United States Environmental Protection Agency

REGION 5 Enforcement and Compliance Assurance Division

INSPECTION REPORT

Inspection Date(s):	08/30/2022 - 08/31/2022	Announced: Yes
Time:	Entry: 01:05 PM (ET)	Exit: 01:20 PM (ET)
Media:	Water	
Statute(s)/Program(s):	Clean Water Act, NPDES, WWTP	
Type of inspection:	CEI - Compliance Evaluation Inspection	
Access:	Granted	
Permittee Name:	CITY OF KENDALLVILLE	
Facility or Site Name:	CITY OF KENDALLVILLE WASTEWATER TREATMENT PLANT	
Facility/Site Physical Address:	501 WEST WAYNE STREET	
(City, state, zip code)	KENDALLVILLE, IN 46755	
County/Parish:	NOBLE	
Facility GPS Coordinates:	41.446444, -85.273806	
Facility/Site Identifier:	110005973900	
Permit Number:	IN0020656	

Persons Participating in Inspection:

Title	Name	Phone	Email	Present at Opening Conf.	Present at Closing Conf.
Lead Inspector	Dean Maraldo	3123532098	Maraldo.Dean@epa.gov	Yes	Yes
Inspector	Valerie Dooling	(312) 886-7167	Dooling.Valerie@epa.gov	Yes	Yes
Superintendent	Mark Schultz	(260) 349-8598	mschultz@kendallville-in.org	Yes	Yes
Lab Technician	Kelsie Duehmig	(260) 410-4400	kduehmig@kendallville-in.org	No	No
CEO WET Env. Eng (City Consultant)	Wade Hale			Yes	Yes
Lead operator	Jordan Undeen			Yes	Yes
Maint. and Collection Supervisor	Patrick Howell			Yes	Yes
Pretreatment Coordinator	Trevor Hampshire	(260) 347-1362	THampshire@kendallville-in.org	Yes	No

Lead Inspector:

Dean Maraldo	*[Signature]* DINO MARALDO	Digitally signed by DINO MARALDO Date: 2022.09.16 09:48:34 -05'00'	
	REGION 5	Maraldo.Dean@epa.gov	(312) 353-2098

Supervisor Review:			
Ryan Bahr	*[Signature]* Bahr, Ryan Digitally signed by Bahr, Ryan Date: 2022.09.16 11:20:56 -05'00'		
	REGION 5	bahr.ryan@epa.gov	

SECTION I – INTRODUCTION

Site Entry and Inspection Objectives

I, Region 5 Lead Inspector, Dean Maraldo, arrived at the KENDALLVILLE WWTP (the "Site" or "Facility"), located at 501 WEST WAYNE STREET, at 01:05 PM (all times in Eastern Time Zone) on 08/30/2022 for an announced inspection. REGION 5 inspector Valerie Dooling joined me for the inspection and we both presented our credentials to the Superintendent Mark Schultz and informed him that this was a REGION 5 inspection to determine compliance with the Clean Water Act (CWA) and the National Pollutant Discharge Elimination System (NPDES) permit program. The inspection was conducted under the authority of the Federal CWA (Section 308). The table above identifies the attendees that participated in the inspection. This report is based on information supplied by Facility representatives, observations made by the Region 5 inspectors, and records and reports maintained by the permittee and the Region 5 inspectors, including: direct observations made by the Region 5 inspectors, photographs taken by Region 5 inspectors, physical evidence collected by the Region 5 inspectors, verbal or written statements made by or information supplied by Facility representatives (the permittee) during or subsequent to the on-site inspection, and materials, processes, data, photographs, or documents shown, demonstrated, or submitted to the Region 5 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 U.S. EPA, State, and public records may be included in this report.

Facility/Site Description

After opening introductions, we went over the inspection plan for the next two days. I asked if there were any questions. There were no questions. I began by asking about the Facility information provided in the latest NPDES permit ("Permit"). Unless noted otherwise, the Superintendent confirmed the following (responses are in italics):

- The permittee currently operates a Class III, 2.68 million gallon per day ("MGD") single-stage nitrification activated sludge plant consisting of grit removal, bar screening, primary clarification, aeration, secondary clarification, phosphorus removal, ultraviolet light disinfection, and post aeration. *Sounds right.*
- Sludge is to be treated by anaerobic and aerobic digesters. Sludge will be de-watered via a screw press. Final sludge will be landfilled. *Yes.*
- The collection system is comprised of combined sanitary and storm sewers with one (1) Combined Sewer Overflow (CSO) location. The collection system is composed of approximately 35 miles of separate storm sewers, 53 miles of separate sanitary sewers, and 4 miles of combined sanitary and storm sewers. *City engineer Wade Hale said about 95% of the collection system is separated. Maintenance and Collection Supervisor Patrick Howell added that the City spent over $1M in lining, including manhole lining. Otherwise permit description is correct.*
- The permittee is authorized to discharge from Outfall 003, which is located at Latitude: 41° 26' 50" N, Longitude: 85° 16' 22" W. *Yes.*

I asked about lift stations. Patrick Howell said they operate 16 lift stations and the majority of the collection system is gravity with some force mains.

The Facility was built as a trickling filter plant in 1950s. A biotower was added in late 1980s for nitrification. The Facility was upgraded to activated sludge and extended aeration in August 2018, and they added UV. The Superintendent started with the City in 2014.

Facility/Site Information

Responses below provided by the Superintendent, unless noted otherwise.

