



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

Report Title: Shenandoah Wastewater Treatment Plant Clean Water Act
Compliance Inspection Report
Inspection Date(s): 8/17/2021 & 8/18/2021
Regulatory Program(s): National Pollutant Discharge Elimination System (NPDES)
Type of Activity: Municipal Wastewater Treatment
Facility Name: Shenandoah Wastewater Treatment Plant
Permittee(s): Shenandoah Municipal Sewer Authority
Facility Operator: Shenandoah Municipal Sewer Authority
Permittee Address: 424 Raven Run Rd, Shenandoah, PA 17976
Facility Address: 3 Mount Olive Blvd, Shenandoah, PA 17976
Facility Latitude: 40.814995
Facility Longitude: -76.215382
County/Parish: Schuylkill County, PA
Permit No: PA0070386
NAICS Code: 221320
SIC: 4952
Unique Project #: 3E21WN142A

Facility Representatives (see report body for list of additional representatives):

Jeff Navitsky
Email: shenboro2@ptd.net
Chris McCoach
Email: cmccoach@benesch.com

EPA Inspectors:

Kaitlin McLaughlin – EPA Region III
Phone: (215) 814-2393 Email: McLaughlin.Kaitlin@epa.gov
Mark Zolandz – EPA Region III
Phone: (215) 814-2319 Email: Zolandz.Mark@epa.gov

State/Local Inspectors (see report body for list of additional inspectors):

Patrick Musinski
Email: pmusinski@pa.gov

Report Preparer

Signature/Date

Kaitlin McLaughlin, Enforcement Officer
NPDES Enforcement Section (3ED32)

Date

Supervisor

Signature/Date

Mark Zolandz, Acting Chief
NPDES Enforcement Section (3ED32)

Date

Unique Project#: **3E21WN142A**

Table of Contents

<u>Section</u>		<u>Page</u>
I	Introduction.....	3
A	Inspection Opening Conference.....	3
B	Weather and Precipitation Conditions.....	3
C	Summary of the Site.....	4
II	Facility Activity.....	4
III	Observations.....	4
IV	Records Review.....	14
V	Closing Conference.....	14
VI	List of Attachments.....	14

I. Introduction

On August 17 & 18, 2021, an inspection team composed of staff from the U.S. Environmental Protection Agency (EPA) Region III (hereinafter, “EPA Inspection Team”) conducted a municipal wastewater inspection of the Shenandoah Wastewater Treatment Plant. The purpose of the inspection 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. PA0070386 (hereinafter, the “Permit”) and applicable State and Federal regulations.

A. Inspection Opening Conference

The EPA Inspection Team arrived at the site at approximately 10:30 AM on August 17, 2021. Representatives from the Pennsylvania Department of Environmental Protection (PADEP) were in attendance. The following inspectors and representatives were present for the inspection:

Table 1: Inspection Attendee List

Name	Affiliation	Telephone	Email
EPA Region III Inspectors and Contractors			
Kaitlin McLaughlin	EPA Region III	215-814-2393	McLaughlin.Kaitlin@epa.gov
Mark Zolandz	EPA Region III	215-814-2319	Zolandz.Mark@epa.gov
Facility Representatives			
Jeff Navitsky	Shenandoah Municipal Sewer Authority	-	shenboro2@ptd.net
Ron Luscavage	Shenandoah Municipal Sewer Authority	-	rr148@yahoo.com
Chris McCoach	Benesch Consultant	570-622-4055	cmcccoach@benesch.com
John Mazack	Independent Consultant		
Mark Hysock	Shenandoah Municipal Sewer Authority	570-205-5717	
State or County Representatives			
Patrick Musinski	PADEP	570-881-0466	pmusinski@pa.gov
Jeremy Miller	PADEP	570-830-3078	jermiller@pa.gov
Jared Sabitsky	PADEP	570-621-3458	jsabitsky@pa.gov
Kelsey Glavich	PADEP	570-826-2367	kglavich@pa.gov

Kaitlin McLaughlin and Mark Zolandz displayed their credentials to the site representatives at the outset of the inspection, and explained the purpose of the inspection was to observe compliance with the its Permit and with the Administrative Order for Compliance on Consent (AOCC) between the Shenandoah Municipal Sewer Authority (SMSA) and the EPA. A copy of the Permit is provided in Attachment 2. A copy of the AOCC is provided in Attachment 3.

