**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**REGION III**
**1650 Arch Street**
**Philadelphia, Pennsylvania 19103-2029**

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| **Report Title:** | Clean Water Act Compliance Inspection Report |
| **Inspection Date(s):** | 02/14/2022 _To_ 02/15/2022 |
| **Regulatory Program(s):** | National Pollutant Discharge Elimination System (NPDES) |
| **Type of Activity:** | Compliance Evaluation Inspection |
| **Site/Facility Name:** | Tamaqua Wastewater Treatment Plant |
| **Permittee(s):** | Borough of Tamaqua |
| **Site/Facility Operator:** | Borough of Tamaqua |
| **Site/Facility Address:** | 32 Sewer Plant Road<br>Tamaqua, PA 18252 |
| **Latitude:** | 40°47'02" **Longitude:** -75°57'46" |
| **County/Parish:** | Wayne County |
| **Permit Number:** | PA0027006 |
| **NAICS Code:** | 221320 **SIC:** N/A |
| **Unique Project #:** | 3E22WN064A |

**Site/Facility Representative(s):** **Point of Contact**

Gene Brode, Operator ☒
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Rich Baddick, Former Operator ☐
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| | Shane McAleer — Digitally signed by Shane McAleer Date: 2022.04.21 12:44:18 -04'00' | 04/21/2022 | |
| **Report Preparer Signature/Date** | Shane McAleer, 3ED32<br>Inspector | | Date |
| | JESSICA DUFFY — Digitally signed by JESSICA DUFFY Date: 2022.04.21 12:21:54 -04'00' | 04/21/2022 | |
| **Supervisor Signature/Date** | Jessica Duffy, 3ED32<br>Acting Chief, NPDES Section | | Date |

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## I. Introduction

On February 14 and 15, 2022, U.S. Environmental Protection Agency ("EPA") Region III Inspectors conducted a reconnaissance inspection (RI) and a wastewater treatment plant (WWTP) compliance evaluation inspection (CEI) of the Tamaqua WWTP (hereinafter, "WWTP" or "Facility") and its combined sewer collection system. The purpose of the inspections was to observe compliance with the Clean Water Act (CWA) and to verify compliance with the Facility's National Pollutant Discharge Elimination System (NPDES) Permit No. PA0027006 (hereinafter, the "Permit") and applicable State and Federal regulations.

### A. Weather and Precipitation Conditions

During the February 14 and 15 inspections, weather was sunny and cold, approximately 20-30 degrees F. National Oceanic and Atmospheric Administration (NOAA) National Weather Service precipitation data[1] for the date of the inspection and 5 days prior are provided in the Table 2 below:

**Table 2. Precipitation Data**

| Station Name | Date | Precipitation Amount (inches)[1] |
|---|---|---|
| LEBANON 2 W, PA | February 10, 2022 | 0.0 |
| LEBANON 2 W, PA | February 11, 2022 | 0.0 |
| LEBANON 2 W, PA | February 12, 2022 | 0.0 |
| LEBANON 2 W, PA | February 13, 2022 | 0.05 |
| LEBANON 2 W, PA | February 14, 2022 | 0.0 |
| LEBANON 2 W, PA | February 15, 2022 | 0.0 |

### B. Reconnaissance Inspection (2/14/22)

On February 14, EPA Inspectors conducted an RI of a portion of the Tamaqua Borough combined sewer collection system in Tamaqua Borough, which consisted of locating and observing several combined sewer overflow (CSO) outfalls for the system. Of the 12 CSO outfalls listed in the Permit, 11 of the outfalls are located off site from the WWTP in Tamaqua Borough, and the remaining outfall is located at the Tamaqua WWTP.

During the inspection, EPA Inspectors attempted to locate, observe and photograph CSO outfalls to Little Schuylkill River and several of its tributaries. Utilizing coordinates listed in the Permit for the Tamaqua CSO outfalls, the intent of the RI was to locate the outfalls, observe the general condition of the outfalls, locate signage for the outfalls, and identify evidence of untreated sewage discharge, such as solids and floatables, at or downstream of the outfalls. Of the 12 CSO outfalls listed in the Permit, eight of the outfalls were located and observed on February 14 (CSO Outfall Nos. 002, 003, 007, 008, 009, 010, 011, and 016) and three of the outfalls were not located, and therefore not inspected (CSO Outfall Nos. 006, 015 and 017). The remaining outfall

[1] Source: NOAA National Weather Service (http://www.weather.gov/).

