

# ELG Permanent Cessation of Coal Combustion Progress Updates

## TVA Kingston Fossil Plant – NPDES permit No. TN0005452

### 2024 Annual Report

#### Introduction

Part I.F. of the NPDES permit for Kingston Fossil Plant (KIF) requires the Tennessee Valley Authority (TVA) to provide the Tennessee Department of Environment and Conservation (TDEC) with an annual report detailing progress achieved during the preceding calendar year as well as identification of upcoming projects needed to attain compliance with EPA’s Effluent Limitations Guidelines (ELGs) for flue gas desulfurization (FGD) wastewater and bottom ash transport water (BATW) treatment. This update report is due by January 31 of the following year.

In 40 CFR 423.19(g), the ELG Rule requires submittal of an annual progress report detailing the status of milestones referenced in TVA’s Notice of Planned Participation (NOPP) for the retirement subcategory of the ELGs.

#### 2024 Calendar Year Update

On February 23, 2024, TVA released a final Environmental Impact Statement (EIS) evaluating the retirement of KIF and alternatives for replacement generation. Based on this alternatives analysis, TVA issued a Record of Decision on April 2, 2024, to retire all coal combustion generating units at KIF and proceed with construction of combined cycle/aeroderivative natural gas plant, battery storage, and solar installation. The timeline for cessation of coal combustion at KIF remains within that allowable under the retirement subcategory of the ELGs.

See below for a listing of milestones submitted with KIF’s NOPP in the retirement subcategory:

<b>Milestone</b>	<b>Activity</b>	<b>Date</b>
Integrated Resource Plan	TVA posted the final Record of Decision for the 2019 IRP.	September 17, 2019
National Environmental Policy Act (NEPA) Review	Publish Environmental Impact Statement (EIS) assessing impacts associated with the proposed retirement of KIF and replacement generation alternatives	February 23, 2024
Decision to Retire KIF	Record of Decision published in Federal Register	April 2, 2024
Cessation of Coal Combustion Activities	Cease coal combustion at KIF	On or before December 31, 2028

With the announcement that KIF will retire, achieving permanent cessation of coal combustion activities on or before December 31, 2028, TVA is not currently planning any additional upgrades for FGD wastewater treatment or bottom ash transport water (BATW) systems at this site.

KIF’s NPDES permit has remained in administratively continued status throughout calendar year 2024. KIF’s NPDES permit expired on February 28, 2023. However, TVA applied for KIF’s

NPDES permit reissuance on August 30, 2022, in accordance with the 180-day advance submittal required for permit coverage continuance past expiration until the renewal is issued.

## **Regulatory & Compliance Developments**

### **2020 ELG Rule**

On October 13, 2020, the United States Environmental Protection Agency (EPA) published revisions to the ELGs in 40 CFR Part 423. The revised rule modified technology-based effluent limitations for FGD wastewater and BATW. In setting new effluent limitations, EPA recognized the need to provide flexibility by establishing new subcategories that provide separate compliance pathways based on unit operation and asset operating plans and by allowing transfers between subcategories.

For facilities planning to cease coal combustion by December 31, 2028, a “retirement subcategory” was established. Best available technology economically achievable effluent limitations for FGD wastewater and BATW discharges in the retirement subcategory are equivalent to those previously established.

### **2021 Modified NPDES Permit Request and Supplemental Developments**

TVA submitted an NPDES permit modification request for KIF on January 8, 2021, to incorporate revisions to the ELGs. Enclosed with that submission was TVA’s justification to modify the permit, including interim milestone dates and applicability date proposals for complying with the revised technology-based effluent limitations for the Generally Applicable category for FGD wastewater and BATW.

Subsequently, on May 6, 2021, during the TVA Board of Directors quarterly meeting, TVA’s CEO announced TVA’s intent to prepare an Environmental Impact Statement (EIS) to assess the impacts associated with the proposed retirement of KIF and the replacement generation alternatives. On June 15, 2021, TVA published a Notice of Intent (NOI) for the EIS in the Federal Register. Preparing an EIS ensured that TVA considered relevant environmental information, and that the public had been informed and had an opportunity to comment on TVA’s proposed decision. The EIS process is crucial for TVA to appropriately evaluate and prioritize the values and concerns of stakeholders and to formulate, evaluate, and compare alternatives. On June 21, 2021, TVA submitted to TDEC supplemental relevant information for review and consideration in the modified NPDES permit request relevant to the Board’s decision to assess closure alternatives for KIF.

### **2021 Notice of Planned Participation - Cessation of Coal Combustion Activities**

On October 6, 2021, TVA submitted a NOPP in the retirement subcategory for FGD wastewater and BATW for the nine coal combustion units at KIF in order to preserve the option of participating in the retirement subcategory. On April 2, 2024, TVA issued a Record of Decision announcing the retirement of KIF. Permanent cessation of coal combustion activities at KIF shall cease by December 31, 2028, thus meeting the timeline allowable in the 2020 ELG rule’s retirement subcategory.

### 2021 Modified NPDES Permit TN0005452

On December 1, 2021, TDEC issued a modified NPDES KIF permit TN005452 for authorized discharges. The modified NPDES permit incorporates alternative compliance pathways with corresponding compliance dates for applicable ELG categories and subcategories. The reissued permit also specifies KIF's status in the retirement subcategory of the 2020 ELGs.

### 2024 ELG Revised Rule

On May 9, 2024, EPA published new revisions to the Steam Electric ELGs. The 2024 revised rule modifies technology-based effluent limitations for four waste streams: FGD wastewater, BATW, combustion residual leachate (CRL), and legacy wastewater. In addition, the rule amends the subcategories for separate compliance pathways based on unit and asset operating plans.

TVA applied for an NPDES permit modification on August 6, 2024, pursuant to the 2024 revised ELGs, to incorporate revised limitations based on multiple asset operating scenarios. TVA is updating the agency's [Integrated Resource Plan](#), which evaluates long-term energy resources, electric generation, power supply, and decarbonization strategies. This process will best inform TVA decision making and asset strategy for managing TVA's coal fleet into the future. Therefore, TVA requested KIF's NPDES permit modification reflect compliance deadlines for regulated waste streams under each available 2024 ELG category or sub-category.

### **Wet FGD and Bottom Ash Transport Water 2024 Projects Activities Update**

The FGD WWT facility and BATW treatment and discharge are in operation and TVA will continue to address any warranty and O&M issues. Due to TVA's decision to Cease Coal Combustion by 2028, there was no project work completed during 2024 related to Bottom Ash Transport Water or additional FGD Wastewater Treatment.