B. Weather and Precipitation Conditions

During the inspection, weather was overcast. The closest National Oceanic and Atmospheric Administration (NOAA) National Weather Service precipitation data for the dates of the inspection and 5 days prior are provided in Table 2 below.

Table 2. Precipitation Data

Station Name	Date	Precipitation Amount (inches) ¹
MAHANOEY CITY 2 N, PA US USC00365344	8/13/21	0.18
MAHANOEY CITY 2 N, PA US USC00365344	8/12/21	0.30
MAHANOEY CITY 2 N, PA US USC00365344	8/14/21	0.00
MAHANOEY CITY 2 N, PA US USC00365344	8/15/21	0.00
MAHANOEY CITY 2 N, PA US USC00365344	8/16/21	0.00
MAHANOEY CITY 2 N, PA US USC00365344	8/17/21	0.20
MAHANOEY CITY 2 N, PA US USC00365344	8/18/21	0.22

C. Summary of the Facility

The Shenandoah Wastewater Treatment Plant (WWTP) (hereinafter, “the facility”) is located at 3 Mount Olive Blvd, Shenandoah, PA 17976. The Permit identifies the permittee as Shenandoah Municipal Sewer Authority (hereinafter, “SMSA” or “the Authority”), which is located at 424 Raven Run Rd, Shenandoah, PA 17976.

The Authority owns and operates the WWTP which receives influent flows from Shenandoah Borough and West Mahanoy Township. The permitted capacity of the facility is 2 MGD, with an average dry weather flow of approximately 0.6 MGD. The facility discharges to the Shenandoah Creek which flows into the Mahanoy Creek, then the Susquehanna River, and finally into the Chesapeake Bay.

The facility treatment process consists of a bar screen, grit collector, comminutor, grease pit, magnesium hydroxide feed, primary clarifier, two aeration basins, two secondary clarifiers, and two chlorine contact tanks. The facility’s sludge management process consists of a sludge thickener, sludge press, primary digester, and secondary digester. Additional details are listed in the observations section of the report.

The Authority is currently planning to construct a new wastewater treatment plant. The new plant is still in the design stage. Mr. McCoach stated that the new wastewater treatment plant will be a modified version of the sequencing batch reactor (SBR) known as the Intermittent Cycle Extended Aeration System (ICEAS). Mr. McCoach stated that the new plant will be built at the same location as the current WWTP. Mr. McCoach stated that the Authority hopes to begin construction of the new plant in Spring 2022.

II. Facility Activity

(section not used; see Observations)

III. Observations

The inspection began on Tuesday, August 17, 2021 at approximately 10:30am in the WWTP office. The inspection observations below are made pursuant to the requirements of the Permit and the AOCC. Photographs were taken during the inspection by both Kaitlin McLaughlin and Mark Zolandz and are provided in Attachment 1.

¹ Source: NOAA National Climatic Data Center (<http://www.ncdc.noaa.gov/>).

The EPA Inspection Team conducted a walkthrough of the WWTP with Jeff Navitsky, Operator in Training, starting at the headworks, which includes the influent channel (Photo DSCN1748), bar screens (Photo DSCN1745), grit removal (Photo DSCN1747), and grit removal dumpster (Photo DSCN1750). During heavy rains, influent may receive only bar screening and solids removal and bypass additional treatment. The leachate from the grit removal dumpster (Photo DSCN1753) flows towards an inlet with the assistance of an asphalt berm. The dumpster is emptied about once every two months. The inlet flows into the influent channel (Photo DSCN1756). Flow continues to the grease pit and wet well (Photo DSCN1754).

Observation 1. There were several grease balls in the grease pit. Mr. Navitsky stated the grease pit is cleaned out as needed.

