NCDEQ Coal Ash Impoundment Closure Plan Decision

Cape Fear Energy Complex

Attachment 1: Hearing Officer's Report and Public Comments

August 14, 2020

Hearing Officer's Report – Proposed Closure Plan for the Coal Ash Impoundment at Cape Fear Plant

Date: August 14, 2020

Facility: Cape Fear Plant
County: Chatham
Owner & Operator: Duke Energy Progress, LLC

Purpose

The purpose of this document is to provide an administrative record of the public input process on the proposed Closure Plan for the subject facility as required by G.S. 130A-309.214(b) of Session Law 2016-95 House Bill 630 (referred to as the Coal Ash Management Act or CAMA).

Regulatory Background Summary

CAMA, enacted by the North Carolina General Assembly in 2014, required that the North Carolina Department of Environmental Quality (NCDEQ) develop proposed classifications for all coal combustion residuals 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 coal combustion residuals (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 selected the Cape Fear Plant as the third and final ash beneficiation site as required by CAMA. 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.

On December 31, 2019, NCDEQ received the proposed Closure Plan for the Cape Fear Power Station per the CAMA deadline. Staff from the NCDEQ's Division of Waste Management; Division of Energy, Mineral, and Land Resources; and Division of Water Resources have reviewed the Closure Plan for completeness and the requirements of 130A-309.214(a)(4). NCDEQ also received the proposed Corrective Action Plan for groundwater remediation for the Cape Fear Power Station. The Division of Water Resources staff also reviewed the Corrective Action Plan as several of its components are part of the Closure Plan.

Site History/Background Summary

The Cape Fear Plant is owned and operated by Duke Energy. The approximately 483-acre Cape Fear Plant site is located at 500 CP&L Road, Chatham County in Moncure, North Carolina, on the eastern bank of the Cape Fear River. The plant initially began power production operations in 1923. Additional power generating units were added from 1924 to 1969. In the most recent operating configuration, the plant employed two coal-fired units along with four oil-fueled combustion turbine units. Power production operations at the plant were terminated in October

2012, and demolition activities were completed in 2017. There are no coal-fired units currently in operation at the Cape Fear Plant.

Closure Plan Summary

The closure plan indicates that the coal ash will be excavated. Duke Energy has developed plans for on-site recovery and reclamation/recycling of a significant portion of the CCR at the Cape Fear Plant, in accordance with the rate established by NCGS § 130A-309.216. The remaining excavated CCR will be transported to an approved landfill facility in order to meet the end date of December 31, 2029 for complete removal of the CCR. The beneficial use activities consist of removing and transporting CCR from the Basins for processing at a STAR® facility to be constructed on-site to the east of the 1985 Basin. The STAR® facility will process the reclaimed CCR to a level of quality and condition suitable for future reuse in the concrete industry.

Public Input Summary

In accordance with the requirements of 130A-309.214(b)(1), the Closure Plan was made available to the public for review and input on January 10, 2020. A copy of the proposed closure plan was available to be reviewed at the Chatham County Health Department, Chatham County Public Library, and at the NCDEQ Raleigh Regional Office. The Closure Plan was also made available online at:

https://NCDEQ.nc.gov/news/key-issues/coal-ash-excavation/2020-coal-ash-closure-plans-buck-cape-fear-hf-lee-and#cape-fear-coal-ash-closure-plan

Per 130A-309.214(b)(2)(a), a notice and summary of the proposed Closure Plan was published in the Chatham News and Record and the Chatham Journal Newspaper for three consecutive weeks beginning on January 16, 2020. Copies of the Notice were provided as required by 130A-309.214(b)(2)(b) and (c). Per 130A-309.214(b)(4), the 60-day comment period began on January 10, 2020 and ended on March 4, 2020. Comments could be sent to the NCDEQ via email, mail, and oral and/or written comments submitted during the public hearing.

Public Hearing and Oral Comments Summary

In accordance with the requirements of 130A-309.214(b)(3), a Public Hearing was held on February 12, 2020 at 6:00 pm in the Chatham County Agriculture and Conference Center located at 1192 US-64 Business, Pittsboro, North Carolina. The purpose of the public hearing was to allow the public to comment on the Cape Fear Steam Electric Plant Closure Plan. Interested parties were able to submit oral or written statements regarding the proposed Closure Plan. Persons wishing to speak registered at the hearing. Speaking times were allotted per speaker as time allowed.

Approximately 37 people attended the public hearing including 14 staff members from the Division of Waste Management; Division of Energy, Mineral, and Land Resources; Division of Water Resources, and Division of Air Quality, as well as Public Information Officers and the Hearing Officer. A total of 35 individuals signed the attendance sheets at the hearing. The Hearing Officer provided opening comments and Sarah Rice of the Division of Waste Management gave a brief overview of the Closure Plan. One (1) individual registered in advance of the hearing to make comments. Because there was only one speaker registered there was not a time limit imposed, but the speaker delivered her comments in less than five minutes.