(Outfall No. 014) is located at the Tamaqua WWTP and was not observed until the following day (February 15) during the CEI of the Tamaqua WWTP. The February 14 inspection commenced at 1:00 PM EST and concluded at 4:30 PM EST.

During the February 14 inspection, the EPA Inspectors observed:

- CSO Outfall to Little Schuylkill River; located on Schuylkill Avenue on the east bank of the Little Schuylkill River; the outfall was visible, but the sign was not (see Photos DSCN2929 and DSCN2932 in Attachment 1). This appears to be CSO Outfall No. 011 from the coordinates in the Permit.
- CSO Outfall No. 009 to Little Schuylkill River, located at Schuylkill Avenue and Locust Street on the east bank of the Little Schuylkill River; the sign for the outfall was visible and facing towards River (see Photos DSCN2936 and DSCN2938).
- Outfall to Little Schuylkill River; located on Schuylkill Avenue on the east bank of the Little Schuylkill River; the outfall was visible, but the sign was not (see Photos DSCN2943 and DSCN2944). This appears to be CSO Outfall No. 010, however EPA was unable to confirm this during the inspection.
- CSO Outfall No. 008 to Panther Creek, located under the South Greenwood Street bridge, on the north bank of the Panther Creek; the sign for the outfall was visible and facing towards the Creek (see Photos DSCN2945 and DSCN2946).
- CSO Outfall No. 007 to Panther Creek, located adjacent to the Borough Hall on the south bank of the Panther Creek, along Route 209; the sign for the outfall was visible and facing towards the Creek (see Photos DSCN2949 and DSCN2951).
- CSO Outfall No. 016 to Panther Creek, located at the intersection of East End Avenue and Federal Street, north of the railroad tracks, on the south bank of the Panther Creek; the sign for the outfall was visible and facing towards the Creek (see Photos DSCN2953 and DSCN2954).
- CSO Outfall No. 002 to Wabash Creek, located at intersection of Spruce Street and Sewer Plant Road, on the west bank of the Wabash Creek; the sign for the outfall was visible and facing towards Sewer Plant Road (see Photos DSCN2956 and DSCN2958).
- CSO Outfall to Wabash Creek, located at the intersection of Wabash Creek and Little Schuylkill River, off Route 309 south; the outfall was visible, but the sign was not. This appears to be CSO Outfall No. 003 from the coordinates in the Permit. A small amount of what appeared to be sewage material (tissue paper, wipes, rags, etc.) were observed at the bottom of and adjacent to concrete channel for the outfall which contained a duck bill opening (see Photos DSCN2960, DSCN2961, DSCN2963, and DSCN2966).
- EPA Inspectors walked along the Little Schuylkill River Walkway from Route 309 to Cedar Street but could not locate CSO Outfall No. 006, neither the outfall or its signage.
- EPA Inspectors walked along the Panther Creek along East End Avenue from CSO No. 016 to a Napa Auto Parts property but could not locate CSO Outfall No. 015, neither the outfall or its signage.

EPA Inspectors did not attempt to locate CSO Outfall No. 017 on Wabash Creek near South Lehigh Street.

## C. WWTP Compliance Evaluation Inspection - Opening Conference (2/15/22)

On February 15, 2022, representatives from EPA Region III and the Pennsylvania Department of Environmental Protection (PADEP), (hereinafter referred to as "EPA Inspection Team") conducted the CEI of the WWTP. The EPA Inspection Team arrived at the facility at est. 9:30 AM EST for the inspection. Inspectors met with the following facility representatives:

