



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III**

**Four Penn Center – 1600 JFK Blvd
Philadelphia, Pennsylvania 19103-2029**

Report Title: Clean Water Act Compliance Inspection Report
Inspection Date(s): 06/26/2023
Regulatory Program(s): National Pollutant Discharge Elimination System (NPDES)
Type of Activity: Municipal Wastewater
Facility Name: Sunnyside Estates
Permittee(s): Marshall County Sewerage District
Facility Address: Emerald Court, Wheeling, WV 26003
Latitude: 40.02077 **Longitude:** -80.69180
Permit Number: WV0081612
NAICS Code: 221320 **SIC:** 4952
Receiving Waters: Bull Run/Jakes Run
Unique Project #: 3E23WN107A

Facility Representative(s):

Point of Contact

Joseph Hickman, District Manager



Phone: (304) 845-8140

Email: MCSDDistrict@outlook.com

Kenny Whorton, Operator

Phone: (304) 312-0499

Email: hpexcavating@yahoo.com

EPA Inspectors:

Monica Crosby, USEPA Region 3

Phone: (410) 305-2930

Email: Crosby.Monica@epa.gov

Allison Gieda, USEPA Region 3

Phone: (215) 814-0232

Email: Gieda.Allison@epa.gov

Michael Lukowich, USEPA NEIC

Phone: (303) 462-9312

Email: Lukowich.Michael@epa.gov

Alexandra Flevarakis, USEPA NEIC

Phone: (303) 462-9299

Email: Flevarakis.Alexandra@epa.gov

State/Local Inspectors:

Christopher Dudek, West Virginia Department of Environmental Protection (WVDEP)

Phone: (304) 238-1220

Email: Christopher.t.dudek@wv.gov

Report Preparer
Signature/Date

Monica Crosby, Inspector
U.S. EPA Region III

Supervisor
Signature/Date

Mark Zolanz, NPDES Chief
U.S. EPA Region III

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I. Introduction

On June 26, 2023, two inspectors from the U.S. Environmental Protection Agency (“EPA”) Region III, accompanied by two inspectors with EPA’s National Enforcement Investigations Center (“NEIC”) (hereinafter, “EPA Inspection Team”) conducted a Clean Water Act (“CWA”) compliance evaluation inspection of the Sunnyside Estates Wastewater Treatment Plant (“WWTP”) (hereinafter, “the Facility”) permitted under the Marshall County Sewerage District National Pollutant Discharge Elimination System (NPDES) Permit. A representative from West Virginia Department of Environmental Protection (“WVDEP”) also attended the Inspection. The purpose of the inspection was to observe compliance with the CWA and with the Facility’s NPDES Permit No. WV0081612 (hereinafter, the “Permit”) and applicable State and Federal regulations.

A. Inspection Opening Conference

The EPA Inspection Team arrived at the Facility at approximately 3:00 PM (EDT) for the inspection. The Inspectors met with the Facility representatives. Monica Crosby displayed her credentials to the Facility representative, Mr. Joe Hickman, at the outset of the inspection and explained that the purpose of the inspection was to review compliance with the Permit. The rest of the EPA Inspection Team displayed their credentials as well. The EPA Inspection Team explained that any information that the Facility deemed to be confidential business information (“CBI”) should be identified to the EPA Inspectors during the inspection and it would be handled as CBI according to EPA’s CBI procedures. Table 1 outlines the individuals that participated in the inspection.

Table 1. Inspection Attendee List

Name	Affiliation	Contact Information
U.S. EPA Region III		
Monica Crosby	EPA Region III - Lead Inspector	Phone: (410) 305 - 2930 Email: crosby.monica@epa.gov
Allison Gieda	EPA Region III – Secondary Inspector	Phone: (215) 814 - 0232 Email: gieda.allison@epa.gov
U.S. EPA National Enforcement Investigations Center (NEIC)		
Michael Lukowich	EPA NEIC	Phone: (303) 462 – 9312 Email: Lukowich.Michael@epa.gov
Alexandra Flevarakis	EPA NEIC	Phone: (303) 462 - 9299 Email: Flevarakis.Alexandra@epa.gov
West Virginia Department of Environmental Protection		
Christopher Dudek	WVDEP	Phone: (304) 238- 1220 Email: Christopher.t.dudek@wv.gov
Facility Representative		
Joe Hickman	Marshall County Sewerage District Manager	Phone: (304) 845-8140 Email: MCSDistrict@outlook.com
Kenny Whorton	Contract Operator	Phone: (304) 312-0499 Email: hpexcavating@yahoo.com

B. Weather and Precipitation Conditions

During the inspection, weather was sunny and mild in temperature . National Oceanic and Atmospheric Administration (NOAA) National Weather Service precipitation data 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
WHEELING, WV USC00469482	6/21/2023	0
WHEELING, WV USC00469482	6/22/2023	0.05
WHEELING, WV USC00469482	6/23/2023	0.02
WHEELING, WV USC00469482	6/24/2023	0.04
WHEELING, WV USC00469482	6/25/2023	0.02
WHEELING, WV USC00469482	6/26/2023	0

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

² 'T' values in the Precipitation Amount category indicate a "trace" value was recorded

C. Summary of the Facility

The Facility is authorized to discharge under West Virginia NPDES Permit No. WV0081612 (hereinafter, Permit). The current permit was issued June 29, 2021, and became effective on August 01, 2021, , and is set to expire June 30, 2025 (refer to Appendix A).