Response to Comments

NCDEQ received four (4) comments via email or verbal comments at the public hearing. The main concerns were: monitoring the air emissions released by the STAR® beneficiation process; appropriate safety controls observed during the dewatering process so raised dike basins are not overtopped or breached; repurposing the coal ash to form cement blocks will diffuse or transfer the liability for the pollution and make it more difficult to hold Duke Energy accountable; final disposition of trees and shrubs growing on older coal ash basins that may have accumulated heavy metals; and 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 unprocessed CCRs remaining by the closure end date. A discussion of these comments follow.

Comment: One commenter 1) recommended that coal ash be stored above ground on property owned by utilities; 2) recommended that there be adequate ambient air monitoring, monitoring at the fence line and metals monitoring; and 3) raised issues regarding the accuracy of testing, expressing concerns about lab inconsistencies. The commenter requested that the most appropriate, sensitive and accurate testing methods available be used.

Response: The coal ash will be excavated. The Closure Plan allows for on-site recovery and reclamation/recycling of a significant portion of the coal ash. The remaining excavated coal ash will be transported to an approved landfill facility in order to meet the end date of December 31, 2029 for complete removal. A STAR® facility will be constructed on-site to process reclaimed coal ash to a level of quality and condition suitable for future reuse. All applicable environmental regulatory requirements and permit conditions must be met, including all regulatory requirements applicable to monitoring and to laboratory procedures.

Comment: One commenter 1) stated that that the companies responsible should pay for the cleanup, not the rate payers; 2) voiced concern about the adequacy of resources for regulatory inspections and compliance enforcement; 3) expressed concern about the impact to drinking water, as the Cape Fear Steam Station Coal Ash Basin is located upstream from several municipalities; 4) stated that personal protective gear should be required for all affected workers; 5) stated that the monitoring of emissions, radioactivity and heavy metals should be routinely conducted; 6) stated that air monitoring devices to monitor SO2 and CO2 should be installed at the STAR® reactor and should be monitored continuously; 7) stated that a community alert should be developed; 8) voiced concern about the dike basins, which are classified high hazard, and requested that appropriate safety controls be required during decanting and dewatering; 9) requested that the completion of modeling take into account extreme weather events and the installation appropriate safeguards. The commenter noted that otherwise contaminants could contaminate wetlands, the Haw River and the Cape Fear River; 10) stated that the Plan needs to include information on the approved landfill that will receive CCR materials not suitable for the STAR® process, as well as details on how to handle waste remaining after incineration; 11) stated that an accounting should be required for any unprocessed CCRs remaining in the basin after October 1, 2029; and 12) stated that the accumulation of heavy metals in the biomass of vegetation growing over the older coal ash basin should be considered.

Response: NCDEQ has not been granted statutory authority to determine who will pay the costs associated with closure-by-removal at Cape Fear, including costs associated with storage of excavated coal ash in a lined landfill. The North Carolina Utilities Commission has statutory authority to determine who will pay the costs associated with cleanup of coal ash at the site,

including those costs associated with storage of excavated coal ash in a lined landfill. These cleanup costs will be the subject of future rate cases before the North Carolina Utilities Commission. The public will have an opportunity to provide comments during those rate case hearings. The Closure Plan allows for on-site recovery and reclamation/recycling of a significant portion of the coal ash. The remaining excavated coal ash will be transported to an approved landfill facility in order to meet the end date of December 31, 2029 for complete removal. A STAR® facility will be constructed on-site to process reclaimed coal ash to a level of quality and condition suitable for future reuse. All aspects of the Closure Plan must meet all applicable environmental regulatory requirements, including but not limited to all regulatory requirements relating to water quality, air emissions, dam safety, solid waste, hazardous waste and landfills. Duke Energy will also be required to meet all applicable legal statutes and regulations addressing worker safety at Cape Fear. Generally, the statutory authority to regulate worker safety laws is vested in state and federal agencies other than NCDEQ. NCDEQ will require that all activities, including vegetation removal from the older impoundments will be handled properly and according to the state rules for disposal of such material.

Comment: One commenter stated that 1) Duke Energy's proposal to re-burn coal ash at the STAR facility should not be allowed due to air toxin concerns; 2) the use of repurposed coal ash is objectionable because it created further health risks for which Duke Energy would not be held accountable; 3) coal ash should be safely stored above-ground at Duke Energy property; and 4) Duke Energy should retain full liability for the lifespan of all coal ash waste.