**Table 1: Inspection Attendee List**

| Name | Affiliation | Telephone | Email |
|---|---|---|---|
| **EPA Region III Inspectors and Contractors** | | | |
| Steven Maslowski | Inspector, EPA Region III | (215) 814-2371 | maslowski.steven@epa.gov |
| Shane McAleer | Inspector, EPA Region III | (215) 814-5616 | mcaleer.shane@epa.gov |
| **Site/Facility Representatives** | | | |
| Gene Brode | Operator | (570) 668-0669 | tamaquawwtp@ptd.net |
| Rich Baddick | Operator | (570) 668-0669 | tamaquawwtp@ptd.net |
| **State or County Representatives** | | | |
| Patrick Musinski | PADEP | (570) 826-2326 | pmusinski@pa.gov |
| Jared Sabitsky | PADEP | (570) 621-3458 | jsabitsky@pa.gov |
| Jeremy Miller | PADEP | - | jermiller@pa.gov |
| Kelsey Glavich | PADEP | - | kglavich@pa.gov |

Steven Maslowski and Shane McAleer displayed their credentials to Gene Brode, one of the operators of the WWTP, at the outset of the inspection, and explained the purpose of the inspection was to observe compliance with its Permit. A copy of the Permit is provided in Attachment 2. The EPA Inspection Team informed Mr. Brode that any information that the Facility deemed to be confidential business information ("CBI") should be identified to EPA representatives during the inspection and it would be handled as CBI according to EPA's CBI procedures. The Chief Operator of the WWTP, Rich Baddick, joined towards the end of the 2/15/22 inspection.

## D. Summary of the Facility

The WWTP is an activated sludge treatment plant with chlorine contact disinfection. The sewer collection system for the WWTP is a combined sewer system and receives wastewater from residential and commercial users in Tamaqua Borough, as well as a connection to a sewer system owned by Rush Township. The Rush Township sewer system service area has residential and commercial users, along with several industrial users. Treatment units for the Tamaqua WWTP include an automatic fine screen, grit chamber, three primary clarifiers, six aeration tanks, three secondary clarifiers, and three chlorine contact chambers for disinfection. Treated effluent is discharged via Outfall No 001 to the Little Schuylkill River, adjacent to the WWTP. Sludge handling is provided by a primary digester, two secondary digesters, and a belt filter press prior to being hauled offsite for disposal. The treatment process is described in more detail in the "Facility Site Walk" section of this report. Operators are present at the WWTP from 4:00 a.m. to

11:00 p.m. The WWTP has a permitted hydraulic capacity of 2.6 million gallons per day (MGD). The WWTP treatment and discharge is regulated under NPDES Permit No. PA0027006, which became effective on January1, 2012, expired December 31, 2016, and is currently administratively extended (refer to Attachment 2). A draft renewal NPDES permit has been issued by PADEP but has yet to be finalized.

## II. Facility Site Walk

The Facility site walk commenced at the Tamaqua WWTP office building, where day-to-day operations were discussed with plant operator Gene Brode. Mr. Brode explained that in December 2021, the facility experienced an upset due to a toxic slug of white / gray wastewater which entered the WWTP through the combined sewer system. The slug was believed to have come from an industrial user in the Rush Township sewer system, which connects to the Tamaqua combined sewer. Mr. Brode stated that the facility treatment process and WWTP effluent quality has improved since the December upset, but the WWTP is still not operating as effectively as it was prior to receiving the slug.

The EPA Inspection Team went downstairs to the pipe room located below the office building, where two check valves on the primary clarifier piping were observed to be rusted and in need of replacement. Liquid was observed dripping from one of the valves and was gathering on the floor (see Photos DSCN2974 and DSCN2975). Mr. Brode stated that new valves to replace the rusted valves were located onsite, but a larger wrench to install the new valves was needed from Tamaqua Borough Streets Department.

Two secondary digester tanks were located adjacent to the office building, and one tank was operating, but the other tank was offline due to the floating lid of the tank not working. In December 2021, the operating secondary digester had leaked down the sides of the tank and into the office building due to the tank being too full. To prevent the digester leak into the building, the operators avoid filling this digester more than half full. The tank was not leaking at the time of the inspection. The influent flow meter is located in the office building and indicated the influent flow was 1.434 MGD at 9:50 am (see Photo DSCN2981). The bypass flow meter is located in the office building, but the flow meter does not work (see Photo DSCN2983).