The influent sampler (Photo DSCN1755) is used to collect composite samples weekly. Mr. Navitsky stated that the influent sampler collects a 24-hour time-proportioned sample. Mr. Navitsky stated that the influent sampler is started on Wednesday morning and that the 24-hour sample is collected by the lab on Thursday morning.

Observation 2. The EPA Inspection Team observed that there was no thermometer in the refrigerator holding the influent sampler.

Observation 3. The AOCC requires SMSA to install and operate “a programmable flow proportional influent composite sampler.” SMSA previously communicated that the influent flow proportional sampler was obtained but that a cable was needed to put it on-line. Mr. Navitsky stated that the cable to enable the influent sampler to take flow-proportioned samples was received a couple of weeks ago. That cable had not been installed at the time of the inspection.

From the wet well, wastewater flows to the pumphouse. Magnesium hydroxide is added to control alkalinity and pH (Photo DSCN1761). Mr. Navitsky stated that the WWTP uses about one tote every two weeks.

Observation 4. The EPA Inspection team observed that the tube for the magnesium hydroxide was clogged (Photo DSCN1762) and was not pumping anything through the line.

From the pumphouse, wastewater flows to the primary clarifier (Photos DSCN1764, DSCN1767, and DSCN1770).

Observation 5. The primary clarifier was offline at the time of the inspection. The primary clarifier appeared to be offline for a length of time as there was vegetation growing in sections of the clarifier (Photos DSCN1767 and DSCN1771). Mr. Navitsky stated that the primary clarifier has not been used since he started working for SMSA in 2018. In a letter from Benesch submitted on behalf of SMSA to EPA and PADEP dated March 23, 2021, it was stated that the primary clarifier was online and operational. A copy of the letter is provided in Attachment 5.

From the primary clarifier, wastewater flows to the aeration tanks. Normally, wastewater can flow to either Aeration Tank 1 or Aeration Tank 2. At the time of the inspection, the gate to Aeration Tank 2 was closed and all flow from the headworks was entering Aeration Tank 1. At the time of the inspection, Aeration Tank 1 was blowing fine bubbles (Photos DSCN1788 and DSCN1789) and Aeration Tank 2 was blowing coarse bubbles (Photo DSCN1791).

From the primary clarifier, sludge should typically flow to the sludge thickener (Photo DSCN1866).

Observation 6. The sludge thickener was offline at the time of the inspection. The sludge thickener appeared to be offline for a length of time as there was vegetation growing in sections of the thickener (Photo DSCN1870). The EPA Inspection Team observed that the flow chart paper in the control building for the primary sludge flow from the primary clarifier to the sludge thickener was dated September 2, 2018. In a letter from Benesch to EPA and PADEP dated March 23, 2021, it was stated that work was completed on the sludge thickener and that the sludge thickener was online and operational. A copy of the letter is provided in Attachment 5. Mr. Navitsky stated that the sludge thickener was repaired in March 2021. Mr. McCoach stated that the sludge thickener was not being used because there was nowhere to send sludge from the sludge thickener until the sludge press is repaired.

From the sludge thickener, sludge should typically flow from the sludge thickener to the primary digester, secondary digester, and sludge press.

Observation 7. The digesters (Photo DSCN1843) and the sludge press (Photos DSCN1841 and DSCN1839) were all offline at the time of the inspection. Mr. Navitsky stated both the digesters and sludge press have not been used for years. Mr. Mazack stated that no sludge has been added to the digester in three to four years.

From the aeration tanks, wastewater flows to the secondary clarifiers (Photos DSCN1800 and DSCN1805).

Observation 8. The flow from the aeration tanks to the secondary clarifiers appeared to have solids deposits in the channel (Photo DSCN1792).

Observation 9. Secondary clarifier 2 was offline at the time of inspection. SMSA staff stated that the WWTP has been running with only one secondary clarifier for approximately 30 years.

Mr. Navitsky stated secondary clarifier 2 partially fills with rainwater, and he has to regularly pump the contents of secondary clarifier 2 back to the aeration tanks (Photos DSCN1809, DSCN1803, DSCN1809).