Response: The Star facility is required to meet air quality standards and air toxic limits and monitoring as established by the air permit. CAMA requires the processing of coal ash to level of quality and condition suitable for future reuse at three Duke Energy sites. The STAR facility must meet all applicable environmental regulatory standards

Comment: One commenter opposed the use of the STAR facility, citing concerns about pollution the STAR® facility would create.

Response: The air emissions of the STAR facility are regulated through the air quality permitting process and the facility must meet all applicable environmental regulatory standards and permit conditions.

Hearing Officer Recommendations

Based on my review of the record and in consultation with subject matter experts in NCDEQ, I recommend approval of the submitted Closure Plan for the coal ash impoundment at Duke Energy's Cape Fear Steam Electric Plant located in Chatham County. I conclude that the Closure Plan is protective of public health, safety and welfare, the environment and natural resources and otherwise complies with the requirements of CAMA.

Kim Nimmer

Kim Nimmer, Hearing Officer

8/17/2020

Date

From: Jeannie Ambrose
To: Capefearcomments
Subject: [External] Public Comments on Draft Cape Fear Power Station Coal Ash Basin Closure Plan
Date: Wednesday, March 4, 2020 4:10:07 PM
Attachments: 2020-MAR 4-Cape Fear Power Station Plant Draft Coal Ash Basin Closure Plan-FINAL Public Comments-JA.pdf

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Please let me know if you have received my submission.

Thank you for taking public comments.

Jeannie Ambrose

Draft Cape Fear Power Station Coal Ash Closure Plan
Public Comments submitted to North Carolina Department of Environmental Quality
March 4, 2020

Communities near the coal-fired power plants have long sought a remediation solution for the leaking impoundments actively polluting the environment and threatening human health. The coal ash basin closure agreement finally begins to address the unsafe storage of coal combustion residuals in large, unlined storage pits close to waterways. Hopefully, the high cost of these long overdue cleanups will be borne by the companies responsible for the pollution and not by the ratepayers.

With DEQ staff reductions due to state funding cuts, I am concerned that there are fewer qualified personnel available to conduct the needed inspections and enforce compliance in a timely manner. Since the Cape Fear Plant site is located upstream from municipalities that rely on the Cape Fear River as its drinking water source, it is critical that the closure process is done in a way that does not add more toxic pollutants to those already detected but not regulated. In addition, protective personal gear should be required for workers to reduce harm from inhalation and contact exposure from handling CCRs during both the excavation of the five coal ash basins and the STAR® fly ash burning operations.

Air emission and radioactivity monitoring of heavy metals associated with CCRs should be conducted routinely to address genuine societal concerns. Improper disturbance of these uncovered basins containing CCRs and other toxic waste byproducts could result in additional health risks to the surrounding community since this heavy industrial zoned area has a history of toxic pollutants released into the air and groundwater. Even if levels of radioactivity in CCRs at the Cape Fear coal-fired power plant are not as high as those detected at Duke Energy's Asheville Power Plant, radioactivity levels during the basin closure operation must be monitored to detect any possible adverse health risks from exposure to fine airborne particulate matter. In this area, the accumulative health effects of radiation exposure are made worse from natural background radiation [low to moderate susceptibility to elevated radon in groundwater] and man-made sources [proximity to Shearon-Harris nuclear facility].

Although transporting the ~5.8 M tons of coal ash from the five impoundments to the STAR® facility is confined within the property boundaries, air dispersion and groundwater releases of air-borne pollutants offsite are still concerns. Continuous air monitoring devices for SO_2 and CO_2 installed on the STAR® reactor could alert SEFA and DEQ of any spikes. But how can the community be alerted to these occurrences? What can be done to monitor for PM and NOx emissions offsite? Dickens RV Park and a poultry farm are located across Corinth Rd. east from the STAR® site. Popular, outdoor recreational areas and campgrounds at Jordan Lake, Harris Lake, and other community parks are located further northeast, downwind from the recycling facility.

Since these raised dike basins are classified as high hazard by NCDEQ and as flood hazard areas on maps, appropriate safety controls during the decanting and dewatering steps in the excavation procedure is essential. The modeling analysis for the excavation plan must take into account the predictions of more extreme weather events. Without appropriate safeguards in place, it is more likely that the structural integrity of the stormwater diversion and retention controls and the temporary water management systems are subject to failure. Overtopping or a dam breach could allow CCRs to contaminate wetlands, the Haw River and Cape Fear River. The original site proposed for the STAR® facility would have been located in a floodplain if not for the Chatham County Watershed Protection Ordinance.

