

LSASD Project ID: 24-0274

Georgetown Sewage Treatment Plant #1

NPDES Compliance Evaluation Inspection

632 N Broadway Georgetown, KY 40324

Project Date(s): July 9th, 2024

Report Date: September 12, 2024



Project Leader: Asher Sampong

Water Quality Section

Field Services Branch

Laboratory Services & Applied Science Division

USEPA – Region 4

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1. Introduction

On July 9th, 2024, staff of the United States Environmental Protection Agency (EPA) Region 4, Laboratory Services and Applied Science Division (LSASD), conducted a National Pollutant Discharge Elimination System (NPDES) Compliance Evaluation Inspection (CEI) at Georgetown Sewage Treatment Plant (STP) #1 in Georgetown, Kentucky. The inspection was conducted under the authority of Section 308 of the Clean Water Act (CWA), as amended, and followed the procedures listed in the LSASD Project No. 24 – 0274 Sample and Analysis Plan (SAP). This report presents the results of the inspection. Table 1 lists the sampling participants and facility staff.

Table 1 – Inspection Personnel

Name	Organization	Date on Site	Contact Info
Asher Sampong	EPA Region 4 LSASD Inspection	07/09/2024	sampong.asher@epa.gov
Chris McHugh	EPA Region 4 LSASD Inspection	07/09/2024	mchugh.christopher@epa.gov
Samantha Chisley	Georgetown STP #1 Operator	07/09/2024	schisley@gmwss.com

2. Inspection Procedures

The objective of this inspection was to evaluate the condition of the STP and the permittee's self-monitoring program and offer compliance assistance as needed. Specific tasks included conducting an opening conference, interview facility staff, conducting a facility walkthrough, conducting records review, observing the receiving waters, and a closing conference.

3. Facility Description

The Georgetown STP #1 treatment system includes automatic bar screening, grit removal, oxidation ditches, primary clarifiers, followed with ultraviolet disinfection. Waste sludge is thickened, dewatered, and sent to a landfill for disposal. The facility is currently building an entire new treatment system scheduled to complete by 2027. The modification will add: New Parshall Flume Channel, New Pretreatment Building, New Grit Removal System, New Sequencing Batch Reactor System, Converted Post EQ-Existing Clarifiers, New Tertiary Filter System, New UV Disinfection System, New Post Aeration, New Effluent Parshall Flume Channel, New Cascade Aeration Steps, New Aerated Sludge Holding Tanks, New Solids Dewatering Building, New Septage Receiving Station, New Plant Drainage Pump Station New Chemical Feed and Storage Building, Converted Wet Weather Storage Basin (Old Oxidation Ditch), New

Electrical Building, New Emergency Generator, and a New Administration Building. This will double the treatment capacity to 9.0 MGD.

4. NPDES Permit

The facility's National Pollutant Discharge Elimination (NPDES) permit number KY0020150 was issued (renewed) by the State of Kentucky on October 1st, 2022, and expires on September 30, 2027. The NPDES permit allows the STP to discharge an average of 4.5 million gallons per day (MGD) of treated wastewater into Lanes Run through Outfall 001. The permit includes effluent limits for Total Suspended Solids (TSS), 5-day Carbonaceous Biochemical Oxygen Demand (CBOD₅), Phosphorous, pH, Dissolved Oxygen (DO), Ammonia Nitrogen, Total Nitrogen, and E. coli. Permit will be effective until the new treatment system is completed and reissued upon completion.

5. Records and Reports

I. Discharge Monitoring Sheet Review

The facility had several permit limit exceedances in the last 12 quarters for CBOD₅ and TSS. Additionally, a formal enforcement action was issued by the State of Kentucky at the end of 2023 (KY-DOW-21-3-0241).

Table 2 - EPA ECHO Permit Limit Exceedances

Period	Parameter	Permit Limit	Report Value	Statistical Basis
07/01-09/30/23	Ammonia	3 mg/L	3.7 mg/L	Daily max concentration
04/01-06/30/23	E. coli	240 #/ 100 mL	442 #/ 100 mL	7-day geometric mean
04/01-06/30/23	Ammonia	7.5 mg/L	10.7 mg/L	Daily max concentration
01/01-03/31/23	CBOD ₅	15 mg/L	144 mg/L	Daily max concentration
01/01-03/31/23	TSS	45 mg/L	491 mg/L	Daily max concentration
01/01-03/31/22	TSS	45 mg/L	223 mg/L	Daily max concentration

II. Records Review

The facility maintains all its discharge monitoring reports and analytical records onsite and had at least 3 years of DMR records and 5 years of sludge records available.

III. Flow Measurement

The facility uses a 2 ft. Parshall Flume and ultrasonic flow meter to measure and record effluent flow rate. The ultrasonic flow meter was last calibrated 07/2023. An instantaneous flow check was conducted, and the secondary flow rate was 5.4% from the primary flow rate which is within the recommended 10% referenced by the NPDES Compliance Inspection Manual.

IV. Sampling Review

The facility collects and analyzes 24-hr time-based composite samples for its permit listed parameters as specified in the NPDES Permit KY0020150.

6. Operation and Maintenance

The facility is operating and maintaining its treatment units to meet its NPDES permit requirements. Facility is currently building a new treatment plant on-site.

7. Effluent and Receiving Waters

The effluent discharge was clear and free of any excessive foam in the receiving stream.

8. Discussions and Findings

The rotating biological contact disc was not operational on one side of the oxidation ditch and the sludge appeared to be dark in color with bulking. This could lead to lack of nutrient removal if the dissolved oxygen isn't maintained at the correct range. Facility stated that it was waiting on procurement of necessary parts. (Figure 1).



Figure 1 - Oxidation Ditch

End of Report