The Marshall County Sewerage District is the permittee and operates and maintains the Sunnyside Estates WWTP described as follows:

- 1.) A wastewater collection system comprised of approximately 2,600 linear feet of six (6) inch and eight (8) inch diameter gravity sewer lines, five (5) manholes, five (5) cleanouts, one (1) lift station, 300 linear feet of four (4) inch diameter force main, and all requisite appurtenances.
- 2.) A 0.025 million gallons per day wastewater treatment plant comprised of a 1,500 gallon trash trap, a bar screen, a flow equalization tank with a volume of 7,500 gallons, an aeration chamber with a volume of 25,000 gallons, a clarifier with a volume of 2,500 gallons, an eight-cell alternating surface sand filter with a total surface area of 1,006 square feet, ultraviolet disinfection facilities, an aerated sludge holding tank with a volume of 2,500 gallons, and all requisite appurtenances. The plant serves approximately 250 persons in the Sunnyside Estates area and environs in the Marshall County Sewerage District, and discharge treated wastewater through Outlet No. 003 to Bull Run, approximately 1 mile from its mouth, then to Jakes Run to Wheeling Creek and to the Ohio River.

- 3.) Also, to accept nondomestic wastewater from Mt. Olivet Car Wash for subsequent treatment and discharge through Outlet No. 003.

II. Facility Activity

As part of the Inspection process, the EPA Inspection Team visually observed the Facility's municipal wastewater treatment train and the outlet in the presence of the County's District Manager and the Facility's Contract Operator.

The municipal treatment train consists of:

- A trash trap,
- A bar screen,
- A 7,500-gallon equalization tank,
- A 25,000-gallon aeration chamber,
- A 2,500-gallon clarifier,
- an eight-cell alternating surface sand filter,
- ultraviolet disinfection facilities, and
- a 2,500-gallon sludge holding tank.

The observations from the inspection are described in detail below in the Observations section. Photographs were taken during the inspection by Alexandra Flevarakis and are provided in Appendix B.

As part of the Inspection Process, the Facility representative explained the operations and service area of the Facility. The Facility is rated for 0.025 MGD.

The EPA Inspection Team began their Facility walk-through at the Industrial User ("IU"), Mount Olivet Car Wash (Appendix B, P6260023). The car wash has five bays with silt traps. The District Manager takes samples of the IU once a quarter (Appendix B, P6260024). The NPDES permit requires the IU to sample the discharge to the WWTP on a quarterly basis. It was explained that samples were previously taken once a month, but the Facility instructed the IU to clean the silt traps, and the concentrations got much better, so sampling was returned to once a quarter. The Facility Representative stated that flow from the IU is measured by their water usage and that the IU sends the Facility a quarterly log of the Oil and Grease Separator.

The EPA Inspection Team then continued the Facility walk-through at the WWTP by observing the Facility's trash traps and equalization basin (Appendix B, P6260025, and P6260026). The Facility Representative explained that the WWTP was substantially modified in 2021, except for the equalization basin, which will need to be replaced in a couple of years. The equalization basin was designed to have its own panel and blowers, which are contained within the covered building.

Following the equalization basin, flow is then gravity fed into a splitter box (Appendix

B, P6260028). Adjustments for the splitter box are made by adjusting the weirs either up or down in either the splitter box or equalization basin. The Facility operator further explained that weirs in the splitter box can be controlled for distribution of flow into the aeration basins. Sludge return runs 24/7, independent of the blowers (Appendix B, P626009). Wastewater is treated in the aeration basin, and solids settle out in the clarifiers before entering the Facility's Up-Flo Filter (Appendix B, P6260030, P6260031, and P6260033). The Facility operates its two Up-Flo Filters in succession, with one being offline at the time of the Inspection (Appendix B, P6260034). The Up-Flo Filter was described as working by depositing solids on top of the filter screens. The operator knows it is time to clean the filter when either changes in flow velocity cause channeling up through the filter or it has been 7–21 days. The filters are cleaned using a garden hose with potable water. The Facility representative explained that there is a sludge pump that exists on the bottom of the filters that pumps sludge to the Facility's sludge holding tank. Sludge is pumped out, and then the filters are rinsed off. The hydraulic velocity of flow is slowed down enough during cleaning that the solids float back down into the thin slits that exist on the filter screen. The sludge is hauled offsite once a quarter to the City of Moundsville.