Observation 10. Secondary clarifier 1 had a large amount of solids in the clarifier (Photo DSCN1799). Secondary Clarifier 1 is center-fed from Aeration Tank 1. The interior area around the center feed was full of solids, which were spilling over the inner wall into the rest of the clarifier. Mr. Navitsky stated that solids that are skimmed from the top of Secondary Clarifier 1 are sent back to the aeration tanks.

Observation 11. Return activated sludge was being pumped from Secondary Clarifier 1 back to Aeration Tank 2. No sludge was being wasted from Secondary Clarifier 1. Mr. McCoach stated that the Sludge Pit and Thickener Feed Pumps were offline.

From the secondary clarifiers, flow continues to the chlorine contact tanks (Photo DSCN1823). The effluent sampler (Photo DSCN1818) is used to collect composite samples twice each week. Mr. Navitsky stated that the effluent sampler is started on Tuesday morning. Mr. Navitsky stated that one 24-hour effluent sample is collected on Wednesday morning and a second 24-hour effluent sample is collected by the lab on Thursday morning.

Behind the building that houses the chlorine tank and effluent sampler, there were several drums and tanks stored.

Observation 12. The EPA Inspection Team observed unlabeled drums and an empty chlorine tank behind the effluent building (Photos DSCN1830, DSCN1835, DSCN1834, and DSCN1836). The empty chlorine tank was not being stored in a cradle (DSCN1830).

Mr. Navitsky took an effluent sample (Photo DSCN1830) and tested for pH and chlorine (Photo DSCN1852). The pH reading of the sample was 5.84 and the chlorine reading of the sample was 0.30ppm.

Observation 13. The pH 7.00 buffer in the lab expired in June 2021 (Photo DSCN1865). Based on the pH test performed by Mr. Navitsky, the pH meter probe may need to be replaced.

After the chlorine contact tanks, the final effluent flows to the effluent pipe (Photo DSCN1825) and then discharged through Outfall 001 to Shenandoah Creek.

Observation 14. The EPA Inspection Team observed Outfall 001 where the WWTP discharges into the Shenandoah Creek (Photos DSCN1887 and DSCN1877). Upstream of Outfall 001, the EPA Inspection Team observed an acid mine drainage (AMD) stream with no solids present. Downstream of Outfall 001, the EPA Inspection Team observed large quantities of solids in the Shenandoah Creek (See Photos DSCN1876, DSCN1875, and DSCN1917). The EPA Inspection Team observed Shenandoah Creek downstream of State Route 54, which is located approximately 150 feet downstream of Outfall 001. The EPA

Inspection Team observed large quantities of solids in Shenandoah Creek (See Photos DSCN1917 and DSCN1918). The EPA Inspection Team also observed large numbers of blood worms in Shenandoah Creek downstream of State Route 54 (See Photos DSCN1918, DSCN1931, and DSCN1926).

The second day of the inspection began on Wednesday, August 18, 2021 at approximately 9:30am in the WWTP office. The second day of the inspection focused on the collection system, including the CSO diversion manholes and outfalls.

Prior to touring the collection system, Mr. Navitsky stated that he unclogged the magnesium hydroxide line before the EPA Inspection Team got to the WWTP, and the EPA Inspection Team observed magnesium hydroxide flowing through the line. In addition, the EPA Inspection Team observed that the primary clarifier arm was still not operational. Mr. Navitsky stated that Moyer Instruments would be coming on August 19, 2021 to fix the chart recorder, which was malfunctioning and caused the pumps to kick off when SMSA tried turning on the primary clarifier on August 17, 2021.

The EPA Inspection Team was shown the collection system by Mr. Mark Hysock, who is in charge of the collection system and CSOs. Mr. Hysock started working with SMSA three months ago. SMSA's Combined Sewer System Operation and Maintenance Plan states there are 14 CSOs and one pump station. A copy of that plan is provided in [Attachment 4](#).

The EPA Inspection Team started at Pump Station 1. [Note: There was some confusion whether this pump station should be referred to as Pump Station 1 or Pump Station 2.] Mr. Hysock stated that there is no standard operating procedure (SOP) for the pump station. Mr. Hysock stated that he checks the pump station and CSO diversion manholes every day. He clears any debris from the grates and takes it to the grit removal dumpster at the WWTP influent channel.