The Inspection Team then entered the Headworks building, which featured an automatic bar screen, a back-up manual bar screen, and a grit chamber (see Photos DSCN2986, DSCN2988, and DSCN2994). The Headworks also contained a manual valve to divert flow to CSO No. 014 at times of high influent flow. Mr. Brode indicated that large amounts of grit can accumulate in the grit chamber during wet weather events and in the winter due to the use of #9 rock and rock salt in de-icing Borough roads. If not removed, accumulated grit can force flow out through CSO 014, and therefore operators need to shovel grit out of the grit chamber when it builds up. Operators increase chlorine feed during wet weather events.

The Inspection Team observed a manhole for CSO 014 that contained a flow metering device that was not working (see Photos DSCN2998 and DSCN2999). Mr. Brode did not know how the Borough reports CSO No. 014 overflow volumes in the monthly DMRs (since the flow meter does not work). Mr. Brode stated that the WWTP staff member who regularly inspected the CSOs retired two years ago, and he did not know when the last time the CSO outfalls were inspected. When CSOs back-up, one of the operators calls the Streets Department and clean out the CSO regulators.

After the Headworks, flow is directed through a Parshall flume (see Photo DSCN3001) to the primary clarifiers. There was no influent flow meter or influent sampler. Mr. Brode did not know how the facility records compliance with secondary treatment standards for the Discharge Monitoring Reports (DMRs).

The primary clarifier distribution chamber contained equipment in need of maintenance or repair (see Photos DSCN3003 and DSCN3004). Two out of the three primary clarifiers were operating. According to the operator, the remaining primary clarifier had been out of service for 8-9 years due to a faulty gear box that operates the arm of the clarifier (see Photos DSCN3006, DSCN3007, DSCN3013, and DSCN3014).

The EPA Inspection Team observed the two secondary digester tanks from the roof of the office building. The concrete at the tops of the tank walls was deteriorated. As stated earlier, one tank was operating, and one tank was offline due to the floating lid of the tank not working. The equipment on the top of the offline tank was rusted (see Photos DSCN3017, DSCN3018, DSCN3019, and DSCN3021). Sludge is dewatered with a belt filter press (see Photo DSCN3038). Tamaqua WWTP does not use any polymers. As a result, they must run the belt press all the time. The operator stated they do not use any chemicals at the plant.

Flow from the primary clarifiers is conveyed to the aeration tanks. Of the six aeration tanks at the WWTP, Aeration Tank Nos. 1 and 2 were operating at the time of the inspection. The sludge color in the Aeration Tank Nos. 1 and 2 was grayish brown, as opposed to being brown which would indicate proper operation. White / gray slug deposits were visible along the walls of the aeration tanks (see Photos DSCN3039, DSCN3041, and DSCN3042). Aeration Tank Nos. 3 and 4 were not operating at the time of the inspection, but according to the operator, are operated at higher flows than the flow observed during the inspection. Aeration Tank Nos. 3 and 4 had a large amount of foam on the water surface (see Photos DSCN3044 and DSCN3049). The remaining two aeration tanks (Aeration Tank Nos. 5 and 6) were offline during the inspection and are generally not used according to the operator (see Photos DSCN3055 and DSCN3056).

From the aeration tanks, flow is directed to three secondary clarifiers. Two of the secondary clarifiers were in operation, and the third was empty and offline (see Photos DSCN3057, DSCN3060 and DSCN3067). Deposits of the white / gray toxic slug from December 2021 were visible in the weirs and troughs of the secondary clarifiers (see Photo DSCN3066). From the secondary clarifiers, flow is directed to three chlorine tanks. Wastewater in the chlorine contact tanks was observed to be slightly cloudy and there was a white, foamy substance on the surface

(see Photos DSCN3074, DSCN3076, and DSCN3077). No effluent sampler or effluent flow meter was observed. The approximate location of the WWTP discharge was observed, which was a pipe located in a concrete box that discharged to the middle of the Little Schuylkill River (see Photo DSCN3079).

