



NCDEQ Coal Ash Impoundment Closure Plan Decision

Belews Creek Steam Station

August 14, 2020



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On December 31, 2019, Duke Energy submitted its proposed Closure Plan for the Belews Creek Steam Station (“Belews Creek”) 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 otherwise complies with the requirements of CAMA. Consequently, NCDEQ hereby approves the proposed Closure Plan for Belews Creek.

Background:

CAMA sets forth a process for closure of coal combustion residuals (“CCR”) impoundments in North Carolina. Based on certain statutory factors, impoundments must be classified low, intermediate or high risk. N.C. Gen. Stat. § 130A-309.213. For impoundments classified as “low risk,” such as the CCR impoundments at Belews Creek, NCDEQ must elect one of three closure options: (1) excavation; (2) cap-in-place; or (3) closure under the federal CCR Rule. N.C. Gen. Stat. § 130A-309.214(a). Prior to making its Closure Determination, NCDEQ received public input on these closure options. In January 2019, NCDEQ held public meetings near Belews Creek, and took public comment into February 2019 regarding the closure options considered at Belews Creek.

On April 1, 2019, NCDEQ elected excavation as the closure option for the CCR impoundments at Belews Creek (“Belews Creek Closure Determination”) “because removing the coal ash from unlined CCR surface impoundments at Belews Creek is more protective than leaving the material in place.” Belews Creek Closure Determination, p. 1. NCDEQ determined that excavation “is the most appropriate closure method because removing the primary source of groundwater contamination will reduce uncertainty and allow for flexibility in the deployment of future remedial measures.” Belews Creek Closure Determination, p. 1.

Based on its analysis of the available information regarding the groundwater plume at Belews Creek, NCDEQ also concluded in its Belews Creek Closure Determination that a cap-in-place or hybrid closure option could not be incorporated into an approvable Closure Plan. CAMA requires that a closure plan for any impoundment where ash is left in place must “prevent, upon the plan’s full implementation, post-closure exceedances of groundwater quality standards beyond the compliance boundary.” N.C. Gen. Stat. § 130A-309.214(a)(3)b. NCDEQ did not believe that

¹ The Hearing Officer’s Report with NCDEQ response to comments is included as Attachment 1. Public comments are included in 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 Belews Creek, and other data relevant to the CAMA requirements.

this requirement could be met with respect to Belews Creek. NCDEQ’s overall conclusion was that “based on the current geographic scope and vertical extent of the groundwater contamination plume, and the modeled extent of the plume in the future, NCDEQ does not believe these two closure options [closure-in-place and hybrid] can meet the requirements of CAMA” Belews Creek Closure Determination, p. 7.

Duke Energy challenged NCDEQ’s Belews Creek Closure Determination along with the closure determinations for six other Duke Energy facilities in the North Carolina Office of Administrative Hearings. After extensive discovery, Duke Energy and NCDEQ reached a settlement and executed an agreement to resolve that litigation on December 31, 2019 (“Settlement Agreement”). On February 5, 2020, the Wake County Superior Court entered a consent order consistent with the terms of the Settlement Agreement (“Consent Order”). Pursuant to the terms of the Settlement Agreement and Consent Order, Duke Energy agreed to excavate the majority of the coal ash in the CCR Impoundment at Belews Creek to lined onsite landfills. The Closure Plan for Belews Creek complies with the terms of the Settlement Agreement and Consent Order.

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 Belews Creek on February 18, 2020 and conducted a public comment period through March 10, 2020. During that hearing, ten individuals made comments on the Closure Plan. Additionally, NCDEQ received three written comments regarding the Closure Plan during the public comment period.

Eleven of the commenters (nine who spoke and two who provided emailed comments) expressed support for excavating and relocating coal ash into lined landfills. One of the commenters at the public hearing expressed concerns about the recycling of coal ash and whether it will pollute and break down over time. Two commenters expressed concern about the safety of Duke Energy workers and contractors. Other commenters had concerns about groundwater monitoring, who incurs the costs of the excavation, as well as a need for third-party testing at the coal ash construction fill site.

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 Belews Creek is protective of public health, safety, welfare, the environment, and natural resources. In the Closure Plan, Duke Energy proposes to excavate the majority of the coal ash in the CCR impoundment, which NCDEQ has determined is the most environmentally protective closure option. The closure plan provides that ash shall remain underneath the Pine Hall Road Landfill, which is capped with a geosynthetic cap and a soil cap. The amount of ash underneath the Pine Hall Road Landfill to remain in place is estimated to be no more than 100,000 tons. Approximately 11,870,000 tons of coal ash will be excavated and transported to an onsite landfill. Because the majority of coal ash will be excavated there will be limited 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 Belews Creek Closure Determination, "removing the primary source of groundwater contamination will reduce uncertainty and allow for flexibility in the deployment of future remedial measures." Belews Creek Closure Determination, p. 1.

Since the coal ash will be excavated to lined onsite landfills, the need to transport coal ash over public roads or by rail car will be minimized. Such onsite disposal also obviates the need to locate additional communities to accept coal ash. Consequently, NCDEQ finds that disposal of coal ash to onsite lined landfills is protective of public health and safety and significantly diminishes the environmental impact of excavation.

NCDEQ further finds that Duke Energy's proposed Closure Plan for Belews Creek complies with the other requirements of CAMA. Specifically, NCDEQ has determined that Duke Energy has adequately included all required elements of a Closure Plan (either directly or through incorporation by reference of the proposed Corrective Action Plan for Belews Creek),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;
- an estimate of the milestone dates for all activities related to closure and post-closure;

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

- 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).

Conclusion:

NCDEQ approves the proposed Closure Plan for Belews Creek based on its finding that this Plan “is protective of public health, safety, and welfare; the environment; and natural resources and otherwise complies with the requirements of CAMA.”