At Pump Station 1, there is a bar screen (Photo DSCN1936), wet well, and three pumps (Photo DSCN1951) that cycle on based on flow.

Observation 15. The EPA Inspection Team observed a CSO at Pump Station 1 that is not listed in the Combined Sewer System Operation and Maintenance Plan (Photo DSCN1942). The CSO pipe leads to the Shenandoah Creek (Photo DSCN1943). The EPA Inspection Team could hear sounds from the wet well through the outlet pipe.

Inside the Pump Station 1 building, there is an alarm system and backup generator.

Observation 16. The EPA Inspection Team observed an emergency signal illuminated on the alarm system (Photo DSCN1956). The EPA Inspection Team also observed that a portion of the alarm was unplugged (Photo DSCN1953 and DSCN1954).

The EPA Inspection Team inspected the diversion manhole for CSO 010 (Photo DSCN1976). Mr. Hysock does not know where the CSO 010 Outfall is; it may be in the tunnel which runs underneath Vine Street. The EPA Inspection Team did not observe a CSO outfall sign near where the tunnel emerges on the south side of W Centre Street near the Family Dollar parking lot.

The EPA Inspection Team inspected the diversion manhole for CSO 011 (Photo DSCN1982). The CSO 011 Outfall could not be observed. Mr. Hysock thinks the CSO 011 discharges to the tunnel that runs underneath Vine Street.

The EPA Inspection Team inspected the diversion manhole for CSO 012 (Photo DSCN1985). The CSO 012 Outfall could not be observed. Mr. Hysock thinks the CSO 012 discharges to the tunnel that runs underneath Vine Street.

The EPA Inspection Team inspected the diversion manholes for CSO 013A (Photo DSCN1987) and CSO 013B (Photo DSCN1988). These two CSOs are located in adjacent manholes and are divided by a wall in the middle. The CSO 013A and CSO 013B Outfalls could not be observed. Mr. Hysock thinks both these CSOs outfall to the tunnel that runs underneath Vine Street.

The EPA Inspection Team inspected the beginning of the tunnel that runs underneath Vine Street where it starts at Coal Street (Photos DSCN1989 and DSCN1991). The tunnel then goes under Vine Street, then eventually emerges south of W Centre Street near the Family Dollar parking lot.

The EPA Inspection Team inspected the diversion manhole for CSO 014 (Photo DSCN1994) and CSO 014 Outfall Signage (Photo DSCN1995). The EPA Inspection Team could not find the CSO 014 Outfall in the area posted (Photo DSCN1996). Mr. Hysock does not know where the CSO 014 Outfall is.

The EPA Inspection Team inspected CSO 002 Outfall (Photo DSCN1999). There was no CSO signage located nearby. There was some debris downstream of CSO 002 Outfall pipe (Photo DSCN2003). Mr. Hysock does not know where CSO 002 diversion manhole is located.

Observation 17. The EPA Inspection Team did not observe any flow or dry weather overflow (DWO) from CSO 002 Outfall.

The EPA Inspection Team inspected the diversion manhole for CSO 009 (Photo DSCN2009) and CSO 009 Outfall Signage (Photo DSCN2011). The EPA Inspection Team also inspected the area near where CSO 009 Outfall should be located. Mr. Hysock and the EPA Inspection Team could not locate the CSO 009 Outfall pipe. A possible CSO 009 Outfall pipe is shown in Photo DSCN2018, and the general area is shown in Photo DSCN2020.

The EPA Inspection Team inspected the diversion manhole for CSO 008 (Photo DSCN2028). There was no CSO signage located nearby. CSO 008 appears to be capped and sealed. Mr. Hysock does not know where the CSO 008 Outfall is. Mr. Hysock and the EPA Inspection Team could not locate the CSO 08 Outfall pipe.

The EPA Inspection Team inspected the diversion manhole for CSO 007 (Photo DSCN2036) and CSO 007 Outfall (Photo DSCN2039). There was no CSO signage located nearby.