Following filtration, the flow enters UV disinfection. The Facility is equipped with a new UV system that uses one bulb and is cleaned once a week (Appendix B, P6260035). Following disinfection, flow is discharged through Outfall No. 003 (Appendix B, P6260036).

III. Observations

Effluent Limitations and Monitoring Requirements

Requirement:

Part A.003 of the Permit outlines discharge limitations and monitoring requirements for the Facility's permitted point of discharge, Outlet 003.

Observation #1:

Since August 2021, Outfall No. 003 has experienced sixteen (16) effluent exceedances. Parameters with violations include total residual chlorine, Biological Oxygen Demand ("BOD") 5-day, ammonia, fecal coliform, dissolved oxygen, and flow. The full table of exceedances is included as Appendix C. The Facility Representative explained that the fecal coliform exceedances were the result of the UV bulb not being replaced after 1.5 years. The

Facility now changes the bulb once a year and has been able to meet their fecal coliform limits.

Fencing

Requirement:

Permit Section C.2 states, “The entire sewage treatment facilities shall be adequately protected by fencing.”

Observation #2:

The EPA Inspection Team observed the north-side of the Facility to be without fencing (Appendix B, P6260027). The Facility representative stated that the Facility’s old sand filter would overflow during high storm events. The consistent overflow eventually caused a slip, causing the fence to collapse. The Facility is scheduled to replace the fence as part of an Order that exists with WVDEP.

Inflow and Infiltration

Requirement:

Part C.18 of the Permit states, “The permittee shall continue to implement its program to identify and eliminate sources of infiltration and inflow. A written progress report shall be provided on a semiannual basis, as an attachment to the Discharge Monitoring Reports, detailing what has been performed in relation to the implementation and accomplishments of the infiltration and inflow elimination program. Failure of the permittee to comply with this requirement shall result in subsequent administrative and/or legal action, as may be necessary in order to obtain the compliance sought herein.”

Observation #3:

During the Inspection, the District Manager stated that Sunnyside Estates does not struggle with I/I. I/I reports for the time period of August 2021 to the present were reviewed. Sunnyside Estates is referred in the I/I report for the second half of calendar year 2022 as having had four new manholes installed along or in Greenbrier Lane.

Sewage Sludge Management Reports

Requirement:

Part D.1 of the Permit requires the permittee monitor and report quarterly a Sewage Sludge Management Report form that analyzes the quality and quantity of sewage sludge produced. Part D.3 of the Permit requires a Sewage Sludge Monitoring Report to be submitted semiannually.

Observation #4:

At the time of the inspection, the Facility’s operator explained that sludge is hauled off to the City of Moundsville. The Facility has been submitting quarterly Sewage Sludge Management Reports, as well as semiannual Sewage Sludge Monitoring Reports, in accordance with its Permit requirements.

Storage of Sludge

Requirement:

Part D.6 of the Permit requires that areas used for processing, curing, and or/storage of sewage sludge to be designed, constructed, and operated to prevent the release of contaminants to groundwater and/or the surface water.

Observation #5:

All sludge generated through treatment is pumped to the Facility's 2,500-gallon sludge holding tank. At the time of the Inspection, sludge was observed to be thick and dark in color, indicating older sludge (Appendix B, P6260029).

Operation and Maintenance

Requirement:

Part II.1 of the Permit states, "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 conditions of this permit."

Observation #6:

The EPA Inspection Team observed pin-floc near the clarifier weirs (Appendix, B P6260032).

Outfall Marker

Requirement:

Appendix A of the Permit Part I.13 states that a permanent marker at the establishment shall be posted in accordance with Title 47, Series 11, Section 9 of the West Virginia Legislative Rules.

Observation #7:

The EPA Inspection Team observed the outlet marker with all required information.

IV. Records Review

The EPA Inspector conducted a records review to evaluate the Facility's compliance with the Permit. Most of the records and reports required by the Permit were available for review onsite and after the Inspection. The Facility's electronic Discharge Monitoring Reports (eDMRs) were obtained electronically and reviewed offsite after the onsite Inspection. The following records were reviewed:

- Facility Permit
- Quarterly eDMR data during the period of March 2021, through August 01, 2023
- Quarterly Sewage Sludge Management Records (March 2021, through August

- 01, 2023)
- Semi-annual Sewage Sludge Monitoring Records (March 2021 through August 31, 2023)

V. Closing Conference

At the conclusion of the onsite Inspection, the EPA Inspection Team conducted a closing conference with the site representatives listed in Table 1 and shared preliminary observations. 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 (EDT).