



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
COLUMBIA ENVIRONMENTAL FIELD OFFICE
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CERTIFIED MAIL
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RECEIPT#: 9489 0090 0027 6428 5403 39

April 28, 2023

The Honorable Mayor Mark Staggs
City of Clifton
P.O. Box 192
Clifton, TN 38425

RE: Performance Audit Inspection and Notice of Violation
NPDES Permit # TN0067423
Clifton STP #2
Wayne County

Dear Mayor Staggs:

On April 25 through 27, 2023, Division of Water Resources (DWR) personnel conducted a Performance Audit Inspection (PAI) of the wastewater treatment system serving the City of Clifton. Specifically, the wastewater plant was inspected to determine compliance with the National Pollutant Discharge Elimination System (NPDES) permit, with a more intensive review of the laboratory operations, including the observation of sample collection, analysis, and examination of the facility's records. Barbara Loudermilk, TDEC Consultant, DWR Compliance and Enforcement Unit, was the lead inspector with assistance by DeWitt Logsdon, EPS3, Columbia Environmental Field Office. The Division thanks Mr. Shawn Teague, Clifton Chief Wastewater Operator, and Mr. Austin Clark, Clifton Public Works Director, for their assistance during this inspection.

I. Permit

1. The Clifton NPDES permit, TN0067423, was issued November 1, 2018, and became effective December 1, 2018.
2. As a reminder, the current NPDES permit expires November 30, 2023. In section 2.0 General Permit Requirements under part 2.1.1. Duty to Reapply, it states that the permit should be renewed no later than 180 days prior to the expiration date. The permit renewal submittal is due June 3, 2023.

II. Records/Reports

No violations were noted.

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

No violations were noted.

IV. Effluent/Receiving Waters

No violations were noted.

V. Flow Measurement

3. A recommendation is for the influent flow meter for the 6-inch Parshall flume to be checked and documented per the flume's flow curve at least once per quarter.

VI. Laboratory

4. The pH probe had not been properly cleaned nor changed annually per the manufacturer's instructions. Additionally, buffer solutions were not being changed daily. These actions are violations of Clifton's NPDES permit.
5. The dissolved oxygen sample was not captured directly within the bottle in which it was to be analyzed. This is not in compliance with the Standard Methods procedure and is a violation of Clifton's NPDES permit.
6. Two portion volume checks of the effluent composite sampler were found to be 60ml and 65ml, respectively. This is a violation of Clifton's NPDES permit as per section 1.2 Monitoring Procedures and part 1.2.3.c. Test Procedures that requires each portion size be at least 100 mL. It is recommended that the portion volume be checked for both samplers and documented on a regular basis.
7. The influent and effluent sample containers were not being cleaned properly prior to capturing samples for daily analysis of the following parameters: Total Suspended Solids (TSS), Biochemical Oxygen Demand (BOD), pH, Dissolved Oxygen (DO), and settleable solids. This is a violation of Clifton's NPDES permit per section 1.2 Monitoring Procedures and part 1.2.1. Representative Sampling.
8. The tubing for both composite samplers should be changed monthly and documented.
9. The influent tubing strainer should be positioned to be in the center of the channel and off the bottom.

10. The influent and effluent strainers should be cleaned prior to each sampling event.
11. The temperature of each sealed thermometer in each composite sampler should have their readings recorded.
12. It is recommended that standard wide-mouthed sample jugs be used for daily sampling of the influent and effluent to allow for easier cleaning.
13. The desiccant located at the bottom of the glass dome desiccator should be changed as needed and the date recorded. Old desiccant can affect the TSS analysis.
14. The glass dome of the desiccator needs grease added to its top edge to ensure a proper seal.
15. Instruction manuals for each piece of lab equipment should be obtained and stored in an easily accessible location.
16. A lab-grade glassware cleaner should be obtained.
17. Before completion of this inspection, bench sheets were revised to reflect the proper Standard Method for each parameter.
18. The lot codes of the various reagents used for all daily analytical work should be recorded.
19. Standard Methods section 1020B Quality Control requires a 12-step Quality Assurance Quality Control (QAQC) program be established. The QAQC program includes but is not limited to conducting duplicates of all parameters at the proper frequency and completion of Demonstration of Capabilities forms for staff. Forms should be completed for Mr. Teague and his backup analyst.
20. The Standard Method for each analysis should be reviewed.
21. The Standard Operating Procedure (SOP) manual should be revised, reviewed annually, and the date of the review recorded.
22. For chlorine residual, the Method Detection Limit (MDL) needs to be determined.
23. A barometer is needed for the calibration of the dissolved oxygen meter.
24. For the BOD analysis, ensure the proper temperature for the bath is achieved and avoid stirring/mixing of the sample before analysis.
25. For the TSS analysis, ensure the filters are properly rinsed.

26. For E. coli testing, a current comparator tray is needed.
27. For settleable solids testing, a dedicated timer is now being used to conduct the settleable solids analysis. The sample should be mixed before pouring into the Imhoff cone, properly stirred, and the various times recorded. The Imhoff cones need to be washed after each use.

VII. Sludge Handling/Disposal

28. For clarification, since Clifton STP #2 does not land apply biosolids, it is exempt from section 3.3 Biosolids Management Practices of their NPDES permit.

VIII. Pollution Prevention and Storm Water

No violations were noted.

IX. Pretreatment

29. In section 3.0 Permit Specific Requirements under part 3.2. POTW Pretreatment Program General Provisions subpart a. of Clifton's permit, it states that an Industrial Waste Survey (IWS) is to be submitted within 120 days of the effective date of the permit. Since this WWTP only receives sewage from both the Turney Center Annex and the Tennessee Department of Correction prison facilities, an IWS is not required per Adam Bonomo, State Pretreatment Coordinator. A request has been made to the Division's permit section to remove this requirement during the permit's reissuance.

X. Additional Comments and Recommendations

30. Consideration should be made to allow Mr. Teague to attend training classes at the Fleming Training Center in Murfreesboro, Tennessee where classes are offered focusing on wastewater treatment laboratory procedures and techniques. The Center's phone number is 615-898-8090.
31. For further training assistance on proper lab techniques for conducting both the BOD and TSS analysis, it is recommended that a representative of one of the following agencies be contacted who can provide on-site training. Those to consider could include a representative of the Tennessee Association of Utility Districts (TAUD) and/or a representative of the Municipal Technical Advisory Service (MTAS). Clifton has phone numbers for both TAUD and MTAS.

XI. Conclusion

Compliance with Clifton's NPDES permit, TN0067423, helps ensure discharges are protective of downstream fish and aquatic life and water quality. Thank you for your efforts to ensure permit compliance and to protect state water quality. By June 15, 2023, the Division requests the

The Honorable Mayor Staggs

April 28, 2023

Page 5

City of Clifton respond to items 2 through 31 in sections I through X as noted above. If you need assistance in matters concerning this report, please contact DeWitt Logsdon via telephone at (931) 401-0564 or by email at DeWitt.Logsdon@tn.gov.

Sincerely,



Sherry R. Glass
Environmental Manager
Division of Water Resources
Columbia Environmental Field Office

ecc: Barbara Loudermilk, TDEC Consultant, Compliance and Enforcement Unit
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File Copy, DWR, Columbia Environmental Field Office
Waterlog database