



NCDEQ Coal Ash Impoundment Closure Plan Decision

Buck Combined Cycle Station

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 Buck Combined Cycle Station

Date: August 14, 2020

Facility: Buck Combined Cycle Station
County: Rowan
Owner & Operator: Duke Energy Carolinas, 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 August 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 October 5, 2016, Duke Energy selected the Buck Steam Station as one 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.

In April 2019, NCDEQ established submittal dates for an updated Comprehensive Site Assessment (CSA) and updated Corrective Action Plan (CAP) for CCR surface impoundments and other primary and secondary sources. Consistent with this direction, Duke Energy will submit to NCDEQ the updated CSA for the Buck Combined Cycle Station by February 1, 2021, and the updated CAP by July 1, 2021.

On December 30, 2019, NCDEQ received the proposed Closure Plan for the Buck Combined Cycle 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 CAP for groundwater remediation for the Buck Combined Cycle Station. The Division of Water Resources staff also reviewed the CAP as some of its components are part of the Closure Plan.

Site History/Background Summary

Buck Combined Cycle Station is owned and operated by Duke Energy Carolinas, LLC (Duke Energy). The approximately 640-acre Buck Combined Cycle Station site is located at 1555 Dukeville Road in Rowan County near Spencer, North Carolina on the southern bank of the Yadkin River. Commercial operations of the station began in 1926 with two coal-fired units and later expanded to six units. Units 1 and 2 were retired in 1979, Units 3 and 4 were retired in 2011, and Units 5 and 6 were retired in 2013. There are no coal-fired units currently in operation at the Buck Combined Cycle Station. The Buck Combined Cycle Station began transitioning to a 620 megawatt, gas-fired combined cycle plant in 2009, and it became operational in December 2011. The property contains three coal ash impoundments, two closed and one inactive covering approximately 150 acres, and containing an estimated 6.6 million tons of ash.

Closure Plan Summary

The Closure Plan indicates that all coal ash at the site will be excavated. Duke Energy has developed plans for on-site recovery and reclamation/recycling of a significant portion of the CCR at the Buck Combined Cycle Station at a rate of 400,000 tons of CCR processed per year in accordance with NCGS § 130A-309.216. Duke Energy will implement a concurrent excavation plan in which any remaining excavated CCR will be transported to an approved lined landfill facility in order to meet the deadline 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 the onsite STAR® facility currently being constructed. 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 22, 2020. A copy of the proposed closure plan was available to be reviewed at the Rowan County Health Department, Rowan County Public Library, and at the NCDEQ Mooresville Regional Office. The Closure Plan was also made available online at:

<https://DEQ.nc.gov/news/key-issues/coal-ash-excavation/2020-coal-ash-closure-plans-buck-cape-fear-hf-lee-and>

Per 130A-309.214(b)(2)(a), a notice and summary of the proposed Closure Plan was published in the Salisbury Post newspaper for three consecutive weeks beginning on January 26, 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 30-day comment period began on January 25, 2020 and ended on March 16, 2020. Comments could be sent to the NCDEQ via email, mail, and oral and/or written comments submitted during the public hearing. As NCDEQ was reviewing the public comments, it was noted that the wrong email address for public comment was included in the original notice in January. The agency determined that an additional 30-day comment period was needed to make sure all the public comments were received and considered as part of the public process. The agency noticed the second comment period for three consecutive weeks starting on June 25, 2020 and the comment period remained open through July 24, 2020.

Public Hearing and Oral Comments Summary

In accordance with the requirements of 130A-309.214(b)(3), a Public Hearing was held on February 24, 2020 at 6:00 pm in the North Rowan High School located at 300 North Whitehead Avenue in Spencer, North Carolina. The purpose of the public hearing was to allow the public to comment on the Buck Combined Cycle Station 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 51 people attended the public hearing including 16 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 a Public Information Officer and the Hearing Officer. A total of 51 individuals signed the attendance sign in sheets at the hearing. The Hearing Officer provided opening comments, and Elizabeth Werner of the Division of Waste Management gave a brief overview of the Closure Plan. Three individuals registered in advance of the hearing to make comments, and one additional individual made comments after the three that registered spoke. Speakers had three minutes for initial presentations and additional time was provided after everyone who registered to speak was finished.