WWTP Design Capacity & Average Daily Flow	2.68 MGD design, peak hourly 6.48 MGD; 2 MGD average daily
WWTP Approx. # of residents served	Roughly 10,000
Contributing (or shared) Jurisdictions	Some mobile home parks
Outfalls: (and do the numbers, locations, and receiving waters match the permit?)	003; CSO is 002
Operation schedule (days of operation, # shifts/day, # operators/shift, coverage overnight, weekends & emergencies), and is staffing sufficient for proper operation?	6:45am-3:15pm M-F; 4 hour day on weekends w/one operator; 3 operators during week
Do you use in-house or contract out for laboratory analyses? (including for metals or WET testing?)	In-house, except they send out metals and toxicity to CF Labs in Fort Wayne
Do you accept waste from septage haulers? If so, what problems have you experienced?	No
Is there currently any portion of the treatment train that is non-operational?	One aeration blower down since last week, expect back next week (Patrick Howell)
Are there any plans for renovation or additional equipment to allow for increased wastewater flow?	No, except for Kraft-Heinz situation
Responsible official	Mark Schultz
Any CBI concerns?	No

Inspection Units

Unit/Area	Description
Interview	Interview questions and observations
Non-DMR NPDES Reports	
Self Monitoring	
Flow Monitoring	
Operations and Maintenance	
Sanitary Sewer Overflows	
Combined Sewer Overflows	
Pretreatment	
Records Review	
Physical Inspection	Physical inspection
Headworks	
Primary Clarification	
Aeration	

Secondary Clarification
Disinfection
Post-aeration
Phosphorus Removal
CSO Outfall
Final Outfall

SECTION II – OBSERVATIONS

Observations may not be in sequential order.

Unit: Interview/Non-DMR NPDES Reports	**Contains CBI:** No
Observation #: DM1-OB-001	**Date:** 08/30/2022

I asked the Facility representatives about non-DMR reporting requirements in the Permit.

The Permit requires the Facility to conduct an annual inventory of priority pollutants (see 40 CFR 423, Appendix A) and identify and quantify additional organic compounds which occur in the influent, effluent, and sludge. The analytical report shall be sent to the Pretreatment Group. This report is due in December of each year. The Superintendent said the report for 2021 was submitted on time.

I asked about the status of June toxicity violations. The Superintendent said repeat samples failed in July, and they are following protocols per the permit. He believes toxicity issues are always due to high solids, when plant settling becomes erratic and high organic acids obstruct development of floc.

Unit: Interview/Flow Monitoring	**Contains CBI:** No
Observation #: DM1-OB-003	**Date:** 08/30/2022

I asked about influent and effluent flow measuring devices. The Superintendent said influent flow is measured using an area velocity meter, and effluent flow is measures with a transducer and broad crested weir. The devices are professionally calibrated every year by GRIP inc. The Superintendent confirmed that any return flows go into the primary wet well, but after influent flow meter.

Unit: Interview/Operations and Maintenance	**Contains CBI:** No
Observation #: DM1-OB-004	**Date:** 08/30/2022

I began the discussion on operations and maintenance ("O&M") with a general question about the current operational condition of all treatment units. The Superintendent said all treatment units are online, except for one of the four aeration blowers currently in repair. He then began a demonstration of the computer-based O&M tracking program called "HACH Job Cal". The program automatically issues O&M work orders every week. The work orders are based on O&M manual information entered into the program. Tasks scheduled on Monday to operators. Lead operators close out completed work orders in system.

Maintenance records are maintained as follows:
a. As-built drawings - stored on computer shared drive
b. Shop drawings - stored on computer shared drive
c. Maintenance history - Job cal
d. Maintenance costs - track costs on spreadsheets

e. Repair history - write dates on equipment tags
f. Records of equipment repair and timely return to service - just write dates on equipment.
g. instruction files for operation and maintenance of each item of major equipment - stored on computer shared drive
h. Operation and maintenance manual is available - paper and shared drive

We then reviewed current operations staffing, and the Superintendent said there are currently three certified wastewater operators, including Patrick Howell (class 4 wastewater, class 3 collection), Mark Schultz (class 4 wastewater, D pretreatment, class 4 collection), and Kelsie Duehmig (class 1 wastewater). The three other operators are certified in class 1 collection. Three others are ready to take the collection certification exam. The Facility has established procedures for training new operators, including on the job training and internal study groups.

I asked if operators monitor key operating parameters on a regular basis. The Superintendent said they run settleable solids daily, along with mixed liquor volatiles, F/M ratio, sludge age, and MCRT. He added that Kraft (Kraft Heinz Company) makes up 2/3 of the plant's Carbonaceous Biochemical Oxygen Demand ("CBOD") loading. CBOD loading is the biggest problem. The City routinely calculates, based on Kraft CBOD loadings, the amount of phosphorus-based additive ("Blue Magic") used for CBOD treatment. Wade Hale explained the history of the Kraft CBOD issue using a graph that showed Kraft CBOD loading over time. I requested copy of the Kraft CBOD loading graph (see Appendix 2 – Inspection Documents). Wade Hale said that the variable CBOD loading from Kraft is driving plant failures. Kraft's flow volume is 300-450 thousand gallons per day. The City met with Kraft in August and reached agreement for Kraft to pay $65,000/month to cover chemical addition costs, in addition to any surcharge fees. Kraft surcharges fees are about $100,000 per month according to the Superintendent.

I asked about plant Bypasses. The Superintendent said there was one bypass back in 2017. Since then no bypasses.

I then asked a series of questions about plant alarms, emergencies, and O&M procedures. The Superintendent provided the responses (in italics):

Does the wastewater treatment facility have an alarm system for all essential equipment? *Yes, the Plant has a SCADA-based alarm system for failures with texts to operators. Lift stations have cellular dialer systems to alert the plant and operators.*

Are alarms sent to qualified personnel who can respond immediately to remedy the problem? *Yes. Patrick Howell explained that the alarm system will dial Jordan Undeen first, then Patrick Howell, then the other maintenance staff until someone picks up.*

Are routine and preventive maintenance scheduled performed and recorded? *Yes, recorded in Job Cal.*

Does the facility maintain written procedures for responding to emergencies such as power failures, floods, fires, and other natural disasters? Y*es, in Plant Emergency Response Plan.*

Is a logbook kept which documents all plant activities on a daily basis? *Yes, electronic log. Operators put notes in Job Cal.*

Does the facility maintain an inventory of spare parts, either at the facility or close by, sufficient to keep all of its treatment units operational? *Yes, in Job Cal.*

Does the facility have standby power for all treatment units? *Yes, 500 KW generator diesel. One lift station has a generator. Two portable generators are available for other lift stations, as needed.*

Is the standby power regularly exercised under load? *Yes, first Monday of every month under load, and weekly*

startups.

