stormwater flow depicted in Photo 26.

Location: Along Facility fence line between Outfalls 002 and 003.

Date/Time: February 22, 2023, 2:08 PM



28: RIMG0151

Description: Road salt application truck. Hopper in truck bed was full at time of inspection. Blue circle denotes chunks of road salt exposed to storm water.

Location: Along Facility fence line, adjacent to Outfall 002.

Date/Time: February 22, 2023, 2:14 PM



29: RIMG0152

Description: Hoses leading from outdoor wastewater treatment area to grass.

Location: Outdoor section of wastewater treatment area.

Date/Time: February 22, 2023, 2:15 PM



30: RIMG0153

Description: Tank farm loading/unloading location. Note catch basin directly beneath the end of the pipes.

Location: Tank farm in southwest corner of the Facility.

Date/Time: February 22, 2023, 2:20 PM



31: RIMG0155

Description: Overview of stormwater captured in tank farm secondary containment. Blue circle denotes pipe in Photo 32.

Location: Tank farm in southwest corner of the Facility.

Date/Time: February 22, 2023, 2:23 PM



32: RIMG0156

Description: Pipe actively taking on water from within tank farm secondary containment. See overview of pipe location in Photo 31.

Location: Tank farm in southwest corner of the Facility.

Date/Time: February 22, 2023, 2:23 PM

Appendix 2 – Wastewater Treatment Flow Diagram



Appendix 3 – Facility Water Volume Diagram

