## COUNTY OF NEW HANOVER

| IN THE MATTER OF: |  |
| :--- | :--- |
|  | ) |
| REQUEST FOR VARIANCE FROM |  |
| SESSION LAW 2014-122, SECTIONS | ) |
| 3(B)(4) AND 3(C), COAL ASH | DECISION GRANTING IN PART |
| MANAGEMENT ACT BY |  |
| DUKE ENERGY PROGRESS, LLC | ) |
|  |  |

On November 16, 2018, pursuant to NCGS § 130A-309.215, Duke Energy Progress, LLC (Duke Energy) submitted an Application for Grant of Variance to Extend the Deadline to Close Sutton Plant CCR Surface Impoundments ("Application") to the North Carolina Department of Environmental Quality ("Department"). The Department received additional information regarding the Application ("Additional Information") from Duke Energy on December 14, 2018. The Application requests that the Department issue a variance to extend the Coal Ash Management Act ("CAMA") closure deadline for the Sutton Plant Coal Combustion Residuals ("CCR") surface impoundments by six months from August 1, 2019 to February 1, 2020.

Based on the Department's analysis of the information submitted, the Department makes the following:

## FINDINGS OF FACT

1. The L.V. Sutton Energy Complex (Sutton Plant) is located at 801 Sutton Steam Plant Road, near Wilmington, NC in New Hanover County. The facility is located adjacent to the Cape Fear River and Sutton Lake. The Sutton Plant operated as a three-unit, 575megawatt coal-fired power plant from 1954 until the coal fired units were retired in 2013 and replaced with a $625-$ megawatt natural gas fired combined-cycle facility.
2. The Sutton facility has two CCR surface impoundments known as the 1971 Basin and the 1984 Basin. These CCR surface impoundments were operated under NPDES Permit No. NC0001422. The 1971 Basin was operated until 1985 and is unlined. The 1984 Basin was operated until 2013 and was constructed with a 24 " thick clay liner. In 2013, the coal-fired units at the Sutton Plant were shut down and coal ash was no longer sluiced to the surface impoundments.
3. By October 2014, Duke Energy had developed the initial excavation plan for the CCR surface impoundments at the Sutton Plant. Duke Energy submitted the plan to the Department in November 2014. To meet the August 2019 deadline, the initial excavation
plans included transporting ash by rail and truck to the Brickhaven Mine facility in Chatham County, NC.
4. As part of the CCR surface impoundments excavation plan, Duke Energy developed the plans for an on-site landfill. Duke Energy submitted the application for the on-site landfill on August 7, 2015. Initial excavation of ash began in November 2015. On April 7, 2016, the Department announced that it would conduct an environmental justice analysis of each Duke Energy coal ash landfill application. The Department submitted its analysis to the EPA Office of Civil Rights, the U.S. Commission on Civil Rights and its North Carolina Advisory Committee for review and approval. Upon completion of this process, the Department issued a permit to construct the Sutton Plant landfill on September 22, 2016. This environmental justice analysis added approximately five months to the landfill construction process.
5. In October 2016, Hurricane Matthew severely impacted the region, delaying both landfill construction and transportation of ash to the Brickhaven Mine.
6. On July 6, 2017, the Department issued the permit to operate the Sutton Plant landfill. The following day Duke Energy began transporting ash to the landfill.
7. In June 2018, dredging operations in the 1971 ash basin were delayed by approximately three weeks due to the unexpected presence of rock and tree stumps in approximately five acres of the basin.
8. In September 2018, Hurricane Florence severely impacted the region causing additional delays in the ability to remove material from the CCR surface impoundments due to extreme flooding as well as damage to the landfill.
9. Throughout this time, Duke Energy evaluated and undertook various measures to accelerate excavation of the CCR surface impoundments, including expediting completion of the onsite landfill and expanding dredging operations.
10. Duke Energy estimates that, as of the end of 2018 , it had excavated 4.9 million tons of ash, and that approximately 1.4 million tons of ash remain to be excavated during 2019. From October 2015 until July 2017, Duke Energy excavated an average of 130,000 tons of coal ash per month. Since the landfill became operational in July 2017, Duke Energy has excavated an average of approximately 150,000 tons of coal ash per month.
11. At the end of July 2019, assuming that there are no significant additional delays, Duke Energy forecasts that approximately 350,000 tons of coal ash will require excavation, which means that the excavation would be approximately $94 \%$ complete.
12. In terms of Duke Energy's compliance with the provisions of CAMA for the Sutton Plant:
a. Annual inspection by the Department of the Sutton 1971 and 1984 dams occurred on August 29, 2018 and no concerns or issues were reported.
b. Pursuant to NCGS § 130A-309-211(c1), no permanent replacement water connections were required.
c. Pursuant to NCGS § 130A-309-211(a), Duke submitted a comprehensive site assessment for the Sutton Plant on August 4, 2015.
d. Pursuant to NCGS § 130A-309-211(b), Duke submitted a corrective action plan for the Sutton Plant in two parts on November 2, 2015 and February 1, 2016.
13. In accordance with NCGS § 130A-309.215(a2), the Department provided public notice and held a public hearing on January 14, 2019 in Wilmington, NC. Jim Gregson, Deputy Director of the Department's Division of Water Resources, served as the hearing officer. Further details are provided in the enclosed Hearing Officer's Report dated March 25, 2019. The hearing officer provided the following recommendation:

Based on the review of the public record, written comments, the North Carolina General Statutes and Administrative Code, the Coal Ash Management Act of 2014, and discussions with other Department staff, I recommend to the Assistant Secretary for the Environment that the request for variance be granted and that the closure deadline for the Sutton Plant CCR surface impoundments be extended by the minimum necessary time period that Duke Energy indicates it will take to complete the closure. The extension should not exceed six months.

Based upon the foregoing Findings of Fact, the Department makes the following:

## CONCLUSIONS OF LAW

1. The CCR surface impoundments at the Sutton Plant in Wilmington, North Carolina are subject to Session Law 2014-122. Section 3(b) of Session Law 2014-122 deemed the CCR surface impoundments at the Sutton Plant as high priority. Sections 3(b)(4) and 3(c) of Session Law 2014-122 required that the CCR surface impoundments be closed by excavation no later than August 1, 2019.
2. NCGS § 130A-309-215(a) authorizes the Secretary of the Department of Environmental Quality to grant a variance to extend any CAMA deadlines. Secretary Michael Regan has delegated this authority in writing to Sheila Holman, Assistant Secretary for the Environment.
3. Pursuant to NCGS § 130A-309-215(a1), for a variance requested by an impoundment owner, the owner shall submit an application that includes "identification of the site, applicable requirements, and applicable deadlines for which a variance is sought, and the site-specific circumstances that support the need for the variance."
4. Additionally, " $[t]$ he owner of the impoundment shall also provide detailed information that demonstrates (i) the owner has substantially complied with all other requirements and deadlines established by this Part; (ii) the owner has made good faith efforts to comply with the applicable deadline for closure of the impoundment; and (iii) that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public." NCGS § 130A-309-215(a1).
5. A variance request shall not be submitted any earlier than one year prior to the applicable deadline.
6. The Department concludes that, in its Application, Duke Energy has identified:
a. The site for which a variance for the closure deadline is sought as Duke Energy's Sutton Plant (see Application, p. 1);
b. The applicable requirements in Session Law 2014-122 (see Application, pp. 1-2); and
c. The applicable deadline for which variance is sought as August 1, 2019 (see Application, p. 2).
7. The Department further concludes that, in its Application and Additional Information, Duke Energy has:
a. Identified the site-specific information that supports the need for a variance, including the delays caused by two hurricanes, delays caused by the Department's environmental justice review, and Duke Energy's evaluation and implementation of measures to expedite excavation (see Application, pp. 2-9).
b. Supplied detailed information demonstrating its compliance with the provisions of CAMA, including its submissions of a Comprehensive Site Assessment and a Corrective Action Plan, no issues or concerns were reported with Sutton dams, and no alternative water supplies were required around the Sutton Plan (see Application, pp. 9-10; Additional Information, pp. 3-5).
c. Supplied detailed information showing it made good faith efforts to comply with the applicable deadline for closure of the CCR surface impoundments, including excavating at an average rate of 150,000 tons per month since commencement of the operation of the onsite landfill, expediting completion of that landfill, expanding dredging operations, adding a third conveyer, simultaneously operating three dredges, and taking various additional measures to meet the August 1, 2019 deadline (see Application, pp. 2-9; Additional Information, pp. 1-3).
d. Supplied detailed information indicating that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public, including information regarding the technology that is currently being deployed to overcome the delays outlined above, additional technology that has been evaluated, and the computation of the average monthly rate of excavation, the amount of coal ash that remains to be excavated, and the
number of months remaining until August 1, 2019 (see Application, pp. 2-9; Additional Information, pp. 1-3).

## ORDER

Based on the Findings of Fact and Conclusions of Law as set forth above, IT IS HEREBY ORDERED that the request for the variance is GRANTED IN PART pursuant to NCGS § 130A-309-215(a) with the following conditions:

1. The August 1, 2019 closure date for the CCR surface impoundments at Duke Energy's Sutton Plant is extended four (4) months to December 1, 2019.
2. Beginning April 15,2019 , and by the $15^{\text {th }}$ day of each successive month until closure is completed, Duke Energy shall provide the Department with the amount of ash excavated at the Sutton Plant during the previous month and the cumulative total for ash excavation, the amount of ash placed in the landfill, the rate at which the ash is being removed and disposed, and the estimated volume of the remaining ash to meet the requirements of the closure.
3. This variance is only for the activities associated with the closure and removal of ash from the 1971 and 1984 Basins at the Sutton Plant in Wilmington, North Carolina.
This the $26^{\text {th }}$ day of March, 2019.
DEPARTMENT OF ENVIRONMENTAL QUALITY


Sheila Holman
Assistant Secretary for the Environment

March 25, 2019

## MEMORANDUM

To: Sheila Holman
Assistant Secretary for the Environment
From:

Subject: Hearing Officer's Report and Recommendations
Duke Energy Progress, LLC - L.V. Sutton Energy Complex
Variance Request to Extend the Deadline to Close Sutton Plant Coal Combustion Residual (CCR) Surface Impoundments
New Hanover County
On January 14, 2019, I served as the Hearing Officer for the Subject Public Hearing held at Cape Fear Community College, 411 North Front Street, McLeod Building Room S-002, Wilmington, NC 28360. The purpose of the public hearing was to allow the public to comment on Duke Energy's request for variance to extend the Coal Ash Management Act (CAMA) closure deadline for the Sutton Plant CCR impoundments by six months.

No oral comments were presented at the public hearing. I have reviewed all written comments received during the public comment period which ended on February 4, 2019. In preparation of this report I have considered all public comments, Duke Energy's variance application and the public record.