The EPA Inspection Team was joined by WWTP Chief Operator Rich Baddick while observing the outfall for CSO 014. The outfall consisted of an outfall pipe entering a concrete headwall, then discharging to riprap on the bank of the Little Schuylkill River. The outfall pipe was broken prior to the concrete headwall. Large amounts deposits of solids, floatables, tissue paper, rags, and other sewage debris was deposited on the bank behind the headwall (where the broken outfall pipe discharges) and around the headwall into the riprap on the bank of the Little Schuylkill River (see Photos DSCN3089, DSCN3090, DSCN3091, DSCN3093, DSCN3095, and DSCN3097).

The EPA Inspection Team entered the laboratory building. Mr. Baddick stated that buffers are kept in a cabinet and the buffers are then placed in containers and used to calibrate the pH meter. The buffers are used for 3 to 5 days. The pH standard operating procedure was dated July 26, 2006. The procedure was written so staff could make up the buffers themselves instead of purchasing the buffers.

Composite sampling results of WWTP effluent was observed on data sheets entitled "Composite Results" for the months December 2021 and January 2022 (see Photos DSCN3121 and DSCN3127). The results written on the composite data sheets for WWTP effluent 5-day carbonaceous biochemical oxygen demand ($CBOD_5$) was greater than the 50.0 mg/l $CBOD_5$ Permit instantaneous maximum effluent limit on the following dates:

- 12/17/21 (53.1 mg/l)
- 12/14/21 (57.8 mg/l)
- 12/21/21 (67.0 mg/l)
- 12/28/21 (53.9 mg/l)
- 1/11/22 (50.7 mg/l)
- 1/13/22 (50.5 mg/l)
- 1/18/22 (64.6 mg/l)
- 1/20/22 (69.4 mg/l)

Note the $CBOD_5$ effluent limits contained in the Permit are as follows: 25 mg/l (monthly average); 40 mg/l (weekly average), 50 mg/l (instantaneous maximum)

Similarly, the results written on the composite data sheets for WWTP effluent total suspended solids (TSS) were greater than the 60.0 mg/l TSS Permit instantaneous maximum effluent limit on the following dates:

- 12/21/22 (74 mg/l)
- 1/11/22 (66 mg/l)

- 1/20/22 (63 mg/l)

Note the TSS effluent limits contained in the Permit are as follows: 30 mg/l (monthly average); 45 mg/l (weekly average), 60 mg/l (instantaneous maximum)

CSO Outfall Inspection Reports were observed for the month December 2021. The reports list the date the CSOs were inspected, but there is no information about missing signs, solids and floatables, or cleaning of regulators (See Photo DSCN3125). Mr. Baddick stated they inspect the CSO outfalls at least once a month or when it rains, and that outfalls may be checked a couple of days after it rains depending on manpower. WWTP staff used to inspect after every rain event, but that ended when they lost an employee, and they were not replaced. Mr. Baddick stated they measure the flow on the CSO outfalls with meters. The operators did not have any information about CSO meter operation and maintenance or calibration.

After inspecting the lab results, it appears that all the samples for the January 2022 DMR are above 6° C. The sample refrigerator does not have a certified thermometer (See Photo DSCN3131). Maintenance Logs for the two pump stations were not present in the lab during the inspection. Mr. Baddick could not locate the Facility Long Term Control Plan (LTCP) or Nine Minimum Controls (NMC) Plan. A copy of the Tamaqua Borough LTCP dated December 2014, by Gannet Fleming, was provided to EPA by PADEP (See Attachment 4). The operator's license was not posted at the Facility.

Mr. Baddick provided the following information industrial users in the Rush Township sewer service area:

- Gellner Industrial has not discharged to the WWTP since 12/23/2021. Gellner's procedures are to first discharge to the collection system and then drive down a sample to the Facility.
- Siberline Manufacturing does not discharge a large amount of flow anymore. The Progress Avenue Siberline facility discharges more than the Lincoln Drive Siberline facility.