Response to Comments

Aside from the comments provided by the speakers at the public hearing, NCDEQ initially received no additional comments via email, written, and/or spoken during the comment period. At the public hearing, the PowerPoint directed email comments be submitted to rowancomments@ncdenr.gov, however the outlook address apparently set up was for buckcomments@ncdenr.gov. Following this discovery in June of 2020, the comment period was re-opened and advertised, and three emails were received. The main concerns were noise control, environmental monitoring, stormwater and wastewater runoff, air quality from the STAR® plant, the Buck Combined Cycle Station being constructed on/near the most historic site in Rowan County, and how the community would be notified if an environmental impact occurred. There were four public commenters who made oral comments at the February 24, 2020 public hearing, and there were three public comments submitted by email, all addressed below.

1. Comments from the February 24, 2020 Public Hearing

Comment: All four commenters expressed support and appreciation for the closure plan as they felt that excavation and transport to a lined landfill was the best way to protect the environment and surrounding communities.

Response: NCDEQ agrees with this comment and has determined that excavation of the CCR impoundment at Buck, followed by utilization for approved beneficial reuse activities and placement in a lined landfill, is the best closure method to protect the environment and surrounding communities.

Comment: One commenter expressed concern that the dams at Buck are classified as “large size, high-hazard, Class C structures” due to the effect a dam failure at Buck would have, and expressed concern about how the community would be notified during an emergency. The commenter suggests that community members meet regularly with NCDEQ and Duke Energy where the Star system is being installed to improve communication with the community.

Response: Duke Energy will be required to meet all applicable legal statutes and regulations addressing emergency plans at Buck. Generally, the statutory authority to regulate emergency plans is vested in local, state, and federal agencies other than NCDEQ.

Comment: One commenter expressed concern there was no mention of noise control for the site during the closing process.

Response: Duke Energy will be required to meet all applicable legal statutes and regulations addressing worker safety at Buck. Generally, the statutory authority to regulate noise control is vested in local, state, and federal agencies other than NCDEQ.

Comment: All boring logs are from 2008 and not more recently, and the commenter worries about what change has happened since, and about letting Duke pick sample sites.

Response: DWR staff review all sample locations and analytical parameters based on hydrogeologic conditions. All such plans are subject to approval by our staff.

Comment: One commenter has concerns about the onsite wastewater and stormwater runoff from the facility especially related to the planned dam breaches, specifically that this water does not make it into the Yadkin River untreated.

Response: NCDEQ has determined that excavation, followed by utilization for approved beneficial reuse activities or placement in a lined landfill, at Buck is the best closure method to protect the water quality of the Yadkin River. Duke Energy will be required to comply with both an industrial stormwater permit and an industrial NPDES permit, both of which are intended to protect the receiving waters from exceeding the water quality standards. If Duke Energy remains in compliance with these permits, NCDEQ believes the Yadkin River will be protected.

Comment: One commenter has concerns about groundwater pollution and remediation, and wants to be able to review the data during monitoring.

Response: Groundwater data provided by Duke Energy to NCDEQ are a public record and will be provided to the public upon request. Additionally, the federal Coal Combustion Residual Rule requires Duke Energy to post the groundwater and other data on a publicly available website.

Comment: Once commenter has concerns about whether the coal ash handled by the Star System will be monitored for toxic metals found in coal ash (but is aware the air permit was issued).

Response: Duke Energy performed a site specific ash analysis taking samples from the ash pond to calculate the emission rate for each toxic metal. The data were used in both the emissions analysis and the air toxic modeling used to set the allowable emission rate in the permit for each of the toxic metals.

Comment: One commenter thinks Duke Energy should have to pay for maintenance costs for their coal ash ponds and power plants.

Response: 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.

Comment: One commenter stated his organization was in favor of beneficial use but shares concerns about air quality.