The report has been prepared using the following outline:
I. Site History / Background
II. January 14, 2019, Public Hearing and Comments Summary
III. Recommendations
IV. Attachments

## Hearing Officer Report

## JANUARY 14, 2019, PUBLIC HEARING - DUKE ENERGY PROGRESS, LLC VARIANCE REQUEST TO EXTEND DEADLINE TO CLOSE SUTTON PLANT CCR SURFACE IMPOUNDMENT LOCATED AT 801 SUTTON STEAM PLANT ROAD NEW HANOVER COUNTY

## I. History / Background

The L.V. Sutton Energy Complex (Sutton Plant) is located at 801 Sutton Steam Plant Road, near Wilmington, NC in New Hanover County. The facility is located adjacent to the Cape Fear River and Sutton Lake. The Sutton Plant operated as a three-unit, 575-megawatt coal-fired power plant from 1954 until the coal fired units were retired in 2013 and were replaced with a 625-megawatt natural gas fired combined-cycle facility.

The Sutton facility has two CCR basins known as the 1971 and 1984 Basins. These basins were operated under NPDES Permit No. NC0001422. Fly and bottom ash sluicing was discontinued when the coal fired units were shut down in 2013. The 1971 Basin was operated until 1985 and is unlined. The 1984 Basin was operated from 1984 until 2013 and was constructed with a 24 " thick clay liner.

Section 3(b) of the Coal Ash Management Act, Session Law 2014-122 deemed the CCR surface impoundments at the Sutton Plant as high risk. Sections 3(b)(4) and 3(c) of Session Law 2014122 further required that the surface impoundments be closed by excavation no later than August 1, 2019.

On November 16, 2018, an application was received from Duke Energy for Variance to extend the deadline to close the Sutton Plant CCR surface impoundments. Additional information regarding the application was received from Duke Energy on December 14, 2018. The application requests that the Department issue a variance to extend the CAMA closure deadline for the Sutton Plant CCR Impoundments by six months; from August 1, 2019 to February 1, 2020.

## II. January 14, 2019, Public Hearing and Comments Summary

A public hearing was held on January 14, 2019, at 6:00 pm, at Cape Fear Community College, 411 North Front Street, McLeod Building Room S-002, in Wilmington, NC. The purpose of the public hearing was to allow the public to comment on Duke Energy's request for variance to extend the Coal Ash Management Act (CAMA) closure deadline for the Sutton Plant CCR impoundments by six months.

The Department provided notices of public hearing and public comment by:

- providing Duke Energy's request for a variance and the Department's notice of public hearing and public comment to the New Hanover County Health Department (Attachment A);
- providing Duke Energy's request for a variance and the Department's notice of public hearing and public comment to the New Hanover County Public Library (Attachment B);
- posting Duke Energy's request for a variance and the Department's notice of public hearing and public comment to the Department's website, issuing a press release, and posting additional notices to its website on January 14, 2019 and February 4, 2019 (Attachment C);
- emailing notice to all persons on its coal ash email distribution list (Attachment D ); and
- publishing notice in the Wilmington Star News on December 20, 2018; December 27, 2018; and January 3, 2019 (Attachment E).

Approximately 13 people attended the public hearing including 10 staff members of the Department of Environmental Quality and myself. No individuals signed the attendance sign in sheets at the hearing (Attachment F ). The hearing officer provided opening comments and a brief overview of the variance request. No one registered in advance of the hearing to provide oral comments. No one responded when the Hearing Officer asked if anyone that did not register to speak would still like to provide oral comments.

The public hearing transcript is included as Attachment G.
In addition to the public hearing, The Department received seven written comments by email during the public comment period. Two of the emails were duplicates. Email comments are included as Attachment H.

## WRITTEN COMMENTS SUMMARY

All email comments expressed general objection to the variance request or provided a general request that the ash be removed. The following is a summary by three major topic areas:

- Clean-up has been prolonged too long.
- What has Duke been doing for the past four years?


## Response - The classification of the Sutton Plant CCR surface

 impoundments as high risk and the requirements for closure of the impoundments by August 1, 2019, were mandated in Session Law 2014-122 which became effective on September 20, 2014. By October 2014, Duke Energy had developed the initial excavation plan for the surface impoundments at the Sutton Plant. The plan was submitted to the Department of Environmental Quality in November 2014. To meet the August 2019 deadline, the initial excavation plans included transporting ash by rail and truck to the Brickhaven Mine facility in Chatham County. At the same time Duke began developing the plans for an on-site landfill. The application for the on-site landfill was submitted on August 7, 2015. Initial excavation of ash began in November 2015. On April 7, 2016, NC DEQ announced that it would conduct an environmental justice review of each Duke Energy coal ash landfill application and ask the EPA Office of CivilRights, the U.S. Commission on Civil Rights and its North Carolina Advisory Committee to review and approve the environmental justice analysis before the permit is issued. The additional review by outside groups with expertise in environmental justice issues is to help ensure Duke Energy's construction of a landfill will not have an adverse disparate impact on a minority or lowincome community protected by Title VI of the Civil Rights Act of 1964. Upon completion of this process, the permit to construct the Sutton Plant landfill was issued on September 22, 2016. Hurricane Matthew impacted the region in October 2016, causing additional delays in both landfill construction and transportation of ash to the Brickhaven Mine. In June 2018, dredging operations in the 1971 ash basin were delayed by approximately three weeks due to the unexpected presence of rock and tree stumps in approximately five acres of the basin. The permit to operate the Sutton Plant landfill was issued on July 6, 2017. The following day Duke Energy began transporting ash to the landfill. In September 2018, the area was severely impacted by Hurricane Florence causing additional delays in the ability to remove material from the ash basins due to extreme flooding and damage to the landfill. Duke Energy estimates that approximately 1.4 million tons of ash remain to be excavated during 2019.

- Ash basins should not have been in flood prone areas.

Response - A review of current FEMA flood maps for the Sutton Plant area indicate the ash basins are in a Flood Zone X (Area of Minimal Flood Hazard). It is recognized that the Sutton Plant property was severely impacted by the historic rainfall events associated with Hurricane Florence.

## III. Recommendations

Based on the review of the public record, written comments, the North Carolina General Statutes and Administrative Code, the Coal Ash Management Act of 2014, and discussions with other Department staff, I recommend to the Assistant Secretary for the Environment that the request for variance be granted and that the closure deadline for the Sutton Plant CCR surface impoundments be extended by the minimum necessary time period that Duke Energy indicates it will take to complete the closure. The extension should not to exceed six months.
IV. Attachments
A. Notice to New Hanover Health Department
B. Notice to New Hanover Public Library
C. Notices Posted to the Department's Website
D. Notices Sent to the Department's Coal Ash Email Distribution List
E. Notices Published in the Wilmington Star News
F. Public Hearing Attendance Sign-in Sheet
G. Public Hearing Transcript
H. Written Comments Received During Public Comment Period

## Attachment A

| From: | Martin, Sharon L. |
| :--- | :--- |
| To: | programsupport@nhcgov, com |
| Subject: | Public Notice of Variance request on Duke Energy Sutton Coal Ash Closure |
| Date: | Friday, December 14, 2018 4:45:00 PM |
| Attachments: | SultonVariance public notice -12142018.pdf |

Dear program support,
I spoke with James in your environmental health section and he indicated you were the best
contact. Attached is a public notice of the Duke Energy request for variance for the closure deadline of the Sutton Coal Ash Facility.
We are required by law to make a copy of this notice and document available in the county health department. Please post as necessary.
Feel free to give me a call if you have any questions of concerns.
Thanks,
Sharon Martin
Public Information Officer


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# NOTICE FOR PUBLIC MEETING AND PUBLIC COMMENT PERIOD ON REQUEST FOR VARIANCE TO EXTEND CLOSURE DEADLINE Duke Energy Sutton Plant 

Duke Energy has made a request to the North Carolina Department of Environmental Quality (DEQ) for a variance to extend the Coal Ash Management Act closure deadline by six months for the Sutton Coal Ash facility located at:

801 Sutton Steam Plant Road<br>Wilmington, NC 28401

This notice serves as a Notice of Public Meeting and Opportunity for Public Comment for this request. The public meeting will be held at the Cape Fear Community College on January 14, 2019 in the Union Station Building.

A copy of the variance request is posted on the DEQ website at deq.nc.gov/Sutton-Variance.
Interested persons are invited to provide comment on the variance request. Written comments may be sent to:

Ellen Lorscheider
1646 Mail Service Center
Raleigh, North Carolina 276991646
Phone/Fax: (919)707-8200
The comment period began on December 14, 2018 and ends on February 4, 2019. Written comments may also be submitted during the public comment period via email at the following address:
publiccomments@ncdenr.gov
Please type "Sutton Variance Request" in the subject line.
After weighing all relevant comments received, DEQ will decide whether to grant the request.

November 16, 2018
Via UPS Overnight Delivery and Electronic Mail
Mr. Michael S. Regan
Secretary
North Carolina Department of Environmental Quality 217 W Jones St
Raleigh, NC 27603

## RE: Application for Grant of Variance to Extend Deadline to Close Sutton Plant CCR Surface Impoundments (N.C.G.S. § 130A-309.215)

Dear Secretary Regan:
North Carolina General Statutes Section 130A-309.215(a) authorizes the Secretary of the North Carolina Department of Environmental Quality ("NCDEQ" or "Department") to "grant a variance to extend any deadline under [the Coal Ash Management Act ("CAMA")] on the Secretary's own motion, or that of an impoundment owner, on the basis that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public." Pursuant to N.C.G.S. § 130A-309.215(a1), where a variance is requested by an impoundment owner, the impoundment owner must within one year prior to the applicable deadline, request a variance including, at a minimum, information regarding (A) the site; (B) applicable requirements; (C) applicable deadlines for which a variance is sought; (D) site-specific circumstances supporting the need for the variance; and (E) detailed information demonstrating that "(i) the owner has substantially complied with all other requirements and deadlines established by [CAMA]; (ii) the owner has made good faith efforts to comply with the applicable deadline for closure of the impoundment; and (iii) that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public."

Consistent with the requirements of subsection (a1) of N.C.G.S. § 130A-309.215, Duke Energy Progress, LLC ("Duke Energy" or "Company") hereby submits this application for a variance to extend by six months the CAMA closure deadline applicable to the coal combustion residuals ("CCR") surface impoundments at Duke Energy's Sutton Plant ("Sutton") in Wilmington, North Carolina. Section I of this application
addresses elements A, B, and C above; Section II addresses elements D, (E)(ii), and (E)(iii); and Section III addresses element (E)(i). As detailed in Section II below, NCDEQ's grant of the variance is warranted, because despite Duke Energy's application of best available technology found to be economically reasonable, compliance with the applicable CAMA deadline cannot be achieved due to myriad factors, including the impacts of several permitting delays, two major hurricanes, and other unforeseeable challenges and limitations beyond the Company's control.

## I. Site; Applicable Requirements and Applicable Deadline

Sections 3.(b)(4) and 3.(c) of CAMA (Sess. L. 2014-122) require that the CCR surface impoundments at Sutton be closed by removal of CCR by no later than August 1, 2019 ("Deadline"). For the reasons discussed in detail below, despite Duke Energy's good faith efforts to apply best available technology found to be economically reasonable, Duke Energy has determined that it may not be able to meet the Deadline without producing serious hardship without equal or greater benefits to the public.