Unit: Interview/Sanitary Sewer Overflows	**Contains CBI:** No
Observation #: DM1-OB-005	**Date:** 08/30/2022

I asked if the Facility experienced any backups or overflows in the sanitary sewer collection system over the last three years. The Superintendent said there was a lift station backup in April 2019. The backup resulted in a discharge to a receiving water and was reported to IDEM. He provided a copy of the report (see Appendix 2 – Inspection Documents). Patrick Howell said there was a backup in a sewer line on Main St. in July, but it never discharged from the collection system. No recent backups resulted in discharges from the collection system. Patrick Howell added that there are few reported basement backups and related complaints, but they are almost always private lateral issues.

Unit: Interview/Combined Sewer Overflows	**Contains CBI:** No
Observation #: DM1-OB-006	**Date:** 08/30/2022

We briefly reviewed the status of CSO control program. The Superintendent confirmed that they have an LTCP, and they experienced one CSO in the last 5 years.

Unit: Interview/Pretreatment	**Contains CBI:** No
Observation #: DM1-OB-007	**Date:** 08/30/2022

I asked a series of questions regarding the City's pretreatment program. Unless noted otherwise, the Superintendent provides the responses (in italics) to the questions below:

Are SIU permits issued/reissued in accordance with SUO? *Yes, they are 5-year permits, and both [Kraft and Creative Liquid Coatings] permits up-to-date.*

Are Significant Industrial Users ("SIUs") inspected at least once per year? *Trevor Hampshire responded. Yes, SIUs three times per year, and inspections are up to date. There are 31 total industrial users. Yearly inspections with sampling are conducted at each industrial user. City plans to permit another SIU (Ashley Industrial Molding), currently discharging non-contact cooling water to the storm sewer.*

I asked for a copy of the City's pretreatment emergency response plan ("ERP"). The Superintendent provided copy of current ERP.

The City as Control Authority ("CA") is required to initiate the appropriate enforcement action against a SIU violating any provision of the SUO and/or discharge permit in accordance with the ERP adopted by the CA. I asked the Facility representatives to summarize past pretreatment enforcement actions. *The Superintendent mentioned the recent Kraft order signed in May 2022* (see Appendix 2 – Inspection Documents). *No other admin orders were issued. Trevor Hampshire said it is ramping up enforcement. The Superintendent added that the City has never "fined" Kraft and that the City "had not been as aggressive as they should."*

I asked if the City, as the CA, published by January 28, in the largest daily newspaper in the area, a list of SIUs that have been in Significant Noncompliance (SNC) with the SUO during the calendar year. *Yes, it was done by last January 28.*

I asked if the City, as the CA, submitted an annual report, including an updated industrial user survey list, to EPA Region 5 by April 1. *We submit annual reports to IDEM*. *Trevor Hampshire added that they also submit quarterly report to IDEM, including updates on violations, SIU "check in", and inspection schedule status.*

Earlier in the inspection, the Superintendent referred to the CBOD loading from the Kraft SIU as the biggest

compliance problem for the Kendallville WWTP. We asked some follow-up questions about the Kraft SIU facility, and, unless noted otherwise, the Superintendent provided the following responses (in italics):

When did potential interference/pass through issues begin at Kraft? *Referring to the Kraft CBOD loading chart* (see Appendix 2 – Inspection Documents)*, the Superintendent said about February 2019.*

When did the City first notify Kraft that its discharges may be causing interference or pass through? *We notified Kraft after the first plant failure and I think they were aware that we were having problems. We will look for documentation that shows our initial contact with Kraft.*

How much does the City collect in surcharge fees to Kraft on average? *We will provide surcharge cost information.* The Superintendent later provided a document with the surcharge cost information (see Appendix 2 – Inspection Documents).

What percentage of influent flow does Kraft contribute normally? *We have influent flow data we can provide.* The Superintendent later provided Kraft monthly monitoring reports, including flow data.

Is the City aware of any recent concerns or complaints regarding palm oil residue seeps along Main St., Ohio St., and Pennsylvania Ave? *No. Trevor Hampshire thought the worst of the palm oil spill would have been in March and even then he was not aware of any seepage in the streets. Patrick Howell said any seep reports might be related to Kraft sewer line cleaning efforts in the area after the palm oil spill. But he was not sure about timing of when Kraft's cleaning contractor was in the area or whether the cleaning had anything at all to do with any seep complaints.*

Where do things stand with Kraft? *City entered into a financial agreement, and we have meetings set up in September for technical discussions.*

Inspector Dooling asked about CBOD spikes from Kraft, and specifically if the City considers CBOD spikes to be interference/pass through. *The Superintendent said the City has informed Kraft that they are causing interference/pass through.*

Inspector Dooling asked for Kraft's spill response plan. Trevor Hampshire provided a copy via email on September 6, 2022.

Inspector Dooling asked about local limits vs surcharge limits for CBOD: *Kraft has never had mass limits for CBOD.*

Unit: Interview/Self Monitoring	**Contains CBI:** No
Observation #: DM1-OB-002	**Date:** 08/31/2022

We returned to the Facility on 8/31 at 8 AM and planned to conclude the interview portion of the inspection and conduct the physical plant inspection.

Before starting with self monitoring questions, I asked for copy of the spreadsheet used to graph the CBOD loading data from Kraft. Trevor Hampshire provided a copy via email on September 6, 2022.