The EPA Inspection Team concluded the 2/15/22 inspection at CSO No. 002 located just up the street from the WWTP at the intersection of Spruce Street and Sewer Plant Road, on the west bank of the Wabash Creek. As stated previously, the sign and outfall were visible (see Photos DSCN2956 and DSCN2958). According to Mr. Brode, CSO No. 002 has the largest volume and pollutant load to the water. There is an 8-inch bottle neck that get overloaded and discharges to the Wabash Creek. Mr. Brode popped the manhole in Sewer Plant Road that contained the regulator for CSO No. 002, and flow was observed in the sewer (see Photos DSCN3135 and DSCN3141).

The observations from the inspection are described in detail below in the Observations section. Photographs were taken during the inspection by Shane McAleer, and are provided in Attachment 1.

## III. Observations

**CSO Outfall Signage**

Part C. II.B. The Department will use the EPA guidance document entitled "Guidance For Nine Minimum Controls" (EPA 832 B 95 003), dated May 1995, and specific comments provided during review of the Nine Minimum Controls (NMCs) documentation reports to determine continued compliance with the CSO permit requirements

**Observation #1**: Maximization of flow to the Publicly Owned Treatment Work for Treatment. The primary clarifier distribution chamber contained equipment in need of maintenance or repair (see Photos DSCN3003 and DSCN3004). One of the three primary clarifiers had been out of service for 8-9 years due to a faulty gear box that operates the arm of the clarifier (see Photos DSCN3006, DSCN3007, DSCN3013 and DSCN3014). CSO Outfall No. 011 (see Photos DSCN2929 and DSCN2932)

Public Notification: Of the 12 CSO outfalls listed in the Permit, signage for the following outfalls was not able to be located:

- CSO Outfall No. 010 (see Photos DSCN2943 and DSCN2944)
- CSO Outfall No. 003 (see Photos DSCN2960, DSCN2961, DSCN2963, and DSCN2966)
- CSO Outfall No. 006 (could not locate outfall or its signage)
- CSO Outfall No. 015 (could not locate outfall or its signage)

Control of Solids and Foldable Materials in CSOs

- CSO Outfall No. 003: Solids and floatables were observed at bottom of and adjacent to concrete channel for the outfall which contained a duck bill opening. The amount of solids was small, but appeared to be sewage material (tissue paper, wipes, rags, etc.) (See Photos DSCN2960, DSCN2961, DSCN2963, and DSCN2966).
- CSO Outfall No. 014. Large amounts deposits of solids, floatables, and other sewage debris littered the bank behind the outfall headwall (where the broken outfall pipe for CSO No. 014 discharges) and around the headwall into the riprap on the bank of the Little Schuylkill River (see Photos DSCN3089, DSCN3090, DSCN3091, DSCN3093, DSCN3095, and DSCN3097).

Modification of Pretreatment Requirements

- In December 2021, the facility experienced an upset due to a toxic slug of white / gray wastewater which entered the WWTP through the combined sewer system. The slug was believed to have come from an industrial user in the Rush Township sewer system, which connects to the Tamaqua combined sewer.

- Deposits of the white / gray toxic slug from December 2021 were visible in the weirs and troughs of the secondary clarifiers

NPDES Permit Part A - Effluent Limitations, Monitoring, Recordkeeping and Reporting Requirements I. C. 1.

Permit citation: "The discharger may not discharge floating materials, oil, grease, scum, foam, sheen and substances which produce color, taste, turbidity or settle to form deposits in concentrations or amounts sufficient to be, or creating a danger of being, inimical to the water uses to be protected or to human, animal, plant or aquatic life. 25 Pa. Code 92.51(6)."

**Observation #2:** Of the 12 CSO outfalls listed in the Permit, two of the CSO outfalls displayed evidence of having discharged floating materials or substances which settled to form deposits at their respective outfall locations:

- CSO Outfall No. 003: Solids and floatables were observed at bottom of and adjacent to concrete channel for the outfall which contained a duck bill opening. The amount of solids was small, but appeared to be sewage material (tissue paper, wipes, rags, etc.) (See Photos DSCN2960, DSCN2961, DSCN2963, and DSCN2966).
- CSO Outfall No. 014. Large amounts deposits of solids, floatables, and other sewage debris littered the bank behind the outfall headwall (where the broken outfall pipe for CSO No. 014 discharges) and around the headwall into the riprap on the bank of the Little Schuylkill River (see Photos DSCN3089, DSCN3090, DSCN3091, DSCN3093, DSCN3095, and DSCN3097).