## II. Site-specific Circumstances Demonstrating Why Compliance with CAMA's Deadline Cannot be Achieved Despite Duke Energy's Good Faith Efforts and Application of Best Available Technology

Throughout the basin excavation process, Duke Energy has encountered numerous challenges that have cumulatively resulted in the current schedule delay at Sutton and have impacted the Company's ability to close the Sutton CCR surface impoundments by the Deadline. During this period, Duke Energy has consistently exercised best efforts to minimize any delays in meeting the Deadline and has taken important steps to overcome the various challenges and limitations presented in an effort to recover schedule.

Under the standard set out in N.C.G.S. § 130A-309.215, whether application of a given technology would be commercially or economically reasonable requires that the costs of such technology be balanced against its benefits to the public. Following this fundamental principle over the course of the basin closure project, Duke Energy has consistently looked for and evaluated measures to safely and reasonably minimize any delays to the extent possible, considering at all times, the risks and benefits associated with each of the options considered.

In October 2014, the Company developed the initial Sutton Excavation Plan and held the Phase I excavation bidding event for excavation of the first two million tons of CCR for rail transport, which was determined to be the amount of ash that would need
to be transported by rail to meet the Deadline. The contractor Duke Energy selected under this bidding event ("Contractor A") was chosen not only because it had bid the lowest price per ton, but also because it had completeness of technical support, engineering competence, and extensive wet ash basin experience. Due to CAMA's aggressive completion date of August 1, 2019, the complexity of CCR excavation at Sutton, and the expected timeline to construct an on-site landfill, the Brickhaven structural fill in Chatham County, North Carolina was selected as the initial CCR placement site for ash from the Sutton impoundments.

On November 13, 2014, Duke Energy submitted the initial Sutton Excavation Plan to the Department to cover the first 12 to 18 months (Phase I) of ash basin excavation activities. In general, the scope of work included site preparation, initiation of basin dewatering, ash basin preparation, construction of the on-site landfill, and ash removal from the basins. Under the initial Excavation Plan, Duke Energy would begin placing ash in the Brickhaven structural fill-a beneficial use of CCR pursuant to N.C.G.S. § 130A-309.201(1), (11), and (14). Ash would be transported from the site via rail car and also trucked to Brickhaven. Although the quantity trucked was small relative to the quantities transported by rail, this action demonstrated Duke Energy's commitment to commence ash excavation and placement operations as soon as feasible. Rail operations would consist of 85 car unit trains, with rail cars averaging 90 tons per car. The monthly goal was to deliver 14 loaded trains to Brickhaven per month, working seven days per week, or approximately 107,000 tons per month.

While transporting ash to Brickhaven, Duke Energy developed simultaneously an on-site landfill in order to meet the Deadline. Based on an engineering feasibility study commissioned by Duke Energy, it was determined that an on-site landfill would be the least-cost option to dispose of the ash and would have the least environmental impact. Moreover, it was determined to be the most expedient method of ash removal from the basins, consistent with the requirements of CAMA. North Carolina's solid waste rules, which prohibit the commencement of construction activities without having first secured the necessary permits, on-site landfill construction could not begin until issuance of the Permit to Construct.

On August 7, 2015, Duke Energy submitted its application for a Permit to Construct the on-site landfill to dispose of five million tons of coal ash from the Sutton impoundments (Phase II). On September 3, 2015, NCDEQ sent a letter to Duke Energy notifying the Company that the landfill application had been deemed "complete." NCDEQ sent a follow-up letter on October 7, 2015, requesting supplemental information, which Duke Energy provided on December 10, 2015. NCDEQ then initiated a 60-day public comment period, which ran from February 11 to April 15, 2016. The Company reasonably expected that the permit would issue soon after the conclusion
of the comment period because (i) the public meeting was not heavily attended or contentious, (ii) NCDEQ Solid Waste Division staff had been reviewing the application since it was submitted on August 7, 2015, and (iii) it historically took the Department only a few weeks after expiration of the comment period to issue such permits. ${ }^{1}$

Duke Energy completed the updated 2015 Sutton Excavation Plan in November 2015 and revised the milestone dates, which reflected a reasonable expectation that it would secure the Permit to Construct in early 2016, thereby supporting a schedule to complete excavation of the ash by March 2019. Duke Energy was planning to move two million tons of ash via rail and, in parallel, dispose of ash in the on-site landfill from late January 2017 to July 2017. The Company estimated that it could excavate and move between approximately 200,000 to 225,000 tons of ash per month, 93,000 to $\mathbf{1 1 8 , 0 0 0}$ tons of which would be via truck to the landfill and approximately 107,000 tons of which would be via rail to Brickhaven.

However, on April 7, 2016, NCDEQ announced a new policy at a town hall meeting sponsored by the North Carolina Advisory Committee ("Advisory Committee") of the United States Commission on Civil Rights ("USCCR"), followed by a news release announcing a new review and approval process for all CCR landfills. Available at https://deq.nc.gov/press-release/north-carolina-take-extra-steps-protect-minoritycommunities. NCDEQ declared that it would go "beyond state and federal requirements" by conducting an environmental justice review of each Duke Energy coal ash CCR landfill application, including applications for expansions of existing on-site CCR landfills, and ask EPA's Office of Civil Rights, the USCCR, and the Advisory Committee to review and approve the environmental justice analysis before the permit is issued. NCDEQ reiterated this new policy a week later in a letter to the Advisory Committee. As a result of this new and unexpected process, on September 22, 2016, Duke Energy finally secured the Permit to Construct the Sutton landfill, which was one full year after NCDEQ had deemed the application "complete," and almost five months later than the latest date on which the permit was reasonably expected.

As a result of the permit delay, Duke Energy lost the six plus months of parallel (i.e., on-site and off-site) excavation and placement/disposal for which it had planned. If issuance of the Permit to Construct would not have been delayed, the landfill construction would have been ongoing over this entire period of time, which would have created substantial margin on available space and volume to dispose of ash. The loss of this time and the ability to create margin had a significant negative impact on the ability to complete the project by the Deadline. Compounding this delay, Hurricane Matthew

[^1]struck eastern North Carolina on October 8, 2016, further delaying the mobilization of landfill construction, limiting access to the work site, and interrupting rail transport of ash to Brickhaven for $\mathbf{2 0}$ days due to railway flooding.

As a result of these unforeseen complications in the landfill permitting process, coupled with historic impacts to the region and Duke Energy's operations from Hurricane Matthew, Duke Energy's excavation schedule was delayed by over six months. However, throughout 2017, Duke Energy continuously evaluated actions and implemented them where the Company determined it was safe and commercially reasonable to do so. Following is a summary of the options the Company evaluated and the economically reasonable measures it undertook to address challenges and limitations and achieve schedule recovery:

- Duke Energy added a third conveyor to increase its margin on rail production. Accelerating the completion of Phase I provided crucial time to transition to Phase II while Duke Energy awaited construction of the on-site landfill to be completed.
- Duke Energy mobilized Contractor B-the contractor performing Phase II of ash excavation-to the site prior to Contractor A completing Phase I to support removal of non-ash material from the 1971 Basin, which accelerated Phase II of basin excavation.
- Due to mild weather and the Company's implementation of parallel activities, construction of Cell 3 of the landfill was completed well in advance of the scheduled September 1, 2017, completion date. As a result of this reduction in the landfill construction schedule, Duke Energy was in a position to start disposing of ash in the landfill upon receipt of the Permit to Operate. NCDEQ issued the permit on July 6, 2017, and the Company promptly started moving ash into the landfill on the following day, representing a 55-day acceleration of the schedule.
- Duke Energy evaluated parallel shipments of ash to Brickhaven and to the on-site landfill but rejected this action primarily based on logistical and contractual constraints. At that time (mid-2017), the Company could only process between approximately 200,000 to 225,000 tons of ash per month irrespective of where it was ultimately placed or disposed of.
- As the project schedule progressed, the landfill continued to be critical path due to the need to get additional cells permitted and operating. Duke Energy took efforts to expedite the landfill construction schedule and was able to complete Cells 5 and 6 a year ahead of schedule, thereby completely removing the landfill
from critical path. In addition, the necessary permits to operate all six cells were secured. Critically, Duke Energy also secured the necessary permits to treat the landfill leachate on-site. This is significant because of the volume of leachate generated by the landfill-as more air space opened up, the volume of precipitation infiltrating into the ash and water draining from the ash itself increased, thus increasing the amount of leachate that needed to be treated. ${ }^{2}$ By constructing Phase 2 of the site's wastewater treatment facility, getting the system installed to transfer the landfill leachate to that facility, and securing the necessary discharge permit, Duke Energy was able to simultaneously operate three cells instead of one, thereby allowing it to increase production substantially.
- The Company evaluated the feasibility of applying additional resources in order to increase the production rate, including expanding to night operations. Leveraging its experience, Duke Energy increased its dredging excavation activities up to $\mathbf{2 0}$ hours per day, six days a week using two 10 -hour shifts or extended shifts.
- A new large dredge was assembled, commissioned, and placed into service in January 2018. Several measures were put into place to continuously improve performance, as follows: (1) A one-week outage was scheduled in late April 2018 to address design and breakdown issues and warranty work on the new dredge; (2) a second smaller dredge was placed into service in mid-April; (3) a third dredge was made available for use as a backup; (4) operating personnel and supervision were staffed up to support increased production; and (5) additional rigor was added to Job Hazard Analysis and Pre-job Briefs, along with increased supervisory oversight. These measures resulted in improved dredge performance. Duke Energy continues to monitor and review performance for additional improvement opportunities. ${ }^{3}$

During Duke Energy's dam decommissioning application discussions with the state, the Company was unexpectedly required by the Department to maintain a 50 -foot buffer on the dikes until issuance of a decommissioning permit. The state's decision to limit Duke Energy to a minimum of a 50 -foot buffer of ash on the dikes of the 1971 Basin further challenged Duke Energy's ability to meet the Deadline, despite exercising best efforts. The buffer requirement prevented Duke Energy from excavating all of the ash
${ }^{2}$ Trucking and treating leachate is the alternate method of managing leachate, but the extent to which this can be done is dependent on the capacity of local vendors and municipalities. The limit is approximately 40,000 gallons per day, which would allow for only one landfill cell to be open at a time.
${ }_{3}$ Although the operation of three dredges was evaluated, the Company rejected this option due to safety concerns associated with the number of cables, anchors, and pipes that would be introduced.
from the basin dikes until after a dam decommissioning permit could be secured authorizing Duke Energy to remove the dikes. The result was that over 125,000 tons of material remained in the buffer zone of the dikes-material that was originally scheduled to be excavated as Duke Energy cut into the basin. Because Duke Energy was compelled to leave the material in the buffer zone of the dikes, ash was trapped on the dikes, which were surrounded by water. This not only prevented the Company from more efficiently achieving its production goals as planned, but required going back to excavate the material off the dikes from the buffer zone in a less efficient manner, thereby extending schedule.

Although it is not possible to recover the loss of margin occasioned by the delay in securing the necessary permit to decommission the dikes, Duke Energy saved substantial time by plotting the coordinates of the bottom of the 1971 Basin by taking 240 sample borings prior to digging below the groundwater table. Based on those sample borings, the Company determined the lower extent of the ash, thereby allowing it to dredge down directly to those coordinates. Duke Energy then developed as-built drawings certifying that it excavated to those coordinates to establish excavation had been completed. If the Company would not have taken this action, it would have been required to go into the basin on a barge and take 100 -foot grid samples, which would have taken significant time. Moreover, if Duke Energy would have found samples that indicated the existence of ash, it would have had to go back to do further excavation. By getting the borings done ahead of time and delineating the GPS coordinates of the contours of the bottom of the basin, the Company saved significant amounts of time.