Kelsie Duehmig, lab technician, joined us for this discussion, and provided the responses (in italics) below:

Where are influent and effluent samples collected? *Influent composite samples collected at headworks (ISCO composite sampler), at rate of 150 ml every 30 minutes; effluent composite samples collected in same manner, after disinfection and before outfall, at a rate of 150 ml every 30 minutes. Effluent grab samples collected right from the final outfall. Composite samples are time proportioned (30 mins).*

Are composite samples cooled during the compositing period? *Yes, they are refrigerated at 4 degrees, and*

temperature log maintained for each. Grab samples at outfall are brought back to lab for immediately analysis. pH and Dissolved Oxygen ("DO") are analyzed within 15 minutes.

Are composite sampler tubes cleaned or replaced to ensure they are free of debris which can result in stagnant water between sample collection events? *Yes, composite sampler tubes replaced monthly.*

What is the process for sampling for *E.coli*? *E.coli samples are collected after disinfection with a sludge judge then into a plastic bag, then into a sample bottle. Process for analysis in the lab usually begins within 5 minutes of grabbing the sample.* I asked if the sludge judge is cleaned between samples. Kelsie Duehmig said they do not clean the sludge judge between use.

Are field probes routinely calibrated? *We run pH and DO calibrations daily and keep calibration logs. A company comes into the lab annually to calibrate lab equipment, like scales.*

Unit: Physical Inspection/Headworks **Contains CBI:** No

Observation #: DM1-OB-008 **Date:** 08/31/2022

We began the physical plant inspection at 11:20 AM. The Superintendent led the tour and we were joined by Wade Hale, Patrick Howell, and Jordan Undeen.

We started at headworks and grit basin where all flow enters the plant via gravity from the collection system (see grit basin and influent pipe outlet in Photo Log image KEND0119).

We then walked into the Grit Building and observed the bar screen which was behind plastic curtains to minimize odor (see Photo Log image KEND0120). Patrick Howell said that aside from a recently repaired bearing issue, the bar screen is working well. I also observed a caustic chemical tank which is no longer in use (see Photo Log image KEND0121). Before leaving the Grit Building, I observed the influent composite sampler (ISCO). I noticed the sampler was refrigerated and included a thermometer (see Photo Log image KEND0122).

Photo(s)

1. KEND0119.JPG
2. KEND0120.JPG
3. KEND0121.JPG
4. KEND0122.JPG

Unit: Physical Inspection/Primary Clarification **Contains CBI:** No

Observation #: DM1-OB-009 **Date:** 08/31/2022

Prior to reaching the primary clarification area, we stopped at the Operations Building. We observed the raw sewage pumps (4) and SCADA system display (see Photo Log image KEND0125). Patrick Howell used the SCADA display to explain the procedure for managing wet weather flows. To avoid Return Activated Sludge ("RAS") washout, they begin to shut down RAS and blowers at 5 MGD (blowers) and 6 MGD (RAS). After wet weather events the RAS starts to come back online at 5.5 MGD.

After the wet-weather discussion we walked to the primary clarifiers (6). Three were in operation. The Superintendent said the system runs best with three primary clarifiers in service, and they remove about 50% of the total suspended solids ("TSS") and about 25-30% of the CBOD. He pointed out the small palm oil blobs floating on top of the influent raw water (see Photo Log image KEND0126). I also observed the floating palm oil blobs collected along the back of primary clarifier #2 (see Photo Log image KEND0127). The palm oil is

eventually skimmed off and ends up in the anaerobic digestor. I asked if what we observed today is normal or a remnant of the big spill that occurred this past spring. The Superintendent said this is a normal amount of palm oil. Before leaving this area, I took a picture looking back at the primary clarifiers (see Photo Log image KEND0128).

Photo(s)

1. KEND0127.JPG
2. KEND0126.JPG
3. KEND0128.JPG
4. KEND0125.JPG

Unit: Physical Inspection/Aeration **Contains CBI:** No

Observation #: DM1-OB-010 **Date:** 08/31/2022

As we walked to the aeration area I observed the aeration blowers (4). One of the blowers was out of service due to motor repairs (see Photo Log image KEND0129). Patrick Howell said he expects to put the blower back in service the following week. One of the four aeration tanks was offline due to the out-of-service blower (see aeration tanks in Photo Log image KEND0130). The Superintendent said they may be having nitrogen issues due to the out-of-service blower and aeration tank. Before leaving the aeration area we viewed the operating digestor tank (see Photo Log image KEND0131).

Photo(s)

1. KEND0129.JPG
2. KEND0130.JPG
3. KEND0131.JPG

Unit: Physical Inspection/Secondary Clarification **Contains CBI:** No

Observation #: DM1-OB-011 **Date:** 08/31/2022

We passed through the Sludge Press Building on the way to the secondary clarifier area and observed the operating sludge press. Patrick Howell said the sludge press is running all day now and was used much less last year. As we were walking through the building Patrick Howell showed me the CBOD results for the day and remarked that CBOD was much higher today (10,470 pounds) than the previous day. The plant's design capacity for CBOD is 10,769 pounds. He added that CBOD levels over the last week were much lower and that this significant daily variation in CBOD loading is part of the problem with plant compliance. We walked to the secondary clarifier area and observed the two secondary clarifiers. I observed significant vegetation growth and debris in the effluent trough and weir notches in secondary clarifier #1 (see Photo Log image KEND0132). I asked Jordan Undeen about the cleaning frequency for the clarifiers. He said they are cleaned every week. I was surprised to see so much growth in less than a week. Jordan Undeen added that they give the clarifiers a major cleaning every year.

I noticed palm oil blobs on the surface of the secondary clarifier. Wade Hale said the palm oil blobs are caught by the skimmer (see skimmer in Photo Log image KEND0132).

