



REGION 4

ATLANTA, GA 30303

ELECTRONIC MAIL

CONFIRMATION OF RECEIPT EMAIL REQUESTED

The Honorable Harold Adcock
Mayor of the City of Greenbrier
2414 Highway 41 South
Greenbrier, Tennessee 37073
lannyadcock@greenbriertn.org

Re: Compliance Evaluation Inspection
Greenbrier Sewage Treatment Plant
NPDES Permit No. TN0020621

Dear Mayor Adcock:

The U.S. Environmental Protection Agency, Region 4 conducted a Compliance Evaluation Inspection (CEI) on the City of Greenbrier's (the City) Sewage Treatment Plant (STP) on October 22, 2024. The objective of the CEI was to assess the City's compliance with the Clean Water Act and the National Pollutant Discharge Elimination System (NPDES) permit, and to evaluate the general condition of the STP. The inspection results have been summarized in the enclosed CEI Report.

If you have specific questions about the inspection report, please contact Mr. Brad Ammons via email at ammons.brad@epa.gov or 404.562.9769. Please verify receipt of this letter and report by emailing Mr. Ammons at the email address provided.

Sincerely,
JAIRO
CASTILLO

Digitally signed by JAIRO
CASTILLO
Date: 2024.12.20
13:24:47 -05'00'

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

ENCLOSURES

1. Greenbrier, TN STP CEI Report

cc: Jessica Murphy
Tennessee Department of Environment and Conservation
Jessica.murphy@tn.gov

Ross Pendergrass
City of Greenbrier
Rpendergass@greenbriertn.org

United States Environmental Protection Agency Region 4
Enforcement and Compliance Assurance Division
Water Enforcement Branch
61 Forsyth Street, SW
Atlanta, Georgia 30303



Compliance Evaluation Inspection Report

Greenbrier STP
1223 Sugar Camp Drive
Greenbrier, TN 37073
NPDES Permit Number: TN0020621

Project No. CV-TN0020621-10222024

Date of Inspection:

October 22, 2024

Inspectors:

Brad Ammons, EPA Region 4
Andrew Gunderson, EPA Region 4

Inspection Report Prepared by:

Brad Ammons

Title and Approval Sheet

Title: 20241205 Greenbrier TN STP CEI Report
Project No. CV-TN0020621-10222024

Approving Official:

JAIRO
CASTILLO

Digitally signed by JAIRO
CASTILLO
Date: 2024.12.20
13:25:13 -05'00'

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

Enforcement Officer:

MICHAEL AMMONS

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MICHAEL AMMONS
Date: 2024.12.20
13:28:45 -05'00'

Brad Ammons, Environmental Engineer
Wastewater Enforcement Section
Water Enforcement Branch

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1. Introduction

On October 22, 2024, representatives of the United States Environmental Protection Agency Region 4, and the Tennessee Department of Environment and Conservation (TDEC) conducted a Compliance Evaluation Inspection (CEI) on the City of Greenbrier Sewage Treatment Plant (STP), owned and operated by the City of Greenbrier, Tennessee (the City). The inspection was conducted under the authority of Section 308 of the Clean Water Act (CWA), as amended. This report provides a summary of the inspection.

2. Participants

Name	Organization	Contact Information
Brad Ammons	EPA Region 4	Ammons.brad@epa.gov
Andrew Gunderson	EPA Region 4	gunderson.andrew@epa.gov
Christina Wingett	TDEC	christina.wingett@tn.gov
Michael Murphy	TDEC	michaelp.murphy@tn.gov
Lance Sperl	City Operator	Greenbriersewer@att.net
Todd Giles	City Operator	tgiles@greenbriertn.org

3. Facility Description

The Greenbrier STP is a three-cell sequencing batch reactor (SBR) plant located on Sugar Camp Drive in Greenbrier, TN. The facility is currently permitted under the National Pollutant Discharge Elimination System (NPDES) permit number TN0020621 to discharge 0.74 million gallons per day (MGD) from Outfall 001 into an unnamed tributary then to Carr Creek.

The STP consists of a headworks (automatic bar screen and grit separator), three-cell SBR (fourth cell is a sludge digester tank) followed by a settling tank and then a disc filter. Each of the three SBR cells have two mixers in each cell. The effluent of the disc filter then passes through UV disinfection prior to discharge through an old chlorine contact chamber. The effluent passes over a weir prior to discharge to the pipe leading to the unnamed tributary. Sludge treatment consists of aerobic digestion followed by dewatering in two roll-off dumpsters and sludge is landfilled.

The facility's current wastewater plant staff are as follows:

- One Tennessee Wastewater Treatment Grade 4 Operator.
- Three Tennessee Wastewater Treatment trainees.

4. Inspection Procedures

The overall objective of this CEI was to evaluate the condition and operational performance of the STP and Greenbrier's self-monitoring program and to offer compliance assistance as needed. Specific tasks included conducting an opening conference, interviewing STP staff, reviewing laboratory and Discharge Monitoring Report (DMR) records, conducting a STP walkthrough, and a closing conference.