**Proper Operation and Maintenance**

NPDES Permit Part B. I. Management Requirements D. Proper Operation and Maintenance 2.

Permit citation: "The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance include, but is not limited to, adequate laboratory controls including appropriate quality assurance procedures. This provision also includes the operation of backup or auxiliary facilities or similar systems that are installed by the permittee, only when necessary to achieve compliance with the terms and conditions of this permit. 40 CFR 122.41 (e)"

**Observation #3:** In the pipe room located below the office building, two check valves on the primary clarifier piping were observed to be rusted and in need of replacement. Liquid was observed dripping from one of the valves and was gathering on the floor (see Photos DSCN2974 and DSCN2975).

**Observation #4:** Of the two secondary digester tanks, one tank was offline due to the floating lid of the tank not working, and the second secondary digester had issues with leaking when the tank becomes too full. In December 2021, this tank leaked down the sides of the tank and into the office building. To prevent the digester leak into the building, the operators avoid filling this digester more than half full. The tank was not leaking at the time of the inspection. The concrete at the tops of the digester tank walls was deteriorated. The equipment on the top of the offline digester tank was rusted (See Photos DSCN3017, DSCN3018, DSCN3019, and DSCN3021).

**Observation #5:** The bypass flow meter for CSO No. 014 located in the office building does not work (see Photo DSCN2983).

**Observation #6:** The primary clarifier distribution chamber contained equipment in need of maintenance or repair (see Photos DSCN3003 and DSCN3004). One of the three primary clarifiers had been out of service for 8-9 years due to a faulty gear box that operates the arm of the clarifier (see Photos DSCN3006, DSCN3007, DSCN3013 and DSCN3014).

**Observation #7:** The sludge color in the Aeration Tank Nos. 1 and 2 was grayish brown, as opposed to being brown which would indicate proper operation. White / gray slug deposits were visible along the walls of the aeration tanks (see Photos DSCN3039, DSCN3041, and DSCN3042). Aeration Tank Nos. 3 and 4 had a large amount of foam on the water surface (see Photos DSCN3044 and DSCN3049.

**Observation #8:** Deposits of the white / gray toxic slug from December 2021 were visible in the weirs and troughs of the secondary clarifiers (see Photo DSCN3066).

**Observation #9:** Wastewater in the chlorine contact tanks was observed to be slightly cloudy and there was a white, foamy substance on the surface (see Photos DSCN3074, DSCN3076, and DSCN3077).

**Observation #10:** All laboratory samples for the January 2022 DMR are above 6° C. The sample refrigerator does not have a certified thermometer (See Photo DSCN3131).

**Observation #11:** The Inspection Team observed a manhole for CSO 014 that contained a flow metering device that was not working. The operator did not know how the Borough reports CSO No. 014 overflow volumes in the monthly DMRs since the flow meter does not work. The Inspection Team observed a manhole for CSO 014 that contained a flow metering device that was not working (see Photos DSCN2998 and DSCN2999).

## NPDES Permit Effluent Exceedances

NPDES Permit Part A - Effluent Limitations, Monitoring, Recordkeeping and Reporting Requirements I. For Outfall 001 B.

Permit citation: "Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply."

**Table 1: NPDES Permit No. PA0027006 Effluent Limits in effect from 1/1/2012 to Current***

| Effluent Parameter | Monthly Average Effluent Limit | Weekly Average Effluent Limit | Instantaneous Maximum Effluent Limit | Minimum Monitoring Frequency |
|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | |
| $CBOD_5$ | 25 | 40 | 50 | 2/week |
| Total Suspended Solids | 30 | 45 | 60 | 2/week |
| Fecal Coliform (5/1 – 9/30) | 200 CFU/100 ml | N/A | 1000 CFU/100 ml | 2/week |
| Fecal Coliform (10/1 – 4/30) | 2,000 CFU/100 ml | N/A | 10,000 CFU/100 ml | 2/week |

* NPDES Permit No. PA0027006 expired December 31, 2016, but is administratively extended until a new permit is issued. Therefore, the effluent limits in Table 1 are still in effect.

