



NCDEQ Coal Ash Impoundment Closure Plan Decision

Cape Fear Energy Complex

August 14, 2020



NCDEQ Coal Ash Impoundment Closure Plan Decision – Cape Fear Energy Complex

On December 31, 2019, Duke Energy submitted its proposed Closure Plan for the Cape Fear Energy Complex (“Cape Fear”) as required by the Coal Ash Management Act (“CAMA”). The North Carolina Department of Environmental Quality (“NCDEQ”) conducted a thorough evaluation of this proposed Closure Plan. In addition to its own evaluation, NCDEQ held a public hearing, circulated the proposed closure plan for public comment, reviewed written public comments and analyzed site specific information provided by Duke Energy and the public.¹ Based on this evaluation, NCDEQ finds that the proposed Closure Plan is protective of public health, safety, and welfare; the environment; and natural resources and generally complies with the requirements of CAMA. Consequently, NCDEQ hereby approves the implementation of the proposed Closure Plan for Cape Fear.

Background:

CAMA, enacted in August 2014, required that NCDEQ develop proposed classifications for all coal combustion residuals (CCR) surface impoundments, including active and retired sites, for the purpose of closure and remediation based on these sites' risks to public health and the environment. In July 2016, the North Carolina General Assembly enacted House Bill 630, which added N.C.G.S. § 130A-309.216 requiring the impoundment owner to identify three sites in North Carolina at which to install and operate ash beneficiation projects capable of processing CCR to specifications appropriate for cementitious products. The statute requires the impoundment owner to use commercially reasonable efforts to produce 300,000 tons of usable CCR at each site annually. On June 30, 2017, Duke Energy identified Cape Fear as the final of the three ash beneficiation sites. Pursuant to subsection (c) of N.C.G.S. § 130A-309.216, CCR surface impoundments located at a site at which an ash beneficiation project is installed and operating shall be closed no later than December 31, 2029.

Public process for the proposed Closure Plan:

CAMA required that NCDEQ put the proposed Closure Plan to public notice and conduct a public meeting to explain the Plan. NCDEQ held the public meeting for Cape Fear on February 12, 2020 and provided a public comment period through March 4, 2020. During the hearing, one person gave comment on the proposed closure plan. In addition, DEQ received three comments via email. The comments included concerns about monitoring the air emissions released during the STAR® beneficiation process; ensuring appropriate safety controls are observed during the dewatering process; whether beneficial use diffuses Duke Energy’s liability; what the final disposition of trees growing on older coal ash basins that may have accumulated heavy metals would be; and whether the Closure Plan needs to include the approved landfill(s) that will receive CCR materials not suitable for the STAR® process, waste remaining after incineration, and any

¹ The Hearing Officer’s Report including NCDEQ’s response to comments is attached as Attachment 1. Public comments are attached to the Hearing Officer’s Report. Additional information reviewed by NCDEQ includes, among other things, environmental data contained in the comprehensive site assessment and proposed corrective action plan, permit requirements, the closure options analysis, ongoing groundwater monitoring, groundwater modeling provided by Duke Energy, NCDEQ’s Closure Determination for Cape Fear, and other data relevant to the CAMA requirements.

unprocessed CCRs remaining by the closure end date. A discussion of the substantive concerns raised in these comments is included as part of the hearing officer's report.

Evaluation of Closure Plan:

CAMA establishes criteria for NCDEQ's evaluation of Closure Plans. Specifically, CAMA provides that NCDEQ "shall disapprove a proposed Coal Combustion Residuals Surface Impoundment Closure Plan unless the Department finds that the Closure Plan is protective of public health, safety, and welfare; the environment; and natural resources and otherwise complies with the requirements of this Part." N.C. Gen. Stat. § 130A-309-214(c). CAMA sets forth a list of required contents for Closure Plans, including engineering drawings, schematics, and specifications for the proposed Closure Plan, a description of the provisions for the final disposition of the coal combustion residuals, groundwater modeling, and a description of the plan for post-closure monitoring and care for an impoundment for a minimum of 30 years.

NCDEQ finds that under CAMA Duke Energy's proposed Closure Plan for Cape Fear is protective of public health, safety, welfare, the environment, and natural resources. In the Closure Plan, Duke Energy proposes to excavate the coal ash in the CCR impoundments, which NCDEQ has determined is the most environmentally protective closure option. Because the coal ash will be excavated, there will not be any primary contaminant source remaining that can continue to leach contaminant into groundwater. Further, without the coal ash in place, there will be additional options available for remediating contaminated groundwater. As explained in the Cape Fear Closure Determination, "removing the primary source of groundwater contamination will reduce uncertainty and allow for flexibility in the deployment of future remedial measures." Cape Fear Closure Determination, p. 1.

Since the coal ash will be excavated and beneficially reused, the need to transport coal ash over public roads or by rail car will be minimized.

NCDEQ further finds that Duke Energy's proposed Closure Plan for Cape Fear complies with the other requirements of CAMA. Specifically, NCDEQ has determined that Duke Energy has generally included all required elements of a Closure Plan (either directly or through incorporation by reference of the proposed Corrective Action Plan for Cape Fear),² including the following:

- site history and history of site operations;
- site maps;
- results of a hydrogeologic, geologic, and geotechnical investigation of the site;
- results of groundwater modeling at the site;
- engineering drawings, schematics, and specifications for the proposed Closure Plan;
- a description of the construction quality assurance and quality control program to be implemented in conjunction with the Closure Plan;
- a description of the provisions for disposal of wastewater and management of stormwater and the plan for obtaining all required permits;
- a list of required permits;
- a description of the provisions for the final disposition of the coal combustion residuals;
- a description of the plan for post-closure monitoring and care for an impoundment for a minimum of 30 years;

² Note that this document does not constitute an approval of the proposed corrective action plan for Cape Fear or any element thereof, NCDEQ will review and take action on that proposal in a separate decisional document.

- an estimate of the milestone dates for all activities related to closure and post-closure;
- projected costs of assessment, corrective action, closure, and post-closure care; and
- a description of the anticipated future use of the site and the necessity for the implementation of institutional controls following closure.

N.C. Gen. Stat. § 130A-309.214(a)(4). However, NCDEQ noted that Duke Energy did not submit an updated Comprehensive Site Assessment (CSA) and CAP that would be sufficient to provide compliance with the applicable requirements under 130A-309.214(a)(4)(c) and (d) and Title 15A of the North Carolina Administrative Code Subchapter 02L. It should be noted that per NCDEQ’s letter to Duke Energy dated February 26, 2020, the updated CSA is due December 1, 2020.

Conclusion:

NCDEQ approves the implementation of the proposed Closure Plan for Cape Fear based on its finding that this Plan “is protective of public health, safety, and welfare; the environment; and natural resources and generally complies with the requirements of CAMA” and that an updated CSA will be submitted December 1, 2020 followed by an updated CAP.