Duke Energy Carolinas, LLC

Application for Special Order by Consent

Supplemental Information

May 2018

Table of Contents

1. **Application Section IV. Necessity Narrative**

2. **Application Section V. Certification**

3. **Application Section VI. Predicted Compliance Schedule**

4. **Application Section VII. Funding Sources Identification**

5. **Non-refundable application fee of $400.00**

Application Section IV. Necessity Narrative

Existing and/or unavoidable future violations(s) of permit conditions or limits(s):

Duke Energy Carolinas holds North Carolina NPDES permit NC0024406 for operation and discharge from an existing wastewater treatment works at coal fired electric generation known as the Belews Creek Steam Station. In 1984, Duke Energy Carolinas, working in cooperation with the predecessor agency to the Department of Environmental Quality to relocate the point source discharge from the facility's coal ash surface impoundment from Belews Reservoir to the Dan River. As detailed in the NPDES permit effective October 1, 1984, the impoundment discharge flowed through an effluent channel designated by the Department. The effluent channel met all existing requirements and was granted lawfully. Duke Energy has renewed the NPDES permit several times and the permit has been issued with the effluent channel transporting wastewater to the Dan River on multiple occasions since the 1984 permit issuance.

The Division of Water resources has recently informed Duke Energy Carolinas of its intent to remove the effluent channel designation, resulting in the reclassification of the current channel as an unnamed tributary to the Dan River. The draft of NPDES permit NC0024406 contains Water Quality Based Effluent Limits (WQBELs) for outfalls 003 and 111 based on concentrations of parameters within the unnamed tributary, which, due to very low natural flows, are more stringent than were included in prior permits. The wastewater treatment system at Belews Creek is not designed to achieve these levels. As a result, Duke Energy is unable to immediately comply with modified effluent limits and 111 and proposes to expend significant and necessary resources to eliminate discharges from outfalls 003 and 111 in a prescribed timeframe.

Duke Energy intends to do so by converting to dry ash handling and subsequently closing the coal ash surface impoundment at Belews Creek in accordance with applicable requirements set out in the North Carolina Coal Ash Management Act and the Federal Coal Combustion Residuals rule, thereby eliminating outfalls 003 and 111 to the unnamed tributary. Some non-ash waste streams currently treated by the impoundment will be directed to a newly constructed lined retention basin, which discharges to the unnamed tributary via outfall 003. The lined retention basin discharge will be relocated via pipe to a new outfall on the Dan River.

The relocation of waste streams and elimination of flows through outfalls 003 and outfall 111 will require considerable engineering, planning and construction activities and are expected to take up to 5 years to fully complete.

The existing treatment process and any process modifications that have been made to date to ensure optimum performance of existing facilities:

The surface impoundment has been in operation for many decades. Surface impoundments have historically been considered Best Available Technology (BAT) for ash sluice treatment as they

provide excellent settling and neutralization of various wastestreams. They are classified as Grade 1 Physical/Chemical treatment systems by the State of North Carolina. The impoundment is monitored per NPDES permit requirements and has an excellent compliance record with NPDES permit terms. The inability to meet new limits in the unnamed tributary is not the result of the operation of the impoundment but a change in the regulatory classification of the tributary.

In accordance with federal and state law, Duke Energy is converting Belews Creek to dry fly and bottom ash handling. Additionally, the facility has already installed and efficiently operated an additional physical/chemical treatment and biological treatment system to treat flue gas desulfurization (FGD) wastewaters. This treatment system is one of a handful in the nation and has been reviewed by EPA as a model technology for the treatment of FGD wastewaters. Once dry ash handling is in place and remaining waste streams have been rerouted, the impoundment can be removed from service and dewatered so that it will no longer discharge through existing outfalls 003 and 111. Complete closure will take additional time, due to the size of the impoundment.

Section V. Certification

Third party engineering report to be submitted under separate cover.

Section VI. Predicted compliance schedule

Under the Order, Duke Energy proposes to undertake the following activities.

1. Sample discharges and instream at frequencies required by the NPDES permits.

2. Provide planning, engineering, funding and construction resources necessary to:

    a. Site, plan, engineer , permit and construct a new pipeline to redirect ongoing flows from the lined retention basin from outfall 003 to the newly authorized outfall 006 to the Dan River within 3.5 years.
    b. Take actions to start the closure of the ash basin at Belews Creek within a timeframe of 5 years. Eliminate or redirect any flows from outfall 003 within 5 year time period.
    c. Eliminate or redirect flows from outfall 111 within 5 years.

3. Provide annual reports on the status of flow re-route work and flow elimination activities.

4. During the period in which Duke Energy is covered by the consent Order, comply with alternate limits as set out in the Special Order by Consent.

5. Safely close ash basins in accordance with requirements under CAMA and CCR rule.

Section VII. Funding Source Identification

Duke Energy will provide adequate funds to engineer, permit and implement the proposed activities listed in Section VI. As detailed in the company's filings with the Securities and Exchange Commission (available at http:// www.duke-energy.com/our-company/investors), Duke Energy has sufficient resources to fund the activities proposed in this application without the need for external funding sources.

Non-refundable application fee of $400.00