To further challenge excavation operations, in late June 2018, while continuing to dredge in the 1971 Basin, both dredges encountered trees and stumps (remnants of a Cyprus forest) in three areas estimated to total approximately five acres, which challenged production by requiring an average of 45 non-productive hours per week to clean dredge cutter heads. Neither dredge type could make sufficient progress in those areas due to continuous clogging of the dredge pumps. However, Duke Energy promptly took interim action to redeploy dredge resources to other locations in the basin to maintain production while developing alternatives to effectively remove stumps and debris without compromising production and the dredge schedule. The Company determined to bridge out over two of the three areas to allow for the utilization of mechanical excavation to remove the stumps and CCR material from these areas (approximately 139,000 cubic yards of material). With respect to the third area (approximately 50,000 cubic yards of material), because there was no nearby land access to the area, bridging was rejected as an option. Other options Duke Energy considered included, amphibious excavation, barge excavation, and continued dredging at a reduced rate. To help inform its decision, the Company obtained additional bathymetric and aerial survey data. After evaluating the available options, all of which
would result in schedule delay, Duke Energy determined that dredging through the area would be the most technically feasible option and would result in the least impact on schedule. Although this was the most commercially reasonable option, it, nevertheless, resulted in a schedule loss of three weeks.

In 2018, weather continued to contribute to Duke Energy's inability to meet the Deadline. As in 2017, Sutton experienced above-average levels of precipitation in 2018. Through October 2018, the Wilmington area received historical levels of rainfall. Although average total precipitation in Wilmington in the months of April through September is 35.22 inches, actual rainfall over this six-month period in 2018 was 74.8 inches. 4 Thus, over this six-month period in 2018, Wilmington received 39.58 inches more rainfall than is normally the case. Under the extremely wet conditions presented, ash could not be dried to the level required for transportation and placement in the landfill.

Sutton, which was directly in the Hurricane Florence's path, experienced the full force of the storm's winds and rainfall. By September 11, 2018, precipitation intensity charts showed 25 to 30 inches of predicted rainfall in a concentrated portion of the coastal area just north of Wilmington. Duke Energy took numerous planning and engineering actions before the hurricane to prepare the site and minimize potential storm impacts, including staffing Sutton during the storm, pre-staging equipment, actively reducing water levels in the ponds before the storm arrived, and placing structural materials on-site to respond quickly if repairs were needed.

Rainfall began at Sutton on September 13, with 5.7 inches falling as measured by gauges at the site. On September 14, Sutton received an additional 11.5 inches of rainfall in three hours, between 6:00 a.m. and 9:00 a.m. ${ }^{5}$ This rainfall significantly exceeded the 25-year, 24-hour storm event design capacity of the run-on/run-off berm for landfill Cells 4 and 5. On September 16, a second peak rain event occurred between the hours of 12:00 a.m. and 6:00 a.m., with the site receiving an additional 4.2 inches of rainfall. Cumulative rainfall received by 8:00 a.m. on September 16 was approximately 30.1 inches.

On September 17, the site response team's priorities were to ensure the site was stable and prepared to handle another rain event by cleaning out ditches, installing

[^2]check dams, pumping contact water to the ash basins, restoring power to the site to support wastewater processing equipment operations, and developing a recovery plan to resume ash excavation. On that same day, the construction contractor remobilized and began to manage water in the landfill. The Department performed an inspection on September 28 after repairs had been completed and gave permission for landfill operations and placement of ash in the landfill to resume. Excavation and placement of ash resumed on September 29-only 16 days after the storm began impacting Sutton.

## III. Substantial Compliance with all Other CAMA Requirements and Deadlines

In compliance with CAMA, in 2015, Duke Energy embarked on an aggressive plan to close all ash basins across its North Carolina fleet, which is a complex task requiring significant planning, coordination with state regulators, and dedication of resources. In North Carolina, the Company has 31 coal ash basins subject to the requirements of CAMA, which imposes on Duke Energy, among other things, stringent structural stability, closure, post-closure care, groundwater monitoring, and corrective action requirements for CCR surface impoundments, as well as permanent water supply obligations. ${ }^{6}$

In July 2016, the North Carolina legislature amended CAMA to require Duke Energy to rectify any deficiencies identified by, and to comply with the requirements of, any dam safety order issued by the state for CCR surface impoundments. See N.C.G.S. § 130A-309-213(d)(1)b. On August 22, 2016, pursuant to N.C.G.S. § 143-215.32, NCDEQ issued Dam Safety Order 16-01 ("DSO") requiring certain repairs to impoundment dams at nine facility's subject to CAMA. Consistent with the requirements of the DSO, Duke Energy promptly undertook the required repairs and sent the Department a letter dated June 1,2018 , notifying it that the Company had fully complied with the requirements of the DSO in accordance with N.C.G.S. §§ 130A-309-213(d)(1)b. and 143-215.32. Specifically, Duke Energy completed all of the repair plans specified by, and timely submitted all of the completion reports to, NCDEQ. The Department conducted as-built inspections for each item and issued Certificates of Final Approval indicating that the required work had been completed as designed. In addition, the annual inspection of each dam has been completed, and the Company has received Notice of Inspection Reports documenting that no deficiencies are present. 7 Finally, on October 10, NCDEQ

[^3]7 The Sutton surface impoundments were not subject to the DSO. Nevertheless, the October 17, 2017, inspection report from the state indicates "the inspections revealed the dams to be well maintained and in good order." Similarly, the most recent annual inspection of the Sutton 1971 and 1984 Basin dams
made official notification to the Environmental Management Commission that Duke Energy had complied with all dam safety requirements, as required by N.C.G.S. § 130A-309-213(d)(1)b.

With respect to the permanent water supply requirements imposed under CAMA, Duke Energy provided each eligible and consenting resident with an alternative drinking water supply (i.e., connection to a public water system or a filtration system) by the deadline set out in N.C.G.S. § 130A-309-211(c1). On October 12, 2018, NCDEQ issued a press release announcing that "permanent replacement water supplies have been provided to all eligible households near Duke Energy coal ash facilities in North Carolina . . . by the deadline of October 15, 2018 set forth in the Coal Ash Management Act." Available at https://deq.nc.gov/news/oress-releases/2018/10/12/release-deq-completes-permanent-replacement-water-supplies-coal-ash.

Consistent with the requirements of N.C.G.S. § 130A-309-211, Duke Energy submitted the groundwater assessments to NCDEQ by the applicable CAMA deadline. In addition, the Company has submitted for six sites and continues to prepare for other sites updated comprehensive site assessments. Updated groundwater corrective action plans are also being submitted. These documents will be submitted to NCDEQ in accordance with the schedule provided to Duke Energy by the Department. ${ }^{8}$ The Company is also preparing site-specific coal ash impoundment closure plans in accordance with the requirements of N.C.G.S. § 130A-309-214(a)(4). These closure plans will be submitted to the Department no later than the applicable deadline set out in CAMA.

Finally, Duke Energy has substantially complied with all other requirements and deadlines established under CAMA, including its annual inspection, annual reporting, and ash beneficiation requirements.

## Conclusion

The latest bathymetric survey data show that Duke Energy has dredged approximately 760,000 cubic yards from the 1971 Basin and that there are approximately 240,000 cubic yards of dredge material remaining. In addition, there are
occurred on August 29, 2018; no concerns or issues were reported by NCDEQ that would necessitate issuance of a Notice of Deficiency or Notice of Violation.
${ }^{8}$ Although not required under CAMA, Duke Energy completed installation of the accelerated remediation system required under Paragraph II.A. of that certain Agreement to Settle and for Release of Claims entered into among NCDEQ and Duke Energy on September 29, 2015.

987,500 cubic yards remaining in the 1984 Basin. By August 1, 2019, Duke Energy estimates it will have excavated and moved for placement or disposal approximately 94 percent of the total ash to be excavated and moved from the Sutton impoundments.

As detailed above, the Company's commitment to the application of best available technology found to be economically reasonable to meet the Deadline has resulted in significant schedule recovery, despite the many challenges and limitations with which Duke Energy was presented throughout the excavation process. Despite these good faith efforts to meet the Deadline, Duke Energy estimates that it requires an additional six months. Accordingly, the Company respectfully requests that the Department grant Duke Energy a variance to extend the Deadline to February 1, 2020, to close the Sutton surface impoundments. Although this application requests a six-month variance, Duke Energy is committed to continuing to undertake best efforts to evaluate opportunities and implement commercially reasonable measures to meet the Deadline.

If you have any questions, please do not hesitate to contact Randy Hart at randy.hart@duke-enersy.com or (980) 373-5630. We appreciate your time and consideration.

Respectfully submitted,


George T. Hamrick
Senior Vice President, Coal Combustion Products
NCDEQ cc: Sheila C. Holman (sheila,holman@ncdenr.gov)
William F. Lane (billlane@ncdem.sov)
Duke Energy cc: ccprecords@duke-energy.com; Randy Hart

December 14, 2018
Via Electronic Mail
Ms. Sheila Holman
Assistant Secretary for Environment
North Carolina Department of Environmental Quality
217 W Jones St
Raleigh, NC 27603

## RE: Sutton Variance Application: Response to Request for Supplemental Information

Dear Ms. Holman:
Thank you for your letter dated December 12, 2018, requesting supplemental information regarding Duke Energy's Application for Variance to Extend Closure Date for Sutton Plant CCR Surface Impoundments dated November 16, 2018 ("Variance Application"). Specifically, you requested additional information regarding the current and projected process rates for ash excavation, assumptions made in calculating these rates, and technologies evaluated, and why they were ultimately selected or rejected. You also asked Duke Energy to discuss whether the Sutton Plant has met the requirements and deadlines set out in the Coal Ash Management Act, as amended ("CAMA"). This letter responds to the North Carolina Department of Environmental Quality's ("NCDEQ") request for supplemental information. In addition, Duke Energy provides information regarding the status of Duke Energy's compliance with N.C.G.S. § 130A-309.216 regarding the installation of ash beneficiation projects at three Duke Energy sites in North Carolina. Although this information was not requested by NCDEQ or applicable to the Sutton Plant, we thought it might be helpful as you evaluate the Variance Application.

## Rates of Excavation, Assumptions, and Technologies Evaluated

Sutton is forecasted to have excavated $4,900,000$ tons of ash by the end of 2018. Based on the estimated volume of material in each of the 1971 and 1984 Basins, there will be approximately $1,400,000$ tons remaining to be excavated in 2019 to meet final compliance criteria. Over the past three years, the excavation rate for the project has averaged approximately 130,000 tons per month. Since the on-site landfill was put into operation, the excavation rate has averaged approximately 150,000 tons per month. The current excavation plan assumes that Duke Energy will continue to excavate at a rate of $\mathbf{1 5 0 , 0 0 0}$ tons per month. At the end of July 2019, Duke Energy is forecasting to have approximately 350,000 tons remaining to be excavated. Using the original
amount of 6,655,200 tons in the basins, this equates to approximately 94 percent complete. After closure by removal has been completed, post-excavation validation sampling is further required. The sampling is scheduled to take about one month to complete the field and lab work. As detailed in Section II of Duke Energy's November 16 Variance Application, throughout its history, the project has been challenged with regulatory, weather, operational, and other unforeseen challenges, which have significantly impacted the monthly production rate despite Duke Energy's application of best efforts.

