



REGION 4

ATLANTA, GA 30303

ELECTRONIC MAIL

CONFIRMATION OF EMAIL RECEIPT REQUESTED

The Honorable Mike Callis
Mayor of the City of Portland
100 South Russell Street
Portland, Tennessee 37148
mikecallis@cityofportlandtn.gov

Re: Compliance Evaluation Inspection
Portland Sewage Treatment Plant
NPDES Permit No. TN0021865

Dear Mayor Callis:

The U.S. Environmental Protection Agency, Region 4 conducted a Compliance Evaluation Inspection (CEI) on the City of Portland'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 13:28:32
-05'00'

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

ENCLOSURE

1. Portland, TN STP CEI Report

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

Bryan Price
City of Portland
bprice@cityofportlandtn.gov

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

Portland STP
122 Morningside Drive
Portland, TN 37148
NPDES Permit Number: TN0021865

Project No. CV-TN0021865-10222024

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: 20241204 Portland TN STP CEI Report
Project No. CV-TN0021865-10222024

Approving Official:

JAIRO
CASTILLO

Digitally signed by JAIRO
CASTILLO
Date: 2024.12.20
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Jairo Castillo, P.E., Chief
Wastewater Enforcement Section
Water Enforcement Branch

Enforcement Officer:

MICHAEL AMMONS

Digitally signed by
MICHAEL AMMONS
Date: 2024.12.20
11:30:55 -05'00'

Brad Ammons, Environmental Engineer
Wastewater Enforcement Section
Water Enforcement Branch

Table of Contents

1. Introduction	1
2. Participants	1
3. Facility Description	1
4. Inspection Procedures	1
5. Findings & Conclusions	2
<i>A. Permit Review</i>	2
<i>B. Records and Reports</i>	2
<i>C. Flow Measurement</i>	3
<i>D. Sampling/Laboratory</i>	3
<i>E. Site Visit (Operation and Maintenance)</i>	3
<i>F. Sludge Handling</i>	3
<i>G. Effluent/Receiving Water</i>	4
6. Discussion	4
Appendix 1: Photographic Log	A1

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 Portland Sewage Treatment Plant (STP), owned and operated by the City of Portland, 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
Jennifer Young	City Operator	jyoung@cityofportlandtn.gov

3. Facility Description

The Portland STP is a two-cell sequencing batch reactor (SBR) plant located on Morningside Drive in Portland, TN. The facility is currently permitted under the National Pollutant Discharge Elimination System (NPDES) permit number TN0021865 to discharge 1.9 million gallons per day (MGD) from Outfall 001 into Summers Branch then to Red River.

The STP consists of a headworks (rotating drum screen and vortex grit separator), two-cell SBR followed by a filter. The effluent of the filter passes through a chlorine contact chamber which uses gaseous chlorine for disinfection. The effluent is treated with calcium thiosulfate for de-chlorination prior to discharge. The effluent passes over a weir prior to discharge to the pipe leading to Summers Branch. Sludge treatment consists of aerobic digestion followed by rotary press and sludge is land applied.

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

- One Tennessee Wastewater Treatment Grade 4 Operator.
- One Tennessee Wastewater Treatment Grade 2 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 Portland'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

Portland's NPDES permit for the STP has an effective date of September 1, 2024, and expires on August 31, 2029. The NPDES permit lists Effluent Limitations and Monitoring Requirements for Outfall 001 (Treated Domestic Wastewater) that discharges into Summers Branch then into the Red River.

B. Records and Reports

The EPA's Integrated Compliance Information System (ICIS) database 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, Dissolved Oxygen (DO), Total Phosphorus,

Settleable Solids, Total Suspended Solids (TSS), pH, Dry Weather Sanitary Sewer Overflows (SSOs), and Wet Weather SSOs.

The City uses a contract laboratory (Waypoint Analytical in Memphis, TN) to analyze CBOD₅, TSS, Total Ammonia-Nitrogen, Metals, Total Nitrogen, Total Phosphorus, and Whole Effluent Toxicity. The City collects the samples and sends to the contract laboratory. Other parameters are measured on-site (pH, DO, E. Coli, and Settleable Solids). 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 after the inspection) which met permit required retention times. The City started using a new record keeping system in June 2024 which improved records organization.

C. Flow Measurement

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

D. Sampling/Laboratory

As discussed above, the City only analyzes pH, Dissolved Oxygen, E. Coli., and Settleable Solids. The City uses a Hach HQ440D for measuring pH and Dissolved Oxygen (pH buffers were within expiration dates), a Hach DR5000 to analyze Total Residual Chlorine (City also has a portable chlorine meter), and an IDEXX Quanti Tray for E. Coli. All analysis equipment appeared to be functional.

E. Site Visit (Operation and Maintenance)

Photographs referenced below can be found in Appendix 1. The following components were observed:

- The STP is undergoing construction to upgrade capacity from 1.9 MGD to 2.85 MGD. Additions include: new headworks; an extra SBR tank (from 2 to 3 tanks); new chlorine contact chamber and outfall to Summers Branch.
- A new blower is onsite for the grit separator (Photo 1). The grit separator has been out of service for years (Photo 2).
- The drum screen was online (Photo 3).
- SBR Tank #1 is out of service. The mixer had no power cord and has moved to the wall of the SBR (Photos 4 and 5). City plans to enclose the SBR tanks to prevent algae growth.
- Sludge digester #1 was out of service.
- The influent refrigerated automatic sampler was noted at 1°C (Mercury thermometer), and the effluent refrigerated automatic sampler was noted at 4°C (Mercury thermometer) and was last calibrated on 6/15/2022.

F. Sludge Handling

Sludge is aerobically digested in three digesters in series. As noted above, digester #1 was out of service during this inspection. Sludge is then sent through a new rotary press, which results in 88-90% cake. The sludge is then land applied.

G. Effluent/Receiving Water

Effluent was not being discharged at the time of the first visit (Photo 6), but was being discharged and observed later when the SBR was decanting (Photo 7). Effluent appeared clear and void of solids. The outfall to Summers Branch was not evaluated during the inspection due to restricted access (overgrown vegetation).

6. Discussion

The facility's effluent exceedances are likely due to out of service equipment (e.g., SBR #1 out of service). The City is under an Order from TDEC to complete construction of the upgrades to the STP by the end of 2024, and generally, construction appeared to be on schedule to meet that deadline.

END OF REPORT

Appendix 1: Photographic Log.



Photo 1: New blower controls.



Photo 2: Vortex grit separator being out of service.



Photo 3: Drum screen.



Photo 4: SBR Tank #1 (out of service).



Photo 5: SBR Tank #1 (out of service).



Photo 6: Effluent weir (no discharge).



Photo 7: Effluent weir (with discharge).