

LSASD Project ID: 24-0149

McComb POTW NPDES Compliance Evaluation Inspection

Location:

1052 Southyard Road McComb, MS

Project Date: March 5th, 2024

Report Date: April 4th, 2024



Project Leader: Chris McHugh

Water Quality Section

Field Services Branch

Laboratory Services & Applied Science
Division

USEPA – Region 4

980 College Station Road

Athens, Georgia 30605-2720

The ANSI National Accreditation Board attests that U.S. EPA Region 4 Laboratory Services and Applied Science Division fulfills the requirements of ISO/IEC 17025:2017 ANAB Forensic Testing & Calibration AR 3125:2019 in the field of Forensic Testing. The activities contained in this report fall within the scope of accreditation, Certificate Number: AT-2628. Expires 08 June 2024.

LSASD
LABORATORY SERVICES & APPLIED SCIENCE DIVISION

Project Requestor:

Jairo Castillo, P.E., Section Chief
Wastewater Enforcement Section
Enforcement & Compliance Assurance Division
USEPA – Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-8960

Analytical Support:

Not Applicable

Approvals:

CHRISTOPHER MCHUGH  Digitally signed by CHRISTOPHER MCHUGH
Date: 2024.04.04 15:41:47 -04'00'

Chris McHugh
Water Quality Section
Field Services Branch

Date

Approving Officials:

JOHN RUIZ  Digitally signed by JOHN RUIZ
Date: 2024.04.03 13:11:22 -04'00'

John Ruiz, Technical Reviewer
Water Quality Section
Field Services Branch

Date

 Digitally signed by DEREK LITTLE
Date: 2024.04.08 08:03:33 -04'00'

Derek Little, Acting Section Chief
Field Services Branch

Date

DENNIS SAYRE  Digitally signed by DENNIS SAYRE
Date: 2024.04.04 11:23:20 -04'00'

Jairo Castillo, P.E., Chief
Wastewater Enforcement Section

Date

1. Introduction

On March 5th, 2024, 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) of McComb Publicly Owned Treatment Works (POTW) in McComb, MS. The facility is operated by Inframark for the City of McComb. The inspection was conducted under the authority of Section 308 of the Clean Water Act (CWA), as amended. This report presents the results of the inspection. The inspection followed the procedures listed in the LSASD Project No. 24 – 0149 Sample and Analysis Plan (SAP). Table 1 lists the sampling participants and facility staff.

Table 1 – Inspection Personnel

Name	Organization	Date on Site	Contact Info
Chris McHugh	EPA Region 4 LSASD Inspection	03/05/24	mchugh.christopher@epa.gov
Asher Sampong	EPA Region 4 LSASD Inspection	03/05/24	sampong.asher@epa.gov
Justin Berry	MDEQ Jackson	03/05/24	JBerry@mdeq.ms.gov
Jackson Dear	MDEQ Jackson	03/05/24	jdear@mdeq.ms.gov
Eddy Russell	Inframark/ facility manager	03/05/24	eddy.russell@inframark.com

2. Inspection Procedures

The objective of this inspection was to evaluate the condition of the water pollution control plant 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

McComb POTW (Figure 1) uses an activated sludge process called vertical loop reactor (VLR) with covered diffused mechanical aerators (Figure 2). The influent headworks consisted of screw pumps, automated bar screens, one manual bar screen and grit removal cyclones. There are plans to upgrade the headworks in the next year according to the operator. There is an eight-bank ultraviolet disinfection system in operation before the final effluent discharge to the receiving stream.



Figure 1. – McComb POTW Site Layout



Figure 2 – VLR Process

4. NPDES Permit

The facility's National Pollutant Discharge Elimination (NPDES) permit number MS0061077, was issued (renewed) by the State of Mississippi on January 23rd, 2024, and expires on June 30, 2028. The NPDES permit allows the POTW to discharge an average of five million gallons per day (MGD) of treated wastewater into Town Creek through Outfall 001.

The permit includes effluent limits for Total Suspended Solids (TSS), 5-day Biochemical Oxygen Demand (BOD₅), Phosphorous, pH, Dissolved Oxygen (DO), Ammonia Nitrogen, Total Nitrogen, and Fecal Coliform Bacteria. It also includes total Copper, Cyanide and Zinc limits.

5. Records and Reports

a. Online Discharge Monitoring Sheet Review

Below is a review of EPA's Integrated Compliance Information System database for the months of July 2021 through September 2023. Table 2 shows the summary of the facility's compliance history of the NPDES permit effluent limits.

Table 2 – DMR Permit Exceedances

Period	Parameter	Permit Limit	Report Value	Statistical Basis
07/01-09/30/21	Effluent BOD ₅	10.95 mg/L	14.2 mg/L (30% exceedance)	Weekly
10/01-12/31/21	Effluent BOD ₅	10.95 mg/L	15.4 mg/L (41% exceedance)	Weekly
10/01-12/31/22	Effluent, Total Nitrogen	2.19 mg/L	2.83 mg/L (29% exceedance)	Quarterly
07/01-09/30/23	Total Copper	0.079 mg/L	0.01 mg/L (27% exceedance)	Quarterly

b. On-site Records Review

The facility maintains all its DMR and analytical records onsite and had at least 3 years of records available. There were some isolated instances of incomplete benchsheets for January 24 - 26th, 2024, where an analyst did not completely fill in every date line or initial line on a given sheet.

c. Flow Measurement

The effluent discharge is measured using an ultrasonic flow meter over a 3 ft Parshall flume. The flow meter was operational and was within 10% instantaneous flow rate of the primary Parshall Flume when checked with the Parshall Flume staff gage. It was last calibrated in April

2023. The ultrasonic sensor should be placed in the middle of the channel instead of near the side wall to measure the flow level.



Figure 3 – Effluent Flow Meter



Figure 4 – Effluent Parshall Flume

d. Sampling Review

The facility collects and analyzes 24-hr composite samples for its permit listed parameters except total Phosphorus and total metals. Phosphorous and total metals are analyzed by Waypoint Analytical.

6. Operation and Maintenance

The facility is operating and maintaining its treatment units to meet its NPDES permit requirements.

7. Effluent and Receiving Waters

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

8. Discussions and Findings

The facility should consider additional quality control samples to ensure that the total metal permit exceedances are not because of sample contamination. The facility should also ensure that staff review laboratory record keeping practices to complete laboratory benchsheets accurately with proper documentation. The facility should have its contractor that maintains the flow measurement equipment review the placement of the ultrasonic flow meter to best monitor the flow level.

End of Report