Although the excavation rate of 150,000 tons that is currently assumed will not be sufficient to achieve closure by the August 1, 2019 deadline established under CAMA, this number reflects the actions Duke Energy undertook to gain schedule, as set forth in the Variance Application. The technologies/actions Duke Energy considered and either adopted or rejected are summarized in the chart below.

| Technologies Evaluated | Status |
| :--- | :--- |
| Send parallel shipments of ash to Brickhaven <br> and on-site landfill after securing delayed <br> permit | Rejected - Logistical and contractual <br> constraints |
| Add third conveyor | Adopted - Allowed Duke Energy to increase its <br> margin on rail production |
| Early mobilization of Phase II contractor prior <br> to Phase I contractor's completion of work | Adopted - Supported early mobilization and <br> removal of non-ash material from 1971 Basin, <br> thereby accelerating Phase II of basin <br> excavation |
| Accelerate construction of Cell 3 of on-site <br> landfill | Adopted - Allowed landfill to be filled earlier <br> than scheduled at 150,0oo tons per month and <br> eliminated project down time with rail <br> operations being complete |
| Expedite construction of Cells 5, 6, and 7 of on- <br> site landfill | Adopted - Removed landfill from critical path |
| Simultaneous operation of multiple landffill cells | Adopted - Substantially increased production |
| Increase dredging excavation activities up to 20 <br> hours per day, six days per week | Adopted - Substantially increased production |
| Place additional dredge into service | Adopted - Substantially increased production |
| Simultaneous operation of three dredges | Rejected - Safety concerns associated with <br> number of cables, anchors, and pipes |
| Plot GPS coordinates of bottom of 1971 Basin | Adopted - Saved significant time by <br> confirming lower extent of ash and avoiding <br> need to go back and do additional excavation <br> and post-excavation sampling time estimates |
| Redeploy dredge resources to other basin <br> locations while developing alternatives to <br> remove stumps and debris | Adopted - Avoided loss of production and <br> dredge schedule |
| Take measures in advance of Hurricane <br> Florence reaching landfall to prepare site | Adopted - Minimized potential storm impacts, <br> thus allowing for prompt return to ash <br> excavation and disposal operations |

The Sutton site received 5.67 inches of rainfall in November 2018, which impacted eight working days of production, or 64,000 to 80,000 tons of CCR material. Through the first nine days of December 2018, the site has received an additional 3.08 inches of precipitation. In total, as of December 9, a total of 97.67 inches of rain has fallen on the site. This has caused 93 lost working days in 2018, equivalent to 697,500 tons of production.

In addition to delays associated with poor weather, recent dredging production from the 1971 Basin deep ash borrow area has been impaired by the lodging of rocks in the cutter head and dredge pump. A bottom sonar survey identified three rock outcroppings varying from 50 to 250 feet in length. An engineering evaluation will consider this data to determine how Duke Energy should modify the final dredging depths to account for the rock formations/outcroppings. To minimize any schedule delays, the large dredge has been moved to another area in the basin.

These problems demonstrate that despite Duke Energy's continuous application of best efforts, production delays occur because of factors entirely out of Duke Energy's control. They further highlight the fact that estimated excavation rates are influenced by many external factors. Therefore, it would not be prudent to conclude that the project will recover $\mathbf{3 5 0 , 0 0 0}$ tons of shortfall in the first seven months of 2019. In light of the extended variance application process set out in CAMA, which essentially provides a single opportunity to apply for a variance ${ }^{1}$, it is critical that the variance request include adequate margin to accommodate additional schedule delays despite Duke Energy's application of best available technology found to be economically reasonable.

## Substantial Compliance with Other CAMA Requirements and Deadlines Applicable to the Sutton Plant

- N.C.G.S. § 130A-309-213(d)(1)b. (dam stability) - Although the CCR surface impoundments at the Sutton Plant were not subject to Dam Safety Order 16-01, the October 17, 2017 inspection report from NCDEQ indicates "the inspections revealed the dams to be well maintained and in good order." Similarly, the most recent annual inspection of the Sutton 1971 and 1984 Basin dams occurred on August 29, 2018; no concerns or issues were reported by NCDEQ that would necessitate issuance of a Notice of Deficiency or Notice of Violation.
- N.C.G.S. § 130A-309-211(c1) (provision of permanent water supply) - Although subject to the statutory requirement to establish permanent replacement water supplies for eligible households, it was determined that no connection was needed at the Sutton Plant. NCDEQ sent its concurrence with this determination to Duke Energy on August 10, 2018.

[^4]- N.C.G.S. § 130A-309-211(a) (comprehensive site assessment) - The comprehensive site assessment for the Sutton Plant was submitted to NCDEQ via cover letter dated August 4, 2015.
- N.C.G.S. § 130A-309-211(b) (corrective action plan) - The corrective action plan was submitted in two parts. Part 1 was dated November 2, 2015, and Part 2 was dated February 1, $2016 .{ }^{2}$


## Compliance with N.C.G.S. § 130A-309. 216 (ash beneficiation projects)

North Carolina General Statutes Section 130A-309.216 requires Duke Energy to install and operate three large-scale coal ash beneficiation projects to produce reprocessed ash for use in the concrete industry. Duke Energy selected the Buck and H.F. Lee Plants prior to the January 1, 2017 deadline set out in subsection (a) of Section 130A-309.216, and selected the Cape Fear Plant prior to the deadline established under subsection (b) of Section 130A-309.216. Construction of the beneficiation unit at the Buck Plant began in November 2018 and will require 18 to 24 months to complete. Construction of the beneficiation unit at the H.F. Lee Plant is targeted to begin in February 2019, pending receipt of all required permits. Construction is expected to take approximately 18 to 24 months. Finally, construction of the beneficiation unit at Cape Fear is targeted to begin in May 2019, pending receipt of all required permits. Construction is expected to take approximately 18 to 24 months.

## Conclusion

As explained in the Variance Application, Duke Energy is committed to continuing to undertake best efforts to evaluate opportunities and implement commercially reasonable measures to meet the August 1, 2019 closure deadline established by CAMA, including taking advantage of good weather days and continuing to move material into the landfill 60 hours or more per week, as weather allows. Nevertheless, Duke Energy respectfully requests that NCDEQ grant it a variance to extend until February 1, 2020, the deadline to close the CCR surface impoundments at the Sutton Plant.

[^5]If you have any questions, please do not hesitate to contact Randy Hart at randy. hart@duke-energy.com or (980) 373-5630. We appreciate your time and consideration.

## Respectfully submitted,



George T. Hayrick
Senior Vice President, Coal Combustion Products
NCDEQ cc: William F. Lane (bill.lane@ncdenr.gov)
Ed Mussier (ed.mussler@ncdenr.gov)
Duke Energy cc: ccprecords@duke-energy.com; Randy Hart

## Attachment B

| From: | Martin, Sharon Le |
| :--- | :--- |
| To: | irider@nhcoov.com |
| Subject: | Library copy of Public Notice of Duke Energy Request for Variance on Sutton Coal Ash Closure deadline |
| Date: | Friday, December 14, 2018 4:49:00 PM |
| Attachments: | SuttonVariance public notice -12142018.pdf |
|  | Sutton Station Application for Grant of Variance to Close Impoundments 20181116. odf |

Mr. Rider,
Thank you for speaking with me today. Attached are the public notice of the public meeting and comment period as well as the request for variance. Please post as necessary. Thank you so much for your help in this matter, and please let me know if there's ever anything you need.

Thank you,
Sharon Martin
Public Information Officer


# NOTICE FOR PUBLIC MEETING AND PUBLIC COMMENT PERIOD ON REQUEST FOR VARIANCE TO EXTEND CLOSURE DEADLINE Duke Energy Sutton Plant 

Duke Energy has made a request to the North Carolina Department of Environmental Quality (DEQ) for a variance to extend the Coal Ash Management Act closure deadline by six months for the Sutton Coal Ash facility located at:

801 Sutton Steam Plant Road<br>Wilmington, NC 28401

This notice serves as a Notice of Public Meeting and Opportunity for Public Comment for this request. The public meeting will be held at the Cape Fear Community College on January 14, 2019 in the Union Station Building.
A copy of the variance request is posted on the DEQ website at deq.nc.gov/Sutton-Variance.
Interested persons are invited to provide comment on the variance request. Written comments may be sent to:

Ellen Lorscheider
1646 Mail Service Center
Raleigh, North Carolina 276991646
Phone/Fax: (919)707-8200
The comment period began on December 14, 2018 and ends on February 4, 2019. Written comments may also be submitted during the public comment period via email at the following address:
publiccomments@ncdenr.gov
Please type "Sutton Variance Request" in the subject line.
After weighing all relevant comments received, DEQ will decide whether to grant the request.

November 16, 2018

## VIA UPS Overnight Delivery and Electronic Mail

Mr. Michael S. Regan
Secretary
North Carolina Department of Environmental Quality
217 W Jones St
Raleigh, NC 27603

## RE: Application for Grant of Variance to Extend Deadline to Close Sutton Plant CCR Surface Impoundments (N.C.G.S. § 130A-309.215)

Dear Secretary Regan:
North Carolina General Statutes Section 130A-309.215(a) authorizes the Secretary of the North Carolina Department of Environmental Quality ("NCDEQ" or "Department") to "grant a variance to extend any deadline under [the Coal Ash Management Act ("CAMA")] on the Secretary's own motion, or that of an impoundment owner, on the basis that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public." Pursuant to N.C.G.S. § 130A-309.215(a1), where a variance is requested by an impoundment owner, the impoundment owner must within one year prior to the applicable deadline, request a variance including, at a minimum, information regarding (A) the site; (B) applicable requirements; (C) applicable deadlines for which a variance is sought; (D) site-specific circumstances supporting the need for the variance; and (E) detailed information demonstrating that "(i) the owner has substantially complied with all other requirements and deadlines established by [CAMA]; (ii) the owner has made good faith efforts to comply with the applicable deadline for closure of the impoundment; and (iii) that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public."

Consistent with the requirements of subsection (a1) of N.C.G.S. § 130A-309.215, Duke Energy Progress, LLC ("Duke Energy" or "Company") hereby submits this application for a variance to extend by six months the CAMA closure deadline applicable to the coal combustion residuals ("CCR") surface impoundments at Duke Energy's Sutton Plant ("Sutton") in Wilmington, North Carolina. Section I of this application
addresses elements A, B, and C above; Section II addresses elements D, (E)(ii), and (E)(iii); and Section III addresses element (E)(i). As detailed in Section II below, NCDEQ's grant of the variance is warranted, because despite Duke Energy's application of best available technology found to be economically reasonable, compliance with the applicable CAMA deadline cannot be achieved due to myriad factors, including the impacts of several permitting delays, two major hurricanes, and other unforeseeable challenges and limitations beyond the Company's control.