Photo(s)

1. KEND0132.JPG

Unit: Physical Inspection/Disinfection **Contains CBI:** No

Observation #: DM1-OB-012	**Date:** 08/31/2022

We walked to the disinfection area and observed the effluent flow meter (see Photo Log image KEND0133) and Wedeco ultraviolet ("UV") disinfection system (covered by a grate, see Photo Log image KEND0134). The effluent flow meter read 1,418 gallons per minute. The UV system consists of two units housing 16 bulbs each. The City hires a contractor to service the UV system in the spring prior to recreation season startup. Jordan Undeen stated that when the clarifiers are cleaned, the algae and wastewater is bypassed around the UV treatment system to prevent the algae from getting physically stuck on the UV light banks. The cleaning wastewater is also routed around the effluent sampler and reconnects with the effluent piping prior to discharge at the receiving stream.

Photo(s)

1. KEND0133.JPG
2. KEND0134.JPG

Unit: Physical Inspection/Post-aeration	**Contains CBI:** No
Observation #: DM1-OB-013	**Date:** 08/31/2022

After the UV system, effluent flows into the post-aeration basin (see Photo Log image KEND0135), then over the post-aeration cascades (see Photo Log image KEND0136). I observed significant duckweed and vegetation growth in the post-aeration tank and cascades.

Photo(s)

1. KEND0135.JPG
2. KEND0136.JPG

Unit: Physical Inspection/Phosphorus Removal	**Contains CBI:** No
Observation #: DM1-OB-014	**Date:** 08/31/2022

After disinfection we walked to the RAS Building and observed the phosphorus feed into the RAS line (see Photo Log image KEND0137), and the two BOD feed tanks (see Photo Log image KEND0138). The Superintendent said the molasses-based BOD feed "is used when Kraft is down." Before departing the building, we observed the phosphorus removal chemical tank (see Photo Log image KEND0139). The aluminum-bearing chemical product is also used to help with copper levels.

Photo(s)

1. KEND0137.JPG
2. KEND0138.JPG
3. KEND0139.JPG

Unit: Physical Inspection/CSO Outfall	**Contains CBI:** No
Observation #: DM1-OB-015	**Date:** 08/31/2022

I observed CSO Outfall #002 (see Photo Log images KEND0141 and KEND0142). CSO Outfall #002 is located just upstream from Outfall 003, on the unnamed tributary that flows to Henderson Lake.

Photo(s)

1. KEND0141.JPG
2. KEND0142.JPG

Unit: Physical Inspection/Final Outfall **Contains CBI:** No

Observation #: DM1-OB-016 **Date:** 08/31/2022

Earlier in the physical plant inspection we walked from the headworks to primary clarification and stopped at the effluent sampling building to observe the effluent composite sampler (see Photo Log image KEND0123). The small building also housed a flowmeter that measured flow between headworks and primary clarification (see Photo Log image KEND0124). At the time of observation, the flowmeter read 1,575 gallons per minute. From here, we walked to the Operations Building and primary clarification area (see Primary Clarification observation section).

We returned to the final outfall area at the end of the physical facility tour. I observed a clear discharge from Final Outfall #003 and noted some vegetation growth along the bed of the receiving water (see Photo Log image KEND0140). Outfall #003 discharges to an unnamed tributary just upstream of Henderson Lake.

Photo(s)

1. KEND0123.JPG
2. KEND0124.JPG
3. KEND0140.JPG

SECTION III – RECORDS REVIEW

Records may not be in sequential order.

Record: Other - Other - Various Records Requested **AOC:** Yes

Ref #: DM1-RR-001 **Reviewed By:** Dean Maraldo **Reviewed Date:** 08/30/2022

I requested a number of records prior to the inspection. The Facility made the requested records available during the inspection. We reviewed the records prior to departing the Facility for the day on August 30, and asked for copies of the following records:

1. Facility Monthly Operating Report for July 2022;
2. Facility Bench Sheets: *Ecoli* Sept 2021- August 2022; DO/Temperature/pH/TSS/CBOD/Ammonia/Phosphorus/*Ecoli* for October 2021, and May through July 2022; Temperature, CBOD, TSS, Ammonia, and Phosphorus for August 2022;
3. SSO Report for April 2019;
4. SIU Permit for Creative Liquid Coatings;
5. Kraft inspection reports 2017-2022;
6. Kraft communications with City, 2019-May 2020;
7. Copy of local limits, surcharge thresholds and surcharge fees;
8. Kraft MMRs from 2017-July 2022;
9. Kraft reports from Feb 2017-June 2022;
10. Summary of IU monitoring in 2021;
11. Draft Order between Kraft and the City; and
12. Communications between the City and IDEM.

We departed the Facility at 4:20 PM on August 30, and returned on August 31 at 8 AM. We met with the

Superintendent, Jordan Undeen, and Wade, then Patrick Howell arrived later at 8:30 AM.

Record: Inspection Report – Previous **AOC:** No

Ref #: DM1-RR-002 **Reviewed By:** Dean Maraldo **Reviewed Date:** 08/31/2022

I asked the Facility representatives to provide an update on the conditions described in IDEM's April 29, 2022 Inspection Report, including strong sewage/septic odor and the presence of Sphaerotilus natans, commonly known as "sewage fungus", in the secondary clarifies, UV system, outfall, and receiving water. The Superintendent said that "everything looks fantastic" now.

Record: Violation History **AOC:** Yes

Ref #: DM1-RR-003 **Reviewed By:** Dean Maraldo **Reviewed Date:** 08/31/2022

I reviewed the list of chronic violations as summarized in EPA's ECHO Report, dated 8/29/2022 (see Appendix 2 – Inspection Documents). Earlier in the inspection (see Observation # DM1-OB-004), Facility representatives stated that CBOD loading from Kraft was the biggest problem. I asked if, since 2019, all effluent limit exceedances were attributed to Kraft. The Superintendent said that copper violations are not attributed to Kraft, and some violations are due to wet weather. After the inspection, the Superintendent sent an email including a list of months since 2018 where wet weather events caused exceedances of the weekly effluent TSS concentration limit of 18 parts per million (see Appendix 2 – Inspection Documents).