Figure 1. Aerial View of Facility

5. Findings & Conclusions

A. Permit Review

Greenbrier's NPDES permit for the STP has an effective date of April 1, 2024, and expires on March 31, 2029. The NPDES permit lists Effluent Limitations and Monitoring Requirements for Outfall 001 (Treated Domestic Wastewater) that discharges into an unnamed tributary then into Carr Creek.

B. Records and Reports

The EPA's Integrated Compliance Information System (ICIS) shows that the City has exceeded the effluent limitations for the last 3 years for Carbonaceous Biochemical Oxygen Demand, 5-day (CBOD₅), E. Coli., Total Ammonia Nitrogen, Total Nitrogen, Total Phosphorus, Whole Effluent Toxicity (WET), Dry Weather Sanitary Sewer Overflows (SSOs), and Wet Weather SSOs.

The City uses a contract laboratory (Waypoint Analytical in Memphis, TN) for Total Nitrogen, Total Phosphorus, and Whole Effluent Toxicity. The City collects the samples and sends to the contract laboratory. All other parameters are done on-site (pH, Dissolved Oxygen, E. Coli, Settleable Solids, CBOD₅, TSS, and Ammonia-Nitrogen). The City had a copy of their NPDES permit and during the inspection some of the analytical results, chain of custody, and DMRs were present (or were provided by email afterwards), which met permit required retention times.

C. Flow Measurement

The discharge from the chlorine contact chamber goes over a v-notch weir and the City has an ultrasonic flow meter to measure flow.

D. Sampling/Laboratory

As discussed above, the City analyzes pH, Dissolved Oxygen, E. Coli., Settleable Solids, CBOD₅, TSS, and Ammonia-Nitrogen. The City uses a Hach HQ440D for measuring pH and Dissolved Oxygen (pH buffers were within expiration dates), a Hach DR3900 to analyze Ammonia-Nitrogen, and an IDEXX Quanti Tray for E. Coli. All analysis equipment appeared to be functional.

E. Site Visit (Operation and Maintenance)

The following components were observed:

- The headworks of the facility was in operation and consisted of a bar screen and grit removal system, (Photos 1 and 2).
- One of the mixers in SBR tank #2 was out of service.
- Three of the blowers on site are used for the SBR tanks; the other two blowers are for sludge digestion in the fourth SBR tank.
- The settling tank, disc filter and UV systems were all operational.
- The influent automatic sampler was noted at 12°C (Mercury thermometer), while the sampler displayed 0.6°C (Photos 3 and 4) and was last calibrated on 10/1/2024. The effluent refrigerated automatic sampler was noted at 4.7°C (Composite sampler display; Mercury thermometer had the same reading).

F. Sludge Handling

Sludge is aerobically digested in the fourth SBR tank, then dewatered using coagulants in two roll-off dumpsters, and the sludge is then landfilled. Supernatant from the dumpsters is sent to the aerobic digester.

G. Effluent/Receiving Water

The effluent appeared clear and void of solids. The unnamed tributary also appeared clear of any solids.

6. Discussion

According to the EPA's ICIS database, this facility was under a Consent Order from TDEC, which was closed in July 2022. The City is also under a Consent Order from TDEC for the wastewater collection and transmission system which implements sewer connection moratoriums. The City has experienced some recent toxicity exceedances, as well as other parameters.

The City's NPDES permit requires sampling of raw influent for CBOD, TSS, and flow. The NPDES regulations at 40 C.F.R. Part 136 requires that the storage of CBOD₅ and TSS samples maintain at least 6⁰ C to minimize biological degradation prior to laboratory examination. The influent composite sampler's refrigeration was not working, which affects the validity of the influent samples.

END OF REPORT

Appendix 1: Photographic Log



Photo 1: Bar screen.



Photo 2: Grit classifier.



Photo 3: Influent composite sampler.

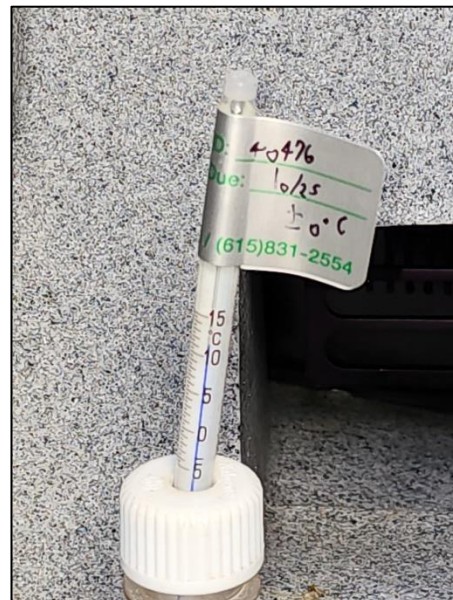


Photo 4: Influent sampler (Hg Thermometer reading 12°C)