



STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
JACKSON ENVIRONMENTAL FIELD OFFICE  
1625 HOLLYWOOD DRIVE  
JACKSON, TENNESSEE 38305-4316  
PHONE (731) 512-1300 STATEWIDE 1-888-891-8332 FAX (431) 661-6283

March 24, 2023

The Honorable Dewayne Reynolds  
Mayor, Town of Bradford  
P. O. Box 87  
Bradford, Tennessee 38316

RE: **Compliance Evaluation Inspection**  
Town of Bradford – Bradford STP  
NPDES Permit No. TN0062022  
Gibson County

Dear Mayor Reynolds:

On March 9, 2023, as a representative of the Tennessee Department of Environment and Conservation, Division of Water Resources (The Division), Jackson Environmental Field Office, I conducted a Compliance Evaluation Inspection (CEI) of Bradford STP (Sewage Treatment Plant). During the inspection, the wastewater treatment lagoon, the collection system and the wastewater laboratory were evaluated to determine the status of compliance with your National Pollutant Discharge Elimination System (NPDES) permit. The Division thanks operator JD Dethloff for his time and assistance.

### **I. Permit**

The permit covers the discharge of treated municipal wastewater from Outfall 001 to the South Fork of the Obion River at mile 9.7. The discharge consists of treated municipal wastewater from the Town of Bradford's wastewater collection and treatment systems. The treatment lagoon has a design capacity of 0.29 MGD. A copy of the permit was on file and available for review.

### **II. Records/Reports**

A review of the facility's self-monitoring and collection system records was performed. Consistently, records were available upon request, efficiently filed, backed up electronically, accurately transcribed, complete and current.

### **III. Facility Site Review, Self-Compliance Program, Operations & Maintenance, and Sanitary Sewer Overflows**

This is an aerated lagoon system consisting of two cells. The primary treatment cell is the largest cell and has 6 functioning aerators running at alternating times. The smaller secondary cell has two aerators in the

main basin and a baffle curtain that allows for settling before the effluent wet well and chlorine contact chamber. Disinfection is by chlorine and the contact time is gained in the 3.7-mile travel time to Outfall 001 at the South Fork of the Obion River. The primary cell of the lagoon system is experiencing erosion along some of the shoreline. Riprap has been placed around some of the lagoon. More riprap will need to be added to prevent further erosion. The Town of Bradford currently has one certified operator holding a biological and natural systems and collection systems level 2. Bradford has one pump station that was inspected and functioning properly. Before the CEI, the EPA CDX system and State Compliance records from April 2018 through January 2023 were reviewed and showed the facility to have had no exceedances of their permit effluent limits.

#### **IV. Effluent/Receiving Waters**

The outfall location at the receiving stream (South Fork of the Obion River at mile 9.7) was not observed during this inspection.

#### **V. Flow Measurement**

The influent primary and effluent flow monitoring devices are magnetic meters. Rye Engineering calibrates both devices annually.

#### **VI. Laboratory**

Laboratory standard operating procedures are followed consistently by laboratory staff. All analytical methods employed in the laboratory are approved in Title 40 CFR Part 136. In-house testing includes the following parameters: pH, dissolved oxygen, total residual chlorine, biochemical oxygen demand, *E. coli*, total suspended solids (TSS) and settleable solids. Annual calibration of laboratory devices is performed by Labtronix. A few areas that need to be brought into compliance in the laboratory were identified:

1. Secondary gel standards are being analyzed monthly for TRC. A primary chlorine standard needs to be prepared and analyzed on a once per month basis. Secondary gel standards should be used daily or at time of use for instrument calibration verification.
2. Quality assurance/Quality control (QA/QC) measures need to be added to the performance of *E. coli* testing according to Title 40 CFR Part 136 guidelines.
3. A duplicate for Total Suspended Solids and Settleable Solids needs to be performed as a part of QA/QC measures according to 40 CFR Part 136 requirements.

#### **VII. Sludge Handling/Disposal (or Biosolids Handling/Disposal)**

During the period evaluated for the purpose of this inspection no sludge was removed from the treatment lagoon.

#### **VIII. Additional Comments and Recommendations**

Please attend to the wave erosion on the primary lagoon cell walls. In addition, the Division recommends that Bradford STP Wastewater facility has the Tennessee Association of Utility Divisions for a site visit to assist with getting the QA/QC measures in alignment with Title 40 CFR Part 136 requirements.

**IX. Conclusion**

Compliance with your NPDES requirements helps ensure discharges that are protective of downstream fish and aquatic life and water quality. On behalf of the Division, I want to thank you and your staff for your efforts to ensure permit compliance and to protect state water quality. If I may be of assistance in matters concerning this report, please contact me via telephone at (731)458-7080 or via email at [Tammy.Miller@tn.gov](mailto:Tammy.Miller@tn.gov).

Sincerely,

A handwritten signature in blue ink that reads "Tammy Miller". The signature is written in a cursive, flowing style.

Tammy Miller  
Environmental Scientist  
Division of Water Resources  
Jackson Environmental Field Office

cc: JD Dethloff: [jddethloff007@tennesseetel.net](mailto:jddethloff007@tennesseetel.net)  
Waterlog