**Observation #11:** The results written on the composite data sheets for WWTP effluent 5-day $CBOD_5$ were greater than the 50.0 mg/l $CBOD_5$ Permit instantaneous maximum effluent limit on the following dates:

- 12/17/21 (53.1 mg/l)
- 12/14/21 (57.8 mg/l)
- 12/21/21 (67.0 mg/l)
- 12/28/21 (53.9 mg/l)
- 1/11/22 (50.7 mg/l)
- 1/13/22 (50.5 mg/l)
- 1/18/22 (64.6 mg/l)
- 1/20/22 (69.4 mg/l)

The composite data sheets for WWTP effluent TSS were greater than the 60.0 mg/l TSS Permit instantaneous maximum effluent limit on the following dates:

- 12/21/22 (74 mg/l)
- 1/11/22 (66 mg/l)
- 1/20/22 (63 mg/l)

See Photos DSCN3121 and DSCN3127.

**Observation #12:** As part of the records review, PADEP's eDMR database was reviewed to compare reported values against effluent limitations defined in the Permit in order to evaluate compliance. There was a total of 5 effluent limit violations in the last five years (2/1/2017 – 2/1/2022). Permit limits were exceeded for TSS (1), $CBOD_5$ (2), and fecal coliform (2). The instantaneous maximum effluent limit exceedances in Observation 11 above did not appear in the eDMR report.

**Table 2 NPDES Permit No. PA0027006 effluent violations 2/1/2017 – 2/1/2022**

| Outfall # | Monitoring Period End Date | Parameter Name | DMR Value | Permit Limit | Units | Limit Type | % Exceeding Limit |
|---|---|---|---|---|---|---|---|
| 001 | 12/31/2021 | Solids, total suspended | 48 | 45 | mg/L | Weekly Average | 7% |
| 001 | 12/31/2021 | Coliform, fecal general | 10,700 | 10,000 | cfu/100ml | Instantaneous Maximum | 7% |
| 001 | 12/31/2021 | BOD, carbonaceous [5-day, 20 C] | 43 | 25 | mg/L | Monthly Average | 72% |
| 001 | 12/31/2021 | BOD, carbonaceous [5-day, 20 C] | 50 | 40 | mg/L | Weekly Average | 25% |
| 001 | 11/30/2020 | Coliform, fecal general | 35,000 | 10,000 | cfu/100ml | Instantaneous Maximum | 250% |

## IV. Records Review

During the inspection, the EPA Inspection Team reviewed documentation including: Facility monitoring reports, laboratory sampling results, laboratory standard operating procedures, and CSO inspection reports. After the inspection, a NPDES Permit effluent exceedance report was pulled from PADEP's eDMR system. EPA representatives reviewed PADEP inspection reports, as well as compliance correspondence between PADEP, Tamaqua Borough, and Tamaqua Borough's Engineering Consultants (Gannet Fleming).

## V. Closing Conference

After the facility walk, the EPA Inspection Team met with the facility representatives for a closing conference. The EPA Inspection Team shared preliminary observations with the facility. The EPA Inspection Team reiterated to the facility representatives that all preliminary observations discussed were not compliance determinations. Any and all preliminary observations shared were subject to further investigation by EPA upon the additional review of records and documentation. Additional observations may be contained in this inspection report that were not identified at the time of the closing conference after EPA reviewed additional materials following the inspection.

The 2/15/22 inspection concluded at 1:00 PM

## VI. List of Attachments

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|---|---|
| Attachment 1: | Inspection Photograph Log |
| Attachment 2: | NPDES Permit No. PA0027006 |
| Attachment 3: | NPDES eDMR Effluent Exceedance Chart |
| Attachment 4: | Tamaqua Borough Long Term Control Plan |
| Attachment 5: | PADEP Inspection Report 2/15/2022 |