The closure plan needs to include information on the contracted, approved landfill(s) that will receive CCR materials not suitable for the STAR® process as well as the remaining waste after incineration. Any unprocessed CCRs remaining in the basin(s) by the closure end date of October 1, 2029, would also need offsite disposal. Also the uptake and accumulation of heavy metals into the biomass of the vegetation growing over the older coal ash basin should be considered. For example pine trees can grow tap roots that penetrate straight down beneath the unlined coal ash basin(s) to a

depth from 4 to 75 feet in search of water. After clearing and grubbing of the oldest vegetated basin site(s), where will these logs, brush, and debris be sent?

Thank you for the opportunity to submit public comments on the proposed Cape Fear Power Station closure plan.

Jeannie Ambrose
Pittsboro, NC 27312

From: Zachary Turner
To: Capefearcomments
Subject: [External] Public Comment
Date: Friday, February 14, 2020 10:53:34 AM

To Louise Hughes at NCDEQ,

Regarding the closure plans for the Cape Fear site, I would like to express my disagreement with Duke Energy's proposal to re-burn coal ash with their STAR power plant. Re-burning coal ash will inevitably release more toxins into the air—as a resident of Chatham County, I'm already worried that my drinking water has been contaminated with heavy metals and PFAS, and I would prefer that the air I breathe remain at least as safe as it currently is.

I am also concerned that repurposing the coal ash will diffuse liability for the pollution and safety risk presented by this hazardous waste. If this hazardous material is repurposed as concrete and distributed throughout the country, how will we be able to hold Duke Energy accountable if the recycled coal ash presents further public safety risks? The entirety of this proposed closing plan appears like a good way for Duke Energy to a.) turn a prof at the expense of the health of an already disadvantaged community, and b.) mitigate accountability in the event of a future incident.

As an alternative, I would like to suggest that the coal ash be moved to above-ground landfills on Duke Energy property, where they could be monitored for leakage easily. I believe that the company responsible for creating this waste should retain full liability for the hazardous waste for the duration of that compound's lifespan.

Thank you for receiving my public comments.

Kind regards,

Zachary Turner

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Zachary D. Turner

UNC Chapel Hill 2017
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amerif.wordpress.com

From: judyhogan@mindspring.com
To: Capefearcomments
Subject: [External] Closure Plan
Date: Monday, February 10, 2020 6:47:41 AM

To whom it may concern:

Re closure plans for the Cape Fear Coal-Burning Plant

As to closure of the Cape Fear Plant and its coal ash dumps (Five and a half million tons of it, some with trees growing in the coal ash), we here in Moncure do not want this plant. Again, this has been forced upon us. People are dying here, and if this STAR plant goes on line, polluting our air, we'll continue to die before our time. It may be hard to prove that we're dying of coal ash poisons, but if you consider our environmental history, it's no wonder that we lose too many people before their normal time would be up. We began working against the coal ash dump in 2014, as soon as we learned it was coming, and we and our county commissioners could not stop it, and these activists have been lost to cancer: John Cross, our vice president, Terica Luxton, active in EnvironmentaLee, and Johnsie Tipton, who was also active in Lee against coal ash.

I moved to Moncure and Moncure-Pittsboro Rd in late 1998. At that time this community was fighting against a low-level nuclear dump. This house and land were right for me, so I decided I would buy it and work on the problems here. We defeated the low-level nuclear dump in 1999. Then we worked against having more nuclear waste shipping to Shearon Harris through our community, right past our homes and post office. Progress Energy (later Duke Energy) said they would suspend such shipments in two years. Did they? They never said.

Then there came word that we had more formaldehyde coming out of the smokestacks of Sierra Pine, which was grandfathered it, than any similar plant in the country. When DEQ finally took action, Sierra Pine sold the plant, and people stopped getting so much asthma, bronchitis, pneumonia. The new owners put in new machinery. We stopped landfills three times. Some of us worked against fracking. In these fights, over fifteen years, our county commissioners could help us. Then came the CAMA legislation, which left the commissioners out of the loop. They didn't want coal ash dumped in Chatham County, but since they couldn't act, they made a deal with Duke Energy to take 12 million tons of coal ash from the Charlotte and Wilmington areas in exchange for $19 million. So far there is 7+ million tons at Brickhaven. And it appears to be leaking, in less that five years. Now a STAR plant is being built, to make the Cape Fear coal ash suitable for use in cement. But it pollutes the air and kills more people. Isn't it time you considered these deaths that keep occurring. We loved these people, these fighters for justice. Isn't it time you considered our human welfare?

Respectfully,

Judy Hogan, Chair, Chatham Citizens Against Coal Ash Dump
judyhogan@mindspring.com 919-545-9932. PO Box 253, Moncure, NC 27559-0253.

cc: CCACAD and E-Lee members, Chatham County Board of Commissioners
Judy Hogan 919-545-9932: Don't Frack Here.
the 12th Penny Weaver Mystery, Feb. 1, 2020.
postmenopausalzest.blogspot.com www.judyhogan.org.