The Superintendent described the plant upset event in February 2019. First thing they noticed is erratic or poor settling. Sludge blankets at 7-8 feet. They checked mixed liquor and noticed lots of organic acids and then noted nitrification "fall off" due to unhealthy biology and ammonia spikes. Finally, DO crashed and plant went septic. The Superintendent said the first conversation with Kraft occurred after the February 2019 upset event, when the City realized the plant upset was a result of the Kraft CBOD loading issue. The Superintendent added that the April 2021 and March 2022 plant upset events were also attributed to the Kraft CBOD loading issue.

In February 2022, Kraft experienced a palm oil spill which flowed into a floor drain and into the sanitary sewer system. The Kendallville WWTP experienced a DO drop and the plant went septic, with high ammonia, TSS, and phosphorus. I asked what steps the Facility takes to get the plant back in proper operation after an upset. Patrick Howell explained the process, including draining solids in all the aeration tanks, hosing off diffusers, cleaning clarifiers, sending sludge to digestors, and cleaning components as best they can. Then they slowly reseed the aeration tanks. It takes several months to recover from upset events. For example, it took the Facility until the last week in July to fully recovered from the February 2022 upset event. The Facility representatives showed a slide of the Kraft Monthly Monitoring Report ("MMR") for February 10 -March 9, and highlighted reported CBOD loading above the plant design CBOD loading (10,769 pounds) 20 out of 28 days (see Appendix 2 – Inspection Documents).

SECTION IV – SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

No sampling was conducted.

SECTION V - AREAS OF CONCERN

Areas of Concern may not be in sequential order.

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

Unit: Interview	Area: Record Review
DM1-RR-003	
Recent chronic effluent limit exceedances for CBOD, copper, cyanide, E.coli, nitrogen-ammonia, DO, phosphorus, TSS, pH, and toxicity. See summary of effluent limit exceedances in the August 29, 2022 EPA ECHO Report (see Appendix 2 – Inspection Documents).	**Citations:** Permit Part I.A
DM1-RR-003	
The City was aware of the Kraft CBOD interference and pass-through issue in 2019, and attributed plant upsets to Kraft CBOD loading. The City also attributed plant upsets due to the Kraft CBOD loading issues in January 2020, April 2021, and March 2022. The City also identified 20 accidental spill/slug discharges to the plant and 29 pH violations from January 1, 2020 to March 1, 2022. According to Section 16 of the City's ERP (see Appendix 2 – Inspection Documents), any unpermitted slug discharge resulting in POTW or environmental damage requires an administrative order response, and multiple unpermitted slug discharges resulting in POTW or environmental damage requires an administrative fine response. According to the City's ERP, four or more local limit violations within a six-month period requires an administrative order and fine response. However, the City did not initiate an administrative order or fine enforcement response to address Kraft accidental spill/slug discharge or pH limit violations prior to the April 29, 2022 administrative order (see Appendix 2 – Inspection Documents).	**Citations:** Permit Part III.A.4; ERP Section 16.
Wet-weather events caused exceedances of the weekly effluent TSS concentration limit of 18 parts per million on at least five occasions (see Mark Schultz email, dated 9/1/2022, Appendix 2 – Inspection Documents)	**Citations:** Permit Part I.A
Unit: Interview	**Area:** Non-DMR NPDES Reports
DM1-OB-001	
I asked about the status of June 2022 toxicity violations. The Superintendent said repeat samples failed in July, and they are following protocols per the permit. He believes toxicity issues are always due to high solids, when plant settling becomes erratic and high organic acids obstruct development of floc.	**Citations:** Permit Part I.A
Unit: Interview	**Area:** Self Monitoring
DM1-OB-002	
E.coli samples are collected after disinfection with a sludge judge then into a plastic bag, then into a sample bottle. Sludge judge is not cleaned prior to sampling.	**Citations:** 40 CFR Part 136
Unit: Interview	**Area:** Operations and Maintenance

DM1-OB-004	
According to Facility representatives, Kraft variable CBOD loading is the cause of recent plant upsets.	**Citations:** Permit Part II.B.1.a-b; Permit Part III.A.4
Unit: Physical Inspection	**Area:** Aeration
DM1-OB-010	
The Superintendent said they may be having nitrogen-ammonia issues due to the out-of- service aeration blower and aeration tank.	**Citations:** Permit Part II.B.1.a-b
Unit: Physical Inspection	**Area:** Secondary Clarification
DM1-OB-011	
I observed significant vegetation growth and debris in the effluent trough and weir notches in secondary clarifier #1.	**Citations:** Permit Part II.B.1.a
Unit: Physical Inspection	**Area:** Disinfection
DM1-OB-012	
The City hires a contractor to service the UV system in the spring prior to recreation season startup. Jordan Undeen stated that when the clarifiers are cleaned, the algae and wastewater is bypassed around the UV treatment system to prevent the algae from getting physically stuck on the UV light banks. The cleaning wastewater is also routed around the effluent sampler and reconnects with the effluent piping prior to discharge at the receiving stream.	**Citations:** Permit Part II.B.2
Unit: Physical Inspection	**Area:** Post-aeration
DM1-OB-013	
I observed significant duckweed and vegetation growth in the post-aeration tank and cascades.	**Citations:** Permit Part II.B.1.a

SECTION VI – CLOSING CONFERENCE AND FOLLOW UP

Closing Conference

I began the inspection closing conference with Facility personnel at 12:59 PM on 08/31/2022. During the closing conference, I discussed the preliminary observations and Areas of Concern identified during the inspection. Observations and Areas of Concern have not yet been evaluated for a formal compliance determination.