Observation 18. The CSO 007 is down a ledge so the EPA Inspection Team was not able to get a good look at the Outfall pipe. The EPA Inspection Team observed gray water beneath the Outfall pipe. The EPA Inspection Team inspected the diversion manhole for CSO 006 (Photo DSCN2045) and CSO 006 Outfall (Photo DSCN2049). There was no CSO signage located nearby.

- Observation 19.** The EPA Inspection Team did not observe any flow or dry weather overflow (DWO) from CSO 006 Outfall. There was a large amount of sediment inside of CSO 006 Outfall.

The EPA Inspection Team inspected the diversion manhole for CSO 005 (Photo DSCN2053), CSO 005 Outfall Signage (Photo DSCN2056), and CSO 005 Outfall (Photos DSCN2057 and DSCN2058).

- Observation 20.** The EPA Inspection Team did not observe any flow or dry weather overflow (DWO) from CSO 005 Outfall.

The EPA Inspection Team inspected the diversion manhole for CSO 004 (Photo DSCN2071), CSO 004 Outfall Signage (Photo DSCN2066), and CSO 004 Outfall (Photos DSCN2064 and DSCN2068).

- Observation 21.** SMSA was not inspecting the diversion manhole for CSO 004. The diversion manhole for CSO 004 was labeled both “004” and “003A” inside the manhole. Mr. Hysock stated that he thought the CSO 003 diversion manhole was the CSO 004 diversion manhole, and he had been inspecting the CSO 003 diversion manhole and thinking he was inspecting the CSO 004 diversion manhole. Mr. Hysock thought he was skipping inspecting CSO 003 diversion manhole when he was actually skipping inspecting the CSO 004 diversion manhole during his daily inspections.

- Observation 22.** The EPA Inspection Team observed water dripping from CSO 002 Outfall. The EPA Inspection Team observed a small pool of water below CSO 002 Outfall.

The EPA Inspection Team inspected the diversion manhole for CSO 003 (Photo DSCN2079) and the CSO 003 Outfall Area (Photo DSCN2080). There was no CSO signage located nearby. The area was covered with a lot of debris, so the EPA Inspection Team was not able to see the end of the CSO 003 Outfall pipe.

- Observation 23.** The EPA Inspection Team observed the SMSA does not know the location of several CSO Outfalls. SMSA thinks that several of these CSO Outfalls (CSO 10, CSO 11, CSO 12, CSO 13A, CSO 13B) discharge to the tunnel that runs underneath Vine Street. SMSA did not know that location of several other CSO Outfalls (CSO 008, CSO 009, CSO 014).

- Observation 24.** SMSA does not know the location of the diversion manhole for CSO 002.

- Observation 25.** Mr. Hysock does not document whether each CSO Outfall is discharging during a rain event. Mr. Navitsky stated that SMSA uses a spreadsheet to estimate the volume of CSO discharges. Mr. Navitsky stated that he enters the total rainfall amount and the duration of the rainfall event, and the spreadsheet provides estimates of the volumes of CSOs that were discharged from each CSO Outfall. This estimate

is entered onto the CSO Supplemental Reports that are required to be completed monthly by the Permit.

Observation 26. At the time of the inspection, SMSA had John Mazack on part-time staff as a Class A, Subclass 1 Wastewater Certified Operator (Photo DSCN1837). Mr. Mazack's operator's license expires September 30, 2021. Jeff Navitsky was on staff full-time as a Class E, Subclass 4 Wastewater Certified Operator (Photo DSCN1838). Mr. Navitsky is planning on taking the test to become a Class A Wastewater Certified Operator.

The AOCC requires the submission of certified quarterly status reports, due each March 30, June 30, September 30, and December 30 ([Attachment 3](#)).

Observation 27. At the time of the Inspection, SMSA has not submitted its Quarterly Status Report that was due June 30, 2021 in accordance with the AOCC.

The AOCC requires the submission of "a PADEP Part II Water Quality Management Permit Application, for the new construction of facilities proposed to comprise the Respondent's new wastewater treatment plant" ([Attachment 3](#)).

Observation 28. At the time of the Inspection, SMSA had not submitted a PADEP Part II Water Quality Management Permit Application, which was due June 26, 2021. Mr. McCoach stated that SMSA fell behind and that the new plant was currently at approximately 50% design.