Response: The air quality permit for the recycling facility addresses the necessary controls to ensure the ambient standards are protected and the toxics emissions are minimized.

Comment: One commenter opposed bringing in coal ash to the Buck site from others in order to undertake the STAR process, raising specific concerns about its proximity to the Yadkin River.

Response: The only coal ash to be used at the site is the ash that is currently stored in impoundments at the Buck facility. Other ash is not planned to be brought in at this time. NCDEQ has determined that excavation, followed by utilization for approved beneficial reuse activities or placement in a lined landfill, at Buck is the best closure method to protect the water quality of the Yadkin River.

Comment: One commenter noted that the Buck site is located “at the most historic site in all of Rowan County” and was frustrated with Duke Energy’s protection of the site’s “historic features.”

Response: NCDEQ will consider this comment as future detailed planned submittals are reviewed for the planned excavation process.

2. Comments received from email.

Comment: One commenter expressed support and appreciation for the closure plan as they felt that excavation and removal of coal ash from unlined pits was the best way to protect the environment and surrounding communities. The commenter hopes that the revised plan will include groundwater monitoring and flow data.

Response: NCDEQ agrees with this comment and has determined that excavation of the CCR impoundment at Buck, followed by utilization for approved beneficial reuse activities or placement in a lined landfill, is the best closure method to protect the environment and surrounding communities.

Comment: One commenter raises concern about stormwater management and suggests that any revised NPDES permit include effluent limitations for heavy metals.

Response: NCDEQ will consider this comment during the NPDES permitting process.

Comment: One commenter suggests further public meetings once annual reports of groundwater sampling data are available and before monitoring/remediation plans are finalized. The commenter suggested that health concerns and drinking water supplies be part of the plans.

Response: NCDEQ will consider this comment.

Comment: One commenter would like a more detailed emergency spill response plan.

Response: NCDEQ will consider this comment.

Comment: One commenter is concerned about the remaining 2.7 million tons of CCR that will be left after 10 years of recycling the 4 million tons of CCR, and asks for a definitive answer for the plans for these 2.7 million tons of CCR.

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 lined landfill facility in order to meet the end date of December 31, 2029 for complete removal.

Comment: While the commenter supports beneficial reuse of CCR, they have air quality concerns for the STAR system emissions of heavy metals.

Response: The air quality permit for the recycling facility addresses the necessary controls to ensure the ambient standards are protected and the toxics emissions are minimized. The STAR® facility must meet all applicable environmental regulatory standards and permit conditions.

Comment: One commenter expresses their approval and support of the Buck site and expresses gratitude for working to resolve these environmental issues.

Response: NCDEQ appreciates the participation of the public in the public comment process as the department determined the best closure method to protect the environment and surrounding communities.

Comment: One commenter insisted that complete removal and landfill disposal is the only acceptable resolution.

Response: In July 2016, the North Carolina General Assembly enacted House Bill 630, which added N.C.G.S. § 130A-309.216 requiring Duke Energy Progress, LLC (Duke Energy) 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 Duke Energy to use commercially reasonable efforts to produce 300,000 tons of usable CCR at each site annually. On October 5, 2016, Duke Energy selected the Buck Steam Station as one of the three ash beneficiation sites.

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 Buck Combined Cycle Station located in Rowan 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.



Jason Watkins, Hearing Officer

August 14, 2020

Date

From: [Edgar Miller](#)
To: [Buckcomments](#)
Cc: [Trey Bender](#); [brianf](#)
Subject: [External] Resubmission of YRK Comments on Buck Power Station CCR Closure Plan
Date: Friday, July 24, 2020 2:32:06 PM

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**Yadkin Riverkeeper Comments to the NC Department of Environmental Quality
Duke Energy Buck Station Coal Ash Closure Plans
Originally submitted March 16, 2020. Revised and resubmitted on July 24, 2020.
Edgar Miller, YRK Executive Director**

Yadkin Riverkeeper (YRK) is a 501(c)(3), nonprofit environmental advocacy organization based in Winston Salem, NC. YRK has more than 325 members and its mission is to protect and enhance the Yadkin River through education, advocacy and action. YRK and our national affiliate, Waterkeeper Alliance, represented by the Southern Environmental Law Center, sued Duke Energy Carolinas over the management of the coal ash basins at the Buck Station in 2015 over concerns about groundwater and potential surface water contamination. The parties to the lawsuit reached a settlement at the end of 2016, requiring removal of all coal ash on site by 2030.