I also reviewed the documents received during the inspection, including:

1. Facility MOR July 2022
2. Facility Bench Sheets: *E.coli* September 2021- August 2022; DO/Temp/pH/TSS/CBOD/N-Ammonia/Phosphorus/*E.coli* October 2021 and May-July 2022; Temp/CBOD/TSS/N-Ammonia/Phosphorus August 2022.
3. SSO Report April 2019

4. SIU Permit for CLC
5. Kraft Inspection reports 2017-2022
6. Kraft communications, 2019-May 2020
7. Copy of PT limits, surcharge thresholds and surcharge fees.
8. Kraft MMRs from 2017-July 2022
9. Kraft reports Feb 2017-June 2022
10. Summary of IU monitoring in 2021
11. Administrative Order between Kraft and Kendallville
12. Communications between Kendallville and IDEM.
13. IDEM compliance plan
14. City's pretreatment ERP
15. Signed financial agreement with City and Kraft
16. Communications between Superintendent and Kraft on August 30, 2022 re meeting.

We also went over pending document requests, including the Kraft CBOD data spreadsheet file, a list of violations due to wet-weather, communications with Kraft regarding pass through and interference concerns, a signed copy of the Administrative Order between Kraft and Kendallville, and the Kraft spill response plan. I asked to receive the documents by Tuesday, September 6.

Before concluding, I asked if anyone had any questions. The Superintendent asked about EPA's next steps. I discussed EPA's inspection report timeframes and general approaches to resolving any areas of concern. With no other questions we departed the Facility at 1:20 PM, on August 31, 2022.

Communication Log

Type	From	To	Date	Description	Attachment(s)
Email	Mark Schultz	Dean Maraldo	8/30/2022	transmitting attachment	Kraft CBOD Loadings (Large Graph).xlsx
Email	Mark Schultz	Dean Maraldo	9/1/2022	regarding communications with Kraft	Four PDF files regarding communications with Kraft
Email	Mark Schultz	Dean Maraldo	9/1/2022	listing months with wet-weather effluent limit exceedances	None
Email	Mark Schultz	Dean Maraldo	9/1/2022	transmitting blower study and Aeration Memo	PDFs: Keaser Blower Study; Aeration Memo
Email	Trevor Hampshire	Dean Maraldo	9/6/2022	transmitting Kraft SPCC plan, Kraft CBOD loading data, signed Administrative Order between the City and Kraft	PDFs: Kraft SPCC plan, Kraft CBOD loading data; signed Administrative Order between the City and Kraft

SECTION VII – LIST OF APPENDICES

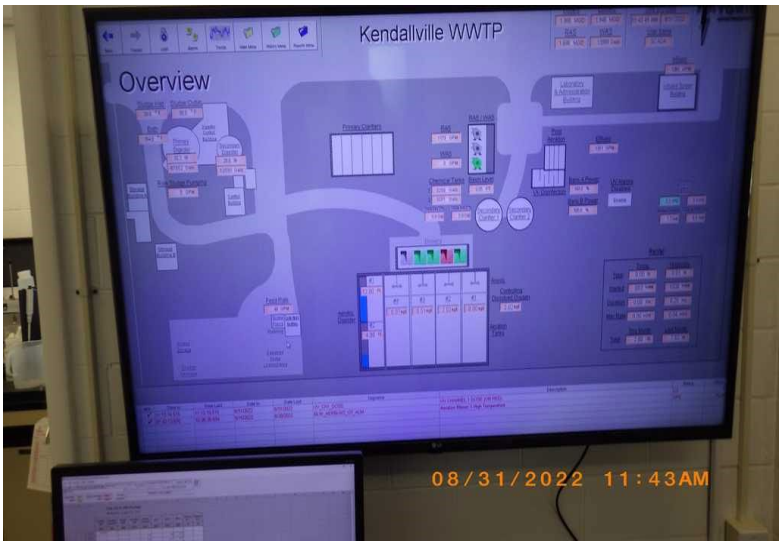
1. Photo Log

2. Inspection Documents

APPENDIX 1. Photo Log

Headworks - Grit Basin	
KEND0119.JPG	
08/31/2022 11:23 AM (ET)	
Dean Maraldo	
Physical Inspection/Headworks	
No CBI	
No PII	
Note influent pipe outlet.	
Bar Screen	
KEND0120.JPG	
08/31/2022 11:25 AM (ET)	
Dean Maraldo	
Physical Inspection/Headworks	
No CBI	
No PII	
Bar screen behind plastic curtain to minimize odor.	
Caustic chemical tank	
KEND0121.JPG	
08/31/2022 11:28 AM (ET)	
Dean Maraldo	
Physical Inspection/Headworks	
No CBI	
No PII	
Tank is no longer in use.	

Influent composite sampler	
KEND0122.JPG	
08/31/2022 11:30 AM (ET)	
Dean Maraldo	
Physical Inspection/Headworks	
No CBI	
No PII	
ISCO composite sampler was refrigerated and included a thermometer.	
Effluent composite sampler	
KEND0123.JPG	
08/31/2022 11:35 AM (ET)	
Dean Maraldo	
Physical Inspection/Final Outfall	
No CBI	
No PII	
Located in the small effluent building.	
Flowmeter measuring flow between headworks and primary clarification	
KEND0124.JPG	
08/31/2022 11:35 AM (ET)	
Dean Maraldo	
Physical Inspection/Final Outfall	
No CBI	
No PII	
Located in the small effluent building.	

SCADA Display	
KEND0125.JPG	
08/31/2022 11:43 AM (ET)	
Dean Maraldo	
Physical Inspection/Primary Clarification	
No CBI	
No PII	
SCADA system display in the Operations Building.	
Influent raw water	
KEND0126.JPG	
08/31/2022 11:56 AM (ET)	
Dean Maraldo	
Physical Inspection/Primary Clarification	
No CBI	
No PII	
Note the small palm oil blobs floating on top of raw influent to the primary clarifiers.	
Primary Clarifier #2	
KEND0127.JPG	
08/31/2022 11:57 AM (ET)	
Dean Maraldo	
Physical Inspection/Primary Clarification	
No CBI	
No PII	
I observed the floating palm oil blobs collected along the back of primary clarifier #2	

Primary Clarifiers	
KEND0128.JPG	
08/31/2022 11:59 AM (ET)	
Dean Maraldo	
Physical Inspection/Primary Clarification	
No CBI	
No PII	
Aeration Blowers (4)	
KEND0129.JPG	
08/31/2022 12:02 PM (ET)	
Dean Maraldo	
Physical Inspection/Aeration	
No CBI	
No PII	
One of the blowers (second from the left) was out of service due to motor repairs.	
View of aeration tanks	
KEND0130.JPG	
08/31/2022 12:07 PM (ET)	
Dean Maraldo	
Physical Inspection/Aeration	
No CBI	
No PII	
One of the four aeration tanks was off line due to the out-of-service blower.	