Part A.I.A of the Permit defines the discharge limitations and monitoring requirements for Outfall 001 discharges ([Attachment 2](#)).

As part of the data review, the EPA Inspection Team reviewed EPA's Enforcement and Compliance History Online (ECHO) Database in order to evaluate compliance.

Observation 29. According to EPA's ECHO Database, the WWTP experienced 62 effluent limit exceedances from Outfall 001 between September 1, 2016 and August 31, 2021 (i.e., the last 5 years) (refer to Table 3 below). The highest number of exceedances occurred for 5-day carbonaceous biological oxygen demand (CBOD5), followed by total suspended solids.

Table 3. Outfall 001 Final Effluent Exceedances (September 1, 2016 through August 31, 2021)

Permit #	Monitoring Period End Date	Parameter Name	DMR Value	Permit Limit	Units	Limit Type
PA0070386	12/31/2017	CBOD5	43.2	40	mg/L	Weekly Average
PA0070386	12/31/2017	CBOD5	25.7	25	mg/L	Monthly Average
PA0070386	2/28/2018	CBOD5	143	25	mg/L	Monthly Average
PA0070386	2/28/2018	CBOD5	1277	667	lbs/day	Weekly Average

Shenandoah Wastewater Treatment Plant
8/17/2021 & 8/18/2021

Permit #	Monitoring Period End Date	Parameter Name	DMR Value	Permit Limit	Units	Limit Type
PA0070386	2/28/2018	CBOD5	177	40	mg/L	Weekly Average
PA0070386	2/28/2018	CBOD5	1035	416	lbs/day	Monthly Average
PA0070386	3/31/2018	Total Suspended Solids	54	45	mg/L	Weekly Average
PA0070386	3/31/2018	Total Suspended Solids	40.3	30	mg/L	Monthly Average
PA0070386	3/31/2018	CBOD5	170	40	mg/L	Weekly Average
PA0070386	3/31/2018	CBOD5	1074.3	416	lbs/day	Monthly Average
PA0070386	3/31/2018	CBOD5	143	25	mg/L	Monthly Average
PA0070386	3/31/2018	CBOD5	1386	667	lbs/day	Weekly Average
PA0070386	4/30/2018	Total Suspended Solids	40.5	30	mg/L	Monthly Average
PA0070386	4/30/2018	Total Suspended Solids	46.6	45	mg/L	Weekly Average
PA0070386	4/30/2018	Fecal Coliform	17000	10000	CFU/100mL	Instantaneous Maximum
PA0070386	4/30/2018	CBOD5	95.5	25	mg/L	Monthly Average
PA0070386	4/30/2018	CBOD5	885.7	416	lbs/day	Monthly Average
PA0070386	4/30/2018	CBOD5	147	40	mg/L	Weekly Average
PA0070386	4/30/2018	CBOD5	1159	667	lbs/day	Weekly Average
PA0070386	5/31/2018	Fecal Coliform	7000	1000	CFU/100mL	Instantaneous Maximum
PA0070386	5/31/2018	CBOD5	45	40	mg/L	Weekly Average
PA0070386	7/31/2018	Total Suspended Solids	1247.8	750	lbs/day	Weekly Average
PA0070386	9/30/2018	Total Suspended Solids	1182.5	750	lbs/day	Weekly Average
PA0070386	9/30/2018	Total Suspended Solids	551.1	500	lbs/day	Monthly Average
PA0070386	10/31/2018	CBOD5	41.7	25	mg/L	Monthly Average
PA0070386	10/31/2018	CBOD5	841.5	667	lbs/day	Weekly Average
PA0070386	10/31/2018	CBOD5	65	40	mg/L	Weekly Average
PA0070386	10/31/2018	CBOD5	673.2	416	lbs/day	Monthly Average
PA0070386	11/30/2018	Total Suspended Solids	33.3	30	mg/L	Monthly Average
PA0070386	11/30/2018	CBOD5	532.1	416	lbs/day	Monthly Average
PA0070386	11/30/2018	CBOD5	40.8	25	mg/L	Monthly Average
PA0070386	11/30/2018	CBOD5	44.5	40	mg/L	Weekly Average
PA0070386	12/31/2018	CBOD5	42.5	40	mg/L	Weekly Average