YRK has supported statewide efforts by community organizations and other NC Riverkeepers to advocate for removal of coal ash from all of Duke Energy's unlined coal ash pits and ponds as the most environmentally sound alternative. We applaud and strongly support NC DEQ's decision to require removal of coal ash at the remaining plants across NC and commend Duke Energy for agreeing to do that plan of action. We hope this will usher in an era of better communications and relationship building between all interested parties to make sure this gets done right and that the neighboring communities' concerns are addressed by NCDEQ and Duke Energy. If successful, this approach will ensure this is a true community partnership that will reestablish trust and that this plan is fully supported by the impacted communities and other stakeholder organizations.

In the original comments YRK submitted by email on March 16, 2020, which were subsequently lost by NCDEQ, we stated our position that the draft closure plan for Buck Station submitted by Duke Energy on December 30, 2019, was a good start to the cleanup process, but noted that the plan did not include key pieces of information including the comprehensive site assessment (CSA), groundwater monitoring data and corrective action plan-(CAP). The December 30, 2019, plan indicated that based on a letter from DEQ on April 5, 2019, the updated CSA would be submitted on October 1, 2020, and the CAP would be submitted on July 1, 2021.

However, in the Duke Energy's revisions to the draft closure plan submitted on April 2, 2020, after the public meeting in Spencer held on February 24, 2020, and after the previous comment deadline of March 16, 2020, the plan stated that the CSA had been submitted to Duke to DEQ on August 23, 2015, and the CAP (Part 2) had been submitted to DEQ on February, 19, 2016, and both were noted to be, "herein incorporated by reference..." In addition, the revised plan indicates groundwater monitoring and flow data has been previously submitted as part of the CSA and CAMA annual monitoring reports.

YRK has been unable to locate these documents and has requested copies from DEQ, but as of the filing of these comments, we have not heard back from DEQ's Division of Waste Management or Division of Water Resources staff about the availability of these documents. As a result, we reiterate our concerns expressed in our original comments that we cannot fully evaluate the plan without those documents and the information contained therein. While we understand both the CSA and CAP are still scheduled to be updated per the schedule outlined in the April 5, 2019, DEQ letter, YRK respectfully request that these documents be made part of the public record and that DEQ not issue any final approval of the closure plan until the public has an opportunity to review and comment on

both the existing and to-be-updated CAP and CSA, as well as the annual CAMA reports

In addition to the need for additional information on groundwater sampling and corrective action plans being available, our other major concerns include:

- On-site wastewater and stormwater management and runoff and impacts of direct discharges to the river.
- Groundwater pollution and remediation.
- Emergency spill response plans and water supply wells and pumping stations.
- The overall coal combustibles residuals or CCR management plan.
- The beneficiation/recycling process and related air and water impacts of the Staged Turbulent Air Reactor or “STAR” facility.

I. Wastewater/Stormwater/Direct Discharge

The draft plan mentions concern about increased water flow from breaching dams, but does not address how those will be effectively managed to reduce stormwater runoff. The plan needs to specify if/how the stormwater will be retained, pumped and treated and these provisions should be in the amended 404 permit needed from the Army Corps of Engineers.

The plan also lacks detail on how wastewater generated from the CCR dewatering process will be managed, including if and how it will be tested, and if it will require treatment in order to meet any effluent limitations imposed by the NPDES permit. Under the current NPDES permit, Duke currently monitors for arsenic, selenium and mercury, however there are no effluent limitations for those heavy metals. YRK recommends the revised NPDES permit include effluent limits for these three heavy metals as well as cadmium and chromium, to ensure protection of water quality in the Yadkin River.