Digestor tank	
KEND0131.JPG	
08/31/2022 12:10 PM (ET)	
Dean Maraldo	
Physical Inspection/Aeration	
No CBI	
No PII	
Secondary Clarifier #1	
KEND0132.JPG	
08/31/2022 12:23 PM (ET)	
Dean Maraldo	
Physical Inspection/Secondary Clarification	
No CBI	
No PII	
Note the significant vegetation growth and debris in the effluent trough and weir notches. Also note skimmer capturing palm oil blobs on the surface of the secondary clarifier.	
Effluent flow meter	
KEND0133.JPG	
08/31/2022 12:32 PM (ET)	
Dean Maraldo	
Physical Inspection/Disinfection	
No CBI	
No PII	

Wedeco Ultraviolet ("UV") disinfection system	
KEND0134.JPG	
08/31/2022 12:32 PM (ET)	
Dean Maraldo	
Physical Inspection/Disinfection	
No CBI	
No PII	
The UV bulb system is under the grates.	
Post-aeration basin	
KEND0135.JPG	
08/31/2022 12:34 PM (ET)	
Dean Maraldo	
Physical Inspection/Post-aeration	
No CBI	
No PII	
Note the significant duckweed and vegetation growth in the post-aeration basin.	
Post-aeration cascades	
KEND0136.JPG	
08/31/2022 12:35 PM (ET)	
Dean Maraldo	
Physical Inspection/Post-aeration	
No CBI	
No PII	
Note the significant duckweed in the post-aeration cascades.	

Phosphorus feed into the RAS line	
KEND0137.JPG	
08/31/2022 12:41 PM (ET)	
Dean Maraldo	
Physical Inspection/Phosphorus Removal	
No CBI	
No PII	
BOD feed tanks (2)	
KEND0138.JPG	
08/31/2022 12:43 PM (ET)	
Dean Maraldo	
Physical Inspection/Phosphorus Removal	
No CBI	
No PII	
Tanks contain molasses-based BOD feed.	
Phosphorus removal chemical tank	
KEND0139.JPG	
08/31/2022 12:44 PM (ET)	
Dean Maraldo	
Physical Inspection/Phosphorus Removal	
No CBI	
No PII	
The aluminum-bearing chemical product is also used to help with copper.	

Final Outfall #003	
KEND0140.JPG	
08/31/2022 12:48 PM (ET)	
Dean Maraldo	
Physical Inspection/Final Outfall	
No CBI	
No PII	
Outfall #003 discharges to an unnamed tributary just upstream of Henderson Lake. Discharge appeared clear.	
CSO Outfall #002	
KEND0141.JPG	
08/31/2022 12:49 PM (ET)	
Dean Maraldo	
Physical Inspection/CSO Outfall	
No CBI	
No PII	
CSO Outfall #002 is located just upstream from Outfall 003, on the unnamed tributary that flows to Henderson Lake.	
CSO Outfall #002 and signage	
KEND0142.JPG	
08/31/2022 12:51 PM (ET)	
Dean Maraldo	
Physical Inspection/CSO Outfall	
No CBI	
No PII	

APPENDIX 2: INSPECTION DOCUMENTS

Document Name	Date Received	Pages	Attached to report below?
EPA's ECHO Report for the Kendallville WWTP, dated 8/29/2022	08/29/2022	5	Yes
Facility MOR July 2022	08/30/2022	12	No
Facility Bench Sheets: *E.coli* September 2021- August 2022; DO/Temp/pH/TSS/CBOD/N-Ammonia/Phosphorus/*E.coli* October 2021 and May-July 2022; Temp/CBOD/TSS/N-Ammonia/Phosphorus August 2022	08/30/2022	180	No
SSO Report April 2019	08/30/2022	1	Yes
SIU Permit for CLC	08/30/2022	32	No
Kraft Inspection reports 2017-2022	08/30/2022	34	No
Kraft/Kendallville communications, 2019-May 2020	08/30/2022	29	No
Copy of Pretreatment limits, surcharge thresholds and surcharge fees	08/30/2022	1	Yes
Kraft MMRs from 2017-July 2022	08/30/2022	392	No
Kraft accidental discharge reports (Feb 2017-June 2022)	08/30/2022	197	No
Summary of IU monitoring in 2021	08/30/2022	1	No
Administrative Order between Kraft and Kendallville	08/30/2022	24	No
Communications between Kendallville and IDEM	08/30/2022	34	No
IDEM compliance plan	08/30/2022	1	No
Pretreatment Program Tasks	08/30/2022	1	No
Kraft CBOD loading graph	08/30/2022	1	Yes
Kraft Monthly Monitoring Report for February 10 -March 9, 2022	08/30/2022	1	Yes
Kendallville's pretreatment ERP	08/31/2022	18	Yes
Signed financial agreement with Kendallville and Kraft	08/31/2022	6	No
Communications between Superintendent and Kraft on August 30, 2022 re meeting	08/31/2022	3	No
Email listing months with wet-weather effluent limit exceedances	09/01/2022	1	Yes
Communications between Kendallville and Kraft	09/01/2022	14	No
Capital Project Aeration Memo	09/01/2022	18	No
Keaser Blower Study	09/01/2022	10	No
Kraft CBOD data spreadsheet	09/06/2022	NA	No
Signed Administrative Order between Kraft and Kendallville	09/06/2022	22	Yes
Kraft SPCC plan	09/06/2022	30	No