Shenandoah Wastewater Treatment Plant
8/17/2021 & 8/18/2021

Permit #	Monitoring Period End Date	Parameter Name	DMR Value	Permit Limit	Units	Limit Type
PA0070386	1/31/2019	Fecal Coliform	90000	10000	CFU/100mL	Instantaneous Maximum
PA0070386	1/31/2019	CBOD5	703.2	667	lbs/day	Weekly Average
PA0070386	1/31/2019	CBOD5	32.3	25	mg/L	Monthly Average
PA0070386	1/31/2019	CBOD5	428.5	416	lbs/day	Monthly Average
PA0070386	1/31/2019	CBOD5	49.5	40	mg/L	Weekly Average
PA0070386	2/28/2019	CBOD5	42.5	40	mg/L	Weekly Average
PA0070386	6/30/2019	Total Suspended Solids	47.6	45	mg/L	Weekly Average
PA0070386	7/31/2019	Total Suspended Solids	50.9	45	mg/L	Weekly Average
PA0070386	7/31/2019	Fecal Coliform	8200	1000	CFU/100mL	Instantaneous Maximum
PA0070386	9/30/2019	Fecal Coliform	1750	1000	CFU/100mL	Instantaneous Maximum
PA0070386	11/30/2019	Total Suspended Solids	32.3	30	mg/L	Monthly Average
PA0070386	12/31/2019	Total Suspended Solids	50	45	mg/L	Weekly Average
PA0070386	2/29/2020	CBOD5	50	40	mg/L	Weekly Average
PA0070386	2/29/2020	CBOD5	27	25	mg/L	Monthly Average
PA0070386	4/30/2020	CBOD5	27	25	mg/L	Monthly Average
PA0070386	4/30/2020	CBOD5	158	40	mg/L	Weekly Average
PA0070386	7/31/2020	Fecal Coliform	5000	1000	CFU/100mL	Instantaneous Maximum
PA0070386	9/30/2020	Ammonia N	23	17.2	mg/L	Monthly Average
PA0070386	9/30/2020	Fecal Coliform	104000	1000	CFU/100mL	Instantaneous Maximum
PA0070386	10/31/2020	Ammonia N	21	17.2	mg/L	Monthly Average
PA0070386	12/31/2020	Ammonia N	42	17.2	mg/L	Monthly Average
PA0070386	12/31/2020	Fecal Coliform	67000	10000	CFU/100mL	Instantaneous Maximum
PA0070386	12/31/2020	CBOD5	83	40	mg/L	Weekly Average
PA0070386	12/31/2020	CBOD5	33	25	mg/L	Monthly Average
PA0070386	12/31/2020	CBOD5	670.2	667	lbs/day	Weekly Average
PA0070386	1/31/2021	Total Suspended Solids	49	45	mg/L	Weekly Average
PA0070386	1/31/2021	Total Suspended Solids	890	750	lbs/day	Weekly Average
PA0070386	2/28/2021	Ammonia N	27.4	17.2	mg/L	Monthly Average

IV. Records Review

EPA requested of the following information from SMSA to be provided after the inspection:

- CSO 002 location
- Missing June Quarterly Update required by the AOCC
- Operator update

V. Closing Conference

After the CSO inspections, the EPA Inspection Team returned to the WWTP for a closing conference. The EPA Inspection Team shared preliminary observations with the site representatives. The EPA Inspection Team reiterated to the site 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 inspection concluded at approximately 3:00 PM.

V. List of Attachments

- | | |
|---------------|--|
| Attachment 1. | Photograph Log |
| Attachment 2. | NPDES Permit |
| Attachment 3. | Administrative Order for Compliance on Consent September 2020 |
| Attachment 4. | Combined Sewer System Operation and Maintenance Plan November 2020 |
| Attachment 5. | Letter from Benesch to EPA and PADEP March 23, 2021 |