



STATE OF TENNESSEE  
**DEPARTMENT OF ENVIRONMENT AND CONSERVATION**  
**KNOXVILLE ENVIRONMENTAL FIELD OFFICE**

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May 22<sup>nd</sup>, 2024

Mr. James Gallup, City Manager  
City of Jefferson City  
e-copy: [jgallup@jeffcitytn.com](mailto:jgallup@jeffcitytn.com)  
P.O. Box 530  
Jefferson City, TN 37760

RE: **Compliance Evaluation Inspection-Filter Backwash**  
City of Jefferson City Water Treatment Plant  
NPDES Permit #TN0056847  
Jefferson County

Dear Mr. Gallup:

On February 27<sup>th</sup>, 2024, Jenna Williams and Caitlin Winburn from the Division of Water Resources (The Division) visited the Jefferson City Water & Sewer Commission Water Treatment Plant and performed a Compliance Evaluation Inspection (CEI) of the NPDES filter backwash water discharge permit #TN0056847. The inspection covered the time-period from May 2021-January 2024. The Division would like Brian Rodgers, Chris Smith, and Lee Shands for their curtesy during and follow-up on Division requests.

As a result of the inspection the following comments, deficiencies, and/or recommendations have been noted:

**1. Site Review**

The membrane filtration plant has an average production of 4,400 million gallons per day and was operational at the time of inspection. Backwash water leaves the four membrane trains and travels to the concrete settling basin prior to discharging to Mossy Creek. Water in the settling basin appeared very cloudy at the time of inspection. While this is in part from the spring being used, which is typically the secondary source, and a large rain event occurring the previous day, the basin should be cleaned to ensure that the backwash water can settle and to prevent excess sediment from discharging the basin.

NPDES signage is placed at Mossy Creek with required information in accordance with the permit.

## **2. Records & Reports**

The NPDES permit was issued September 18<sup>th</sup>, 2020, and will expire August 31<sup>st</sup>, 2025. Monthly Discharge Monitoring Reports (DMRs) have all been submitted timely during the inspection period. No effluent exceedances were reported during the inspection period.

Aluminum is sent to a third-party lab for analysis, but it was determined that the analysis for Total Suspended Solids (TSS) was not being done in accordance with a Code of Federal Regulations Title 40 Part 136 approved analytical method. This was corrected immediately after the inspection and these samples are now being analyzed at the Jefferson City wastewater treatment plant which has the correct equipment to perform the analysis.

Additionally, total residual Chlorine was not being monitored properly as free Chlorine reagents were being used in the analysis. Mr. Rodgers stated that total Chlorine reagents would be ordered and used in the analysis moving forward.

## **3. Sludge Handling**

As mentioned above, the discharge basin was very cloudy at the time of inspection. Water system staff indicated that the backwash sludge had been previously sent to the wastewater treatment plant which no longer has the ability to accept it. If that is the case, the system should explore other disposal options. The Division asks that Jefferson City Water & Sewer Commission respond to this letter by **July 8<sup>th</sup>, 2024** with a timeline for cleaning the basin and how the removed sludge will be disposed.

## **General Observations, Comments, and/or Other Recommendations**

Again, I would like to thank facility personnel for their assistance and courtesy. If you have any questions or need additional information, do not hesitate to contact me at (865) 347-4849 or [Jenna.Williams@tn.gov](mailto:Jenna.Williams@tn.gov).

Sincerely,



Jenna Williams, Environmental Protection Specialist  
Knoxville Environmental Field Office  
Division of Water Resources

cc: Mr. Porter Massengill, Dir. of Public Works & Utilities (e-copy: [pmassengill@jeffcitytn.com](mailto:pmassengill@jeffcitytn.com))  
Mr. Chris Smith, Chief Operator (e-copy: [csmith@jeffcitytn.com](mailto:csmith@jeffcitytn.com))  
Mr. Brian Rodgers, Superintendent of Utilities (e-copy: [brodgers@jeffcitytn.com](mailto:brodgers@jeffcitytn.com))  
DWR, Nashville (e-copy)