II. Groundwater Concerns

As noted above, it is difficult to fully assess the Buck Closure Plan without groundwater sampling data and proposed monitoring and remediation plans included. Current place holders in the December 31, 2019, plan called for this information to be part of the CSA due on October 1 of this year and the CAP due July 1, 2021, but as noted above, the revised plan incorporates previous reports and CAMA annual reports as containing this information. YRK recommends NCDEQ hold additional public meetings and opportunities for impacted communities and stakeholders to review this information and provide comments once they are available and before they are finalized. The plans must address ongoing health concerns of nearby residents and provision of drinking water supplies.

III. Other Water Related Concerns

In addition to water quality concerns, YRK would like to see a more detailed emergency spill response plan and better understand the purpose, need and impact of new water supply wells and pumping stations mentioned in the Plan.

IV. CCR Management

YRK applauds Duke Energy for maintaining the 2030 CCR removal deadline and its decision to not pursue a landfill permit for on-site disposal of any CCR. However, we are concerned about the disposition of the remaining 2.7 million tons of CCR left over after 10 years of recycling 4 million tons of CCR on site and potential environmental impacts of this material being transported off site, which should include a mitigation plan to minimize transportation impacts. Duke Energy needs to provide a definitive answer to the question of what the plans are for handling the remaining 2.7 million tons of CCR, which is currently not addressed in either the initial or revised draft Closure Plan.

V. CCR Recycling

YRK supports beneficial reuse of CCR, however we do have air quality concerns related to the proposed lack of monitoring for the STAR system emissions for heavy metals associated with coal ash. We understand the air quality permit has already been granted for this facility and is based on modeling predictions for processing 400,000 tons of CCR per year for 10 years, with projected emission levels well below current air quality standards. YRK recommends the facility be required to monitor for heavy metal emissions in its first year of operations to ensure the projections are accurate, which will build public confidence and support the recycling process. YRK also would like to see a stronger commitment from Duke Energy to not accept any CCR from off-site facilities for recycling.

In conclusion, YRK supports NCDEQ and Duke's plans to remove all CCR onsite by the 2030 deadline and Duke Energy's plans to recycle the bulk of the material onsite into materials that can be beneficially reused. We want to work with NCDEQ and Duke Energy to ensure the final plans and their implementation will enjoy broad public support, address ongoing health concerns and protect water quality and natural resources critical to the citizens of the Yadkin River basin and particularly, Davidson and Rowan Counties and High Rock Lake. Millions in economic impacts from the River and Lake are at stake, as well as the quality of life of future generations of North Carolinians depending on the River for drinking water and recreation.

Thank you for the opportunity to comment.

Edgar Miller
Executive Director
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336.688.2651
www.yadkinriverkeeper.org

From: [Molly Jenkins](#)
To: [Buckcomments](#)
Subject: [External] Buck facility closure public comment
Date: Monday, July 20, 2020 2:22:26 PM

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Hi,

In accordance with the public comment period for the excavation and closure of the Buck coal ash basin, I would like to use this opportunity to voice my approval and support for the excavation and closure of this site. Thank you for working to resolve the environmental issues associated with coal ash basins, and thank you for moving forward with this project. It makes me proud to be a citizen of North Carolina, and proud to be raising my young son here.

Regards,

Molly Jenkins

--

Molly F. Jenkins

Science Communication & Outreach ORISE Participant

Public Health & Environmental Systems Division | Environmental Pathways Modeling Branch

Center for Public Health & Environmental Assessment

U.S. EPA Office of Research and Development

C: (919) 541-1338

jenkins.molly@epa.gov

From: [Deirdre Woolard](#)
To: [Buckcomments](#)
Subject: [External] Buck Power Station
Date: Wednesday, July 1, 2020 11:45:48 AM

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Anything other than complete excavation and disposal (not repurpose or landfill disposal) is unacceptable and criminal.

Allowing power companies to continuously reep record profits without liability has to stop!
NC needs to hold them accountable on their dime!

Sincerely,
Deirdre Woolard
Concerned citizen of Planet Earth