## I. Site; Applicable Requirements and Applicable Deadline

Sections 3.(b)(4) and 3.(c) of CAMA (Sess. L. 2014-122) require that the CCR surface impoundments at Sutton be closed by removal of CCR by no later than August 1, 2019 ("Deadline"). For the reasons discussed in detail below, despite Duke Energy's good faith efforts to apply best available technology found to be economically reasonable, Duke Energy has determined that it may not be able to meet the Deadline without producing serious hardship without equal or greater benefits to the public.

## II. Site-specific Circumstances Demonstrating Why Compliance with CAMA's Deadline Cannot be Achieved Despite Duke Energy's Good Faith Efforts and Application of Best Available Technology

Throughout the basin excavation process, Duke Energy has encountered numerous challenges that have cumulatively resulted in the current schedule delay at Sutton and have impacted the Company's ability to close the Sutton CCR surface impoundments by the Deadline. During this period, Duke Energy has consistently exercised best efforts to minimize any delays in meeting the Deadline and has taken important steps to overcome the various challenges and limitations presented in an effort to recover schedule.

Under the standard set out in N.C.G.S. § 130A-309.215, whether application of a given technology would be commercially or economically reasonable requires that the costs of such technology be balanced against its benefits to the public. Following this fundamental principle over the course of the basin closure project, Duke Energy has consistently looked for and evaluated measures to safely and reasonably minimize any delays to the extent possible, considering at all times, the risks and benefits associated with each of the options considered.

In October 2014, the Company developed the initial Sutton Excavation Plan and held the Phase I excavation bidding event for excavation of the first two million tons of CCR for rail transport, which was determined to be the amount of ash that would need
to be transported by rail to meet the Deadline. The contractor Duke Energy selected under this bidding event ("Contractor A") was chosen not only because it had bid the lowest price per ton, but also because it had completeness of technical support, engineering competence, and extensive wet ash basin experience. Due to CAMA's aggressive completion date of August 1,2019, the complexity of CCR excavation at Sutton, and the expected timeline to construct an on-site landfill, the Brickhaven structural fill in Chatham County, North Carolina was selected as the initial CCR placement site for ash from the Sutton impoundments.

On November 13, 2014, Duke Energy submitted the initial Sutton Excavation Plan to the Department to cover the first 12 to 18 months (Phase I) of ash basin excavation activities. In general, the scope of work included site preparation, initiation of basin dewatering, ash basin preparation, construction of the on-site landfill, and ash removal from the basins. Under the initial Excavation Plan, Duke Energy would begin placing ash in the Brickhaven structural fill-a beneficial use of CCR pursuant to N.C.G.S. § 130A-309.201(1), (11), and (14). Ash would be transported from the site via rail car and also trucked to Brickhaven. Although the quantity trucked was small relative to the quantities transported by rail, this action demonstrated Duke Energy's commitment to commence ash excavation and placement operations as soon as feasible. Rail operations would consist of 85 car unit trains, with rail cars averaging 90 tons per car. The monthly goal was to deliver 14 loaded trains to Brickhaven per month, working seven days per week, or approximately 107,000 tons per month.

While transporting ash to Brickhaven, Duke Energy developed simultaneously an on-site landfill in order to meet the Deadline. Based on an engineering feasibility study commissioned by Duke Energy, it was determined that an on-site landfill would be the least-cost option to dispose of the ash and would have the least environmental impact. Moreover, it was determined to be the most expedient method of ash removal from the basins, consistent with the requirements of CAMA. North Carolina's solid waste rules, which prohibit the commencement of construction activities without having first secured the necessary permits, on-site landfill construction could not begin until issuance of the Permit to Construct.

On August 7, 2015, Duke Energy submitted its application for a Permit to Construct the on-site landfill to dispose of five million tons of coal ash from the Sutton impoundments (Phase II). On September 3, 2015, NCDEQ sent a letter to Duke Energy notifying the Company that the landfill application had been deemed "complete." NCDEQ sent a follow-up letter on October 7,2015 , requesting supplemental information, which Duke Energy provided on December 10, 2015. NCDEQ then initiated a 60-day public comment period, which ran from February 11 to April 15, 2016. The Company reasonably expected that the permit would issue soon after the conclusion
of the comment period because (i) the public meeting was not heavily attended or contentious, (ii) NCDEQ Solid Waste Division staff had been reviewing the application since it was submitted on August 7, 2015, and (iii) it historically took the Department only a few weeks after expiration of the comment period to issue such permits. ${ }^{1}$

Duke Energy completed the updated 2015 Sutton Excavation Plan in November 2015 and revised the milestone dates, which reflected a reasonable expectation that it would secure the Permit to Construct in early 2016, thereby supporting a schedule to complete excavation of the ash by March 2019. Duke Energy was planning to move two million tons of ash via rail and, in parallel, dispose of ash in the on-site landfill from late January 2017 to July 2017. The Company estimated that it could excavate and move between approximately 200,000 to 225,000 tons of ash per month, 93,000 to 118,000 tons of which would be via truck to the landfill and approximately 107,000 tons of which would be via rail to Brickhaven.

However, on April 7, 2016, NCDEQ announced a new policy at a town hall meeting sponsored by the North Carolina Advisory Committee ("Advisory Committee") of the United States Commission on Civil Rights ("USCCR"), followed by a news release announcing a new review and approval process for all CCR landfills. Available at https://deq.nc.gov/press-release/north-carolina-take-extra-steps-protect-minoritycommunities. NCDEQ declared that it would go "beyond state and federal requirements" by conducting an environmental justice review of each Duke Energy coal ash CCR landfill application, including applications for expansions of existing on-site CCR landfills, and ask EPA's Office of Civil Rights, the USCCR, and the Advisory Committee to review and approve the environmental justice analysis before the permit is issued. NCDEQ reiterated this new policy a week later in a letter to the Advisory Committee. As a result of this new and unexpected process, on September 22, 2016, Duke Energy finally secured the Permit to Construct the Sutton landfill, which was one full year after NCDEQ had deemed the application "complete," and almost five months later than the latest date on which the permit was reasonably expected.

As a result of the permit delay, Duke Energy lost the six plus months of parallel (i.e., on-site and off-site) excavation and placement/disposal for which it had planned. If issuance of the Permit to Construct would not have been delayed, the landfill construction would have been ongoing over this entire period of time, which would have created substantial margin on available space and volume to dispose of ash. The loss of this time and the ability to create margin had a significant negative impact on the ability to complete the project by the Deadline. Compounding this delay, Hurricane Matthew

[^6]struck eastern North Carolina on October 8, 2016, further delaying the mobilization of landfill construction, limiting access to the work site, and interrupting rail transport of ash to Brickhaven for 20 days due to railway flooding.

As a result of these unforeseen complications in the landfill permitting process, coupled with historic impacts to the region and Duke Energy's operations from Hurricane Matthew, Duke Energy's excavation schedule was delayed by over six months. However, throughout 2017, Duke Energy continuously evaluated actions and implemented them where the Company determined it was safe and commercially reasonable to do so. Following is a summary of the options the Company evaluated and the economically reasonable measures it undertook to address challenges and limitations and achieve schedule recovery:

- Duke Energy added a third conveyor to increase its margin on rail production. Accelerating the completion of Phase I provided crucial time to transition to Phase II while Duke Energy awaited construction of the on-site landfill to be completed.
- Duke Energy mobilized Contractor B-the contractor performing Phase II of ash excavation-to the site prior to Contractor A completing Phase I to support removal of non-ash material from the 1971 Basin, which accelerated Phase II of basin excavation.
- Due to mild weather and the Company's implementation of parallel activities, construction of Cell 3 of the landfill was completed well in advance of the scheduled September 1, 2017, completion date. As a result of this reduction in the landfill construction schedule, Duke Energy was in a position to start disposing of ash in the landfill upon receipt of the Permit to Operate. NCDEQ issued the permit on July 6, 2017, and the Company promptly started moving ash into the landfill on the following day, representing a 55-day acceleration of the schedule.
- Duke Energy evaluated parallel shipments of ash to Brickhaven and to the on-site landfill but rejected this action primarily based on logistical and contractual constraints. At that time (mid-2017), the Company could only process between approximately 200,000 to 225,000 tons of ash per month irrespective of where it was ultimately placed or disposed of.
- As the project schedule progressed, the landfill continued to be critical path due to the need to get additional cells permitted and operating. Duke Energy took efforts to expedite the landfill construction schedule and was able to complete Cells 5 and 6 a year ahead of schedule, thereby completely removing the landfill
from critical path. In addition, the necessary permits to operate all six cells were secured. Critically, Duke Energy also secured the necessary permits to treat the landfill leachate on-site. This is significant because of the volume of leachate generated by the landfill-as more air space opened up, the volume of precipitation infiltrating into the ash and water draining from the ash itself increased, thus increasing the amount of leachate that needed to be treated. ${ }^{2}$ By constructing Phase 2 of the site's wastewater treatment facility, getting the system installed to transfer the landfill leachate to that facility, and securing the necessary discharge permit, Duke Energy was able to simultaneously operate three cells instead of one, thereby allowing it to increase production substantially.
- The Company evaluated the feasibility of applying additional resources in order to increase the production rate, including expanding to night operations. Leveraging its experience, Duke Energy increased its dredging excavation activities up to 20 hours per day, six days a week using two 10 -hour shifts or extended shifts.
- A new large dredge was assembled, commissioned, and placed into service in January 2018. Several measures were put into place to continuously improve performance, as follows: (1) A one-week outage was scheduled in late April 2018 to address design and breakdown issues and warranty work on the new dredge; (2) a second smaller dredge was placed into service in mid-April; (3) a third dredge was made available for use as a backup; (4) operating personnel and supervision were staffed up to support increased production; and (5) additional rigor was added to Job Hazard Analysis and Pre-job Briefs, along with increased supervisory oversight. These measures resulted in improved dredge performance. Duke Energy continues to monitor and review performance for additional improvement opportunities. ${ }^{3}$

During Duke Energy's dam decommissioning application discussions with the state, the Company was unexpectedly required by the Department to maintain a 50 -foot buffer on the dikes until issuance of a decommissioning permit. The state's decision to limit Duke Energy to a minimum of a 50 -foot buffer of ash on the dikes of the 1971 Basin further challenged Duke Energy's ability to meet the Deadline, despite exercising best efforts. The buffer requirement prevented Duke Energy from excavating all of the ash

[^7]from the basin dikes until after a dam decommissioning permit could be secured authorizing Duke Energy to remove the dikes. The result was that over 125,000 tons of material remained in the buffer zone of the dikes-material that was originally scheduled to be excavated as Duke Energy cut into the basin. Because Duke Energy was compelled to leave the material in the buffer zone of the dikes, ash was trapped on the dikes, which were surrounded by water. This not only prevented the Company from more efficiently achieving its production goals as planned, but required going back to excavate the material off the dikes from the buffer zone in a less efficient manner, thereby extending schedule.

Although it is not possible to recover the loss of margin occasioned by the delay in securing the necessary permit to decommission the dikes, Duke Energy saved substantial time by plotting the coordinates of the bottom of the 1971 Basin by taking 240 sample borings prior to digging below the groundwater table. Based on those sample borings, the Company determined the lower extent of the ash, thereby allowing it to dredge down directly to those coordinates. Duke Energy then developed as-built drawings certifying that it excavated to those coordinates to establish excavation had been completed. If the Company would not have taken this action, it would have been required to go into the basin on a barge and take 100 -foot grid samples, which would have taken significant time. Moreover, if Duke Energy would have found samples that indicated the existence of ash, it would have had to go back to do further excavation. By getting the borings done ahead of time and delineating the GPS coordinates of the contours of the bottom of the basin, the Company saved significant amounts of time.

To further challenge excavation operations, in late June 2018, while continuing to dredge in the 1971 Basin, both dredges encountered trees and stumps (remnants of a Cyprus forest) in three areas estimated to total approximately five acres, which challenged production by requiring an average of 45 non-productive hours per week to clean dredge cutter heads. Neither dredge type could make sufficient progress in those areas due to continuous clogging of the dredge pumps. However, Duke Energy promptly took interim action to redeploy dredge resources to other locations in the basin to maintain production while developing alternatives to effectively remove stumps and debris without compromising production and the dredge schedule. The Company determined to bridge out over two of the three areas to allow for the utilization of mechanical excavation to remove the stumps and CCR material from these areas (approximately 139,000 cubic yards of material). With respect to the third area (approximately 50,000 cubic yards of material), because there was no nearby land access to the area, bridging was rejected as an option. Other options Duke Energy considered included, amphibious excavation, barge excavation, and continued dredging at a reduced rate. To help inform its decision, the Company obtained additional bathymetric and aerial survey data. After evaluating the available options, all of which
would result in schedule delay, Duke Energy determined that dredging through the area would be the most technically feasible option and would result in the least impact on schedule. Although this was the most commercially reasonable option, it, nevertheless, resulted in a schedule loss of three weeks.

In 2018, weather continued to contribute to Duke Energy's inability to meet the Deadline. As in 2017, Sutton experienced above-average levels of precipitation in 2018. Through October 2018, the Wilmington area received historical levels of rainfall. Although average total precipitation in Wilmington in the months of April through September is $35-22$ inches, actual rainfall over this six-month period in 2018 was 74.8 inches. 4 Thus, over this six-month period in 2018, Wilmington received 39.58 inches more rainfall than is normally the case. Under the extremely wet conditions presented, ash could not be dried to the level required for transportation and placement in the landfill.

Sutton, which was directly in the Hurricane Florence's path, experienced the full force of the storm's winds and rainfall. By September 11, 2018, precipitation intensity charts showed 25 to 30 inches of predicted rainfall in a concentrated portion of the coastal area just north of Wilmington. Duke Energy took numerous planning and engineering actions before the hurricane to prepare the site and minimize potential storm impacts, including staffing Sutton during the storm, pre-staging equipment, actively reducing water levels in the ponds before the storm arrived, and placing structural materials on-site to respond quickly if repairs were needed.

Rainfall began at Sutton on September 13, with 5.7 inches falling as measured by gauges at the site. On September 14, Sutton received an additional 11.5 inches of rainfall in three hours, between 6:00 a.m. and 9:00 a.m. ${ }^{5}$ This rainfall significantly exceeded the 25-year, 24-hour storm event design capacity of the run-on/run-off berm for landfill Cells 4 and 5. On September 16, a second peak rain event occurred between the hours of 12:00 a.m. and 6:00 a.m., with the site receiving an additional 4.2 inches of rainfall. Cumulative rainfall received by 8:00 a.m. on September 16 was approximately 30.1 inches.

On September 17, the site response team's priorities were to ensure the site was stable and prepared to handle another rain event by cleaning out ditches, installing

[^8]

5 The flooding Cape Fear River triggered the shutdown of the entire plant, including its natural gas-fired operations-and evacuation of plant staff. The storm resulted in 1.8 million Duke Energy customers losing power.
check dams, pumping contact water to the ash basins, restoring power to the site to support wastewater processing equipment operations, and developing a recovery plan to resume ash excavation. On that same day, the construction contractor remobilized and began to manage water in the landfill. The Department performed an inspection on September 28 after repairs had been completed and gave permission for landfill operations and placement of ash in the landfill to resume. Excavation and placement of ash resumed on September 29-only 16 days after the storm began impacting Sutton.

## III. Substantial Compliance with all Other CAMA Requirements and Deadlines

In compliance with CAMA, in 2015, Duke Energy embarked on an aggressive plan to close all ash basins across its North Carolina fleet, which is a complex task requiring significant planning, coordination with state regulators, and dedication of resources. In North Carolina, the Company has 31 coal ash basins subject to the requirements of CAMA, which imposes on Duke Energy, among other things, stringent structural stability, closure, post-closure care, groundwater monitoring, and corrective action requirements for CCR surface impoundments, as well as permanent water supply
obligations. ${ }^{6}$

In July 2016, the North Carolina legislature amended CAMA to require Duke Energy to rectify any deficiencies identified by, and to comply with the requirements of, any dam safety order issued by the state for CCR surface impoundments. See N.C.G.S. § 130A-309-213(d)(1)b. On August 22, 2016, pursuant to N.C.G.S. § 143-215.32, NCDEQ issued Dam Safety Order 16-01 ("DSO") requiring certain repairs to impoundment dams at nine facility's subject to CAMA. Consistent with the requirements of the DSO, Duke Energy promptly undertook the required repairs and sent the Department a letter dated June 1,2018 , notifying it that the Company had fully complied with the requirements of the DSO in accordance with N.C.G.S. §§ 130A-309-213(d)(1)b. and 143-215.32. Specifically, Duke Energy completed all of the repair plans specified by, and timely submitted all of the completion reports to, NCDEQ. The Department conducted as-built inspections for each item and issued Certificates of Final Approval indicating that the required work had been completed as designed. In addition, the annual inspection of each dam has been completed, and the Company has received Notice of Inspection Reports documenting that no deficiencies are present. 7 Finally, on October 10, NCDEQ
${ }^{6}$ Twenty-six of these basins are also regulated under the federal CCR rule.
${ }^{7}$ The Sutton surface impoundments were not subject to the DSO. Nevertheless, the October 17, 2017, inspection report from the state indicates "the inspections revealed the dams to be well maintained and in good order." Similarly, the most recent annual inspection of the Sutton 1971 and 1984 Basin dams
made official notification to the Environmental Management Commission that Duke Energy had complied with all dam safety requirements, as required by N.C.G.S. § 130A-$309-213(\mathrm{~d})(1) \mathrm{b}$.

With respect to the permanent water supply requirements imposed under CAMA, Duke Energy provided each eligible and consenting resident with an alternative drinking water supply (i.e., connection to a public water system or a filtration system) by the deadline set out in N.C.G.S. § 130A-309-211(c1). On October 12, 2018, NCDEQ issued a press release announcing that "permanent replacement water supplies have been provided to all eligible households near Duke Energy coal ash facilities in North Carolina . . . by the deadline of October 15, 2018 set forth in the Coal Ash Management Act." Available at https://deq.nc.gov/news/press-releases/2018/10/12/release-deq-completes-permanent-replacement-water-supplies-coal-ash.

Consistent with the requirements of N.C.G.S. § 130A-309-211, Duke Energy submitted the groundwater assessments to NCDEQ by the applicable CAMA deadline. In addition, the Company has submitted for six sites and continues to prepare for other sites updated comprehensive site assessments. Updated groundwater corrective action plans are also being submitted. These documents will be submitted to NCDEQ in accordance with the schedule provided to Duke Energy by the Department. ${ }^{8}$ The Company is also preparing site-specific coal ash impoundment closure plans in accordance with the requirements of N.C.G.S. § 130A-309-214(a)(4). These closure plans will be submitted to the Department no later than the applicable deadline set out in CAMA.

Finally, Duke Energy has substantially complied with all other requirements and deadlines established under CAMA, including its annual inspection, annual reporting, and ash beneficiation requirements.

## Conclusion

The latest bathymetric survey data show that Duke Energy has dredged approximately 760,000 cubic yards from the 1971 Basin and that there are approximately 240,000 cubic yards of dredge material remaining. In addition, there are
occurred on August 29, 2018; no concerns or issues were reported by NCDEQ that would necessitate issuance of a Notice of Deficiency or Notice of Violation.
${ }^{8}$ Although not required under CAMA, Duke Energy completed installation of the accelerated remediation system required under Paragraph II.A. of that certain Agreement to Settle and for Release of Claims entered into among NCDEQ and Duke Energy on September 29, 2015.

987,500 cubic yards remaining in the 1984 Basin. By August 1, 2019, Duke Energy estimates it will have excavated and moved for placement or disposal approximately 94 percent of the total ash to be excavated and moved from the Sutton impoundments.

As detailed above, the Company's commitment to the application of best available technology found to be economically reasonable to meet the Deadline has resulted in significant schedule recovery, despite the many challenges and limitations with which Duke Energy was presented throughout the excavation process. Despite these good faith efforts to meet the Deadline, Duke Energy estimates that it requires an additional six months. Accordingly, the Company respectfully requests that the Department grant Duke Energy a variance to extend the Deadline to February 1, 2020, to close the Sutton surface impoundments. Although this application requests a six-month variance, Duke Energy is committed to continuing to undertake best efforts to evaluate opportunities and implement commercially reasonable measures to meet the Deadline.

If you have any questions, please do not hesitate to contact Randy Hart at randy.hart@duke-energy.com or (980) 373-5630. We appreciate your time and consideration.

Respectfully submitted,


George T. Hamrick
Senior Vice President, Coal Combustion Products
NCDEQ cc: Sheila C. Holman (sheila holman@ncdenr.gov)
William F. Lane (bill,lane@ncdenr.gov)
Duke Energy cc: ccprecords@duke-energy.com; Randy Hart

December 14, 2018

## Via Electronic Mail

Ms. Sheila Holman<br>Assistant Secretary for Environment<br>North Carolina Department of Environmental Quality<br>217 W Jones St

Raleigh, NC 27603

## RE: Sutton Variance Application: Response to Request for Supplemental Information

Dear Ms. Holman:
Thank you for your letter dated December 12, 2018, requesting supplemental information regarding Duke Energy's Application for Variance to Extend Closure Date for Sutton Plant CCR Surface Impoundments dated November 16, 2018 ("Variance Application"). Specifically, you requested additional information regarding the current and projected process rates for ash excavation, assumptions made in calculating these rates, and technologies evaluated, and why they were ultimately selected or rejected. You also asked Duke Energy to discuss whether the Sutton Plant has met the requirements and deadlines set out in the Coal Ash Management Act, as amended ("CAMA"). This letter responds to the North Carolina Department of Environmental Quality's ("NCDEQ") request for supplemental information. In addition, Duke Energy provides information regarding the status of Duke Energy's compliance with N.C.G.S. § 130A-309.216 regarding the installation of ash beneficiation projects at three Duke Energy sites in North Carolina. Although this information was not requested by NCDEQ or applicable to the Sutton Plant, we thought it might be helpful as you evaluate the Variance Application.

## Rates of Excavation, Assumptions, and Technologies Evaluated

Sutton is forecasted to have excavated $4,900,000$ tons of ash by the end of 2018. Based on the estimated volume of material in each of the 1971 and 1984 Basins, there will be approximately $1,400,000$ tons remaining to be excavated in 2019 to meet final compliance criteria. Over the past three years, the excavation rate for the project has averaged approximately 130,000 tons per month. Since the on-site landfill was put into operation, the excavation rate has averaged approximately 150,000 tons per month. The current excavation plan assumes that Duke Energy will continue to excavate at a rate of 150,000 tons per month. At the end of July 2019, Duke Energy is forecasting to have approximately 350,000 tons remaining to be excavated. Using the original
amount of $6,655,200$ tons in the basins, this equates to approximately 94 percent complete. After closure by removal has been completed, post-excavation validation sampling is further required. The sampling is scheduled to take about one month to complete the field and lab work. As detailed in Section II of Duke Energy's November 16 Variance Application, throughout its history, the project has been challenged with regulatory, weather, operational, and other unforeseen challenges, which have significantly impacted the monthly production rate despite Duke Energy's application of best efforts.

Although the excavation rate of 150,000 tons that is currently assumed will not be sufficient to achieve closure by the August 1, 2019 deadline established under CAMA, this number reflects the actions Duke Energy undertook to gain schedule, as set forth in the Variance Application. The technologies/actions Duke Energy considered and either adopted or rejected are summarized in the chart below.

| Technologies Evaluated | Status |
| :--- | :--- |
| Send paralles shipments of ash to Brickhaven <br> and on-site landfill after securing delayed <br> permit | Rejected - Logistical and contractual <br> constraints |
| Add third conveyor | Adopted - Allowed Duke Energy to increase its <br> margin on rail production |
| Early mobilization of Phase II contractor prior <br> to Phase I contractor's completion of work | Adopted - Supported early mobilization and <br> removal of non-ash material from 1971 Basin, <br> thereby accelerating Phase II of basin <br> excavation |
| Accelerate construction of Cell 3 of on-site <br> landfill | Adopted - Allowed landfill to be filled earlier <br> than scheduled at 150,ooo tons per month and <br> eliminated project down time with rail <br> operations being complete |
| Expedite construction of Cells 5, 6, and 7 of on- <br> site landfill | Adopted - Removed landfill from critical path |
| Simultaneous operation of multiple landfill cells | Adopted - Substantially increased production |
| Increase dredging excavation activities up to 20 <br> hours per day, six days per week | Adopted - Substantially increased production |
| Place additional dredge into service | Adopted - Substantially increased production |
| Simultaneous operation of three dredges | Rejected - Safety concerns associated with <br> number of cables, anchors, and pipes |
| Plot GPS coordinates of bottom of 1971 Basin | Adopted - Saved significant time by <br> confirming lower extent of ash and avoiding <br> need to go back and do additional excavation <br> and post-excavation sampling time estimates |
| Redeploy dredge resources to other basin <br> locations while developing alternatives to <br> remove stumps and debbris | Adopted - Avoided loss of production and <br> dredge schedule |
| Take measures in advance of Hurricane <br> Florence reaching landfall to prepare site | Adopted - Minimized potential storm impacts, <br> thus allowing for prompt return to ash <br> excavation and disposal operations |

The Sutton site received 5.67 inches of rainfall in November 2018, which impacted eight working days of production, or 64,000 to 80,000 tons of CCR material. Through the first nine days of December 2018, the site has received an additional 3.08 inches of precipitation. In total, as of December 9, a total of 97.67 inches of rain has fallen on the site. This has caused 93 lost working days in 2018, equivalent to 697,500 tons of production.

In addition to delays associated with poor weather, recent dredging production from the 1971 Basin deep ash borrow area has been impaired by the lodging of rocks in the cutter head and dredge pump. A bottom sonar survey identified three rock outcroppings varying from 50 to 250 feet in length. An engineering evaluation will consider this data to determine how Duke Energy should modify the final dredging depths to account for the rock formations/outcroppings. To minimize any schedule delays, the large dredge has been moved to another area in the basin.

These problems demonstrate that despite Duke Energy's continuous application of best efforts, production delays occur because of factors entirely out of Duke Energy's control. They further highlight the fact that estimated excavation rates are influenced by many external factors. Therefore, it would not be prudent to conclude that the project will recover 350,000 tons of shortfall in the first seven months of 2019. In light of the extended variance application process set out in CAMA, which essentially provides a single opportunity to apply for a variance ${ }^{1}$, it is critical that the variance request include adequate margin to accommodate additional schedule delays despite Duke Energy's application of best available technology found to be economically reasonable.

Substantial Compliance with Other CAMA Requirements and Deadlines Applicable to the Sutton Plant

- N.C.G.S. § 130A-309-213(d)(1)b. (dam stability) - Although the CCR surface impoundments at the Sutton Plant were not subject to Dam Safety Order 16-01, the October 17, 2017 inspection report from NCDEQ indicates "the inspections revealed the dams to be well maintained and in good order." Similarly, the most recent annual inspection of the Sutton 1971 and 1984 Basin dams occurred on August 29, 2018; no concerns or issues were reported by NCDEQ that would necessitate issuance of a Notice of Deficiency or Notice of Violation.
- N.C.G.S. § 130A-309-211(c1) (provision of permanent water supply) - Although subject to the statutory requirement to establish permanent replacement water supplies for eligible households, it was determined that no connection was needed at the Sutton Plant. NCDEQ sent its concurrence with this determination to Duke Energy on August 10, 2018.

[^9]- N.C.G.S. § 130A-309-211(a) (comprehensive site assessment) - The comprehensive site assessment for the Sutton Plant was submitted to NCDEQ via cover letter dated August 4, 2015.
- N.C.G.S. § 130A-309-211(b) (corrective action plan) - The corrective action plan was submitted in two parts. Part 1 was dated November 2, 2015, and Part 2 was dated February 1, 2016. ${ }^{2}$


## Compliance with N.C.G.S. § 130A-309.216 (ash beneficiation projects)

North Carolina General Statutes Section 130A-309.216 requires Duke Energy to install and operate three large-scale coal ash beneficiation projects to produce reprocessed ash for use in the concrete industry. Duke Energy selected the Buck and H.F. Lee Plants prior to the January 1, 2017 deadline set out in subsection (a) of Section 130A-309.216, and selected the Cape Fear Plant prior to the deadline established under subsection (b) of Section 130A-309.216. Construction of the beneficiation unit at the Buck Plant began in November 2018 and will require 18 to 24 months to complete. Construction of the beneficiation unit at the H.F. Lee Plant is targeted to begin in February 2019, pending receipt of all required permits. Construction is expected to take approximately 18 to 24 months. Finally, construction of the beneficiation unit at Cape Fear is targeted to begin in May 2019, pending receipt of all required permits. Construction is expected to take approximately 18 to 24 months.

## Conclusion

As explained in the Variance Application, Duke Energy is committed to continuing to undertake best efforts to evaluate opportunities and implement commercially reasonable measures to meet the August 1,2019 closure deadline established by CAMA, including taking advantage of good weather days and continuing to move material into the landfill 60 hours or more per week, as weather allows. Nevertheless, Duke Energy respectfully requests that NCDEQ grant it a variance to extend until February 1, 2020, the deadline to close the CCR surface impoundments at the Sutton Plant.

[^10]If you have any questions, please do not hesitate to contact Randy Hart at randy.hart@duke-energy.com or (980) 373-5630. We appreciate your time and consideration.

Respectfully submitted,


George T. Famrick
Senior Vice President, Coal Combustion Products

> NCDEQ cc: William F. Lane (bill.lane@ncdenr.gov)
> Ed Mussler (ed.mussler@ncdenr.gov)

Duke Energy cc: ccprecords@duke-energy.com; Randy Hart

## Attachment C

The North Carolina Department of Environmental Quality (NCDEQ) posted Duke Energy's request for a variance and notice of public meeting and comment on NCDEQ's website on the following dates and at the following website addresses:

- December 14, 2018 NCDEQ Press Release: "Comment Period and Public Meeting on Duke Energy Request for Sutton Plant Variance to Extend Closure Deadline" available at https://deq.nc.gov/news/press-releases/2018/12/14/comment-period-and-public-meeting-duke-energy-request-sutton-plant
- December 14, 2018 NCDEQ Public Notices and Hearings: "Notice of Comment Period and Public Meeting on Duke Energy Request for Variance to Extend Sutton Closure Deadline" available at https://deq.nc.gov/news/events/notice-comment-period-and-public-meeting-duke-energy-request-variance-extend-sutton
- January 14, 2019 NCDEQ Public Notices and Hearings: "Public Meeting on Duke Energy Request for Variance on Sutton Closure Deadline" available at https://deq.nc.gov/news/events/public-meeting-duke-energy-request-variance-sutton-closuredeadline
- February 4, 2019 NCDEQ Public Notices and Hearings: "Comment Period Ends on Duke Energy Request for Variance on Sutton Closure Deadline" available at https://deq.nc.gov/news/events/comment-period-ends-duke-energy-request-variance-sutton-closure-deadline

Attachment D

SuttonVariance - 12/14/2018 4:14:03 PM Comment Period: Duke requests Sutton variance to extend closure deadline

Created by: Sharon Martin

## Comment Period：Duke requests Sutton variance to extend closure deadline

## Copy of Email

Roy Cooper，Governor


Michael S．Regan Secretary

| Release：IMMFDIATE | Contact Megan Thorpe |
| :--- | :--- |
| Date：December 14， 2018 | Phone： $919-707-8670$ |

## Comment Period：Duke requests Sutton Plant variance to extend closure deadine

RALEIGH－The North Carolina Deparment of Environmental Quality today announced a public comment period for Duke Energy＇s request for variance to extend the CAMA closure deadline for their Sutton Plant by six months．When the comment period concludes on February 4，2019，DEQ will consider that input and then make a decision whether to grant Duke＇s request．

View Duke＇s request here：deq．nc．goviSutton－Variance．
A public meeting on this request will take place at Cape Fear Communty College on January 14，2019．The public and media are invited to attend and comment on Duke＇s request．

Writen comments on the request for variance can be sent to the attention of Ellen Lorscheider， 1646 Mail Service Center，Raleigh． N．C．27699－1646．

Comments may also be submitted by email to：publiccomments ancdenr＿gov．Please inchide the term＂Sutton Variance Request＂in the email＇s subject tine．The deadline for submitting comments is Feb．4， 2019.

WHAT：Public Meeting on Duke＇s request for Variance at Sutton Coal Ash facility
WHEN：January 14，2019，at 6：00 pm
WHERE：Cape Fear Community College
502 N．Front St．，
Wilnington，N．C．， 28360

Website：httpp：／www．incdent gov：

## Email Details

Subject
Comment Period: Duke requests Sutton variance to extend closure deadline
Sender Name
Megan Thorpe
Sender Email
Megan.Thorpe@ncdenr.gov
Created:
Fri, 14 Dec 2018 16:27:36 Eastern Standard Time
Submitted:
Fri, 14 Dec 2018 16:27:37 Eastern Standard Time
Sent:
Fri, 14 Dec 2018 16:27:37 Eastern Standard Time
Recipient Lists
Contacts:
Asheville Media; DENR Internal; DENR PIOs; Division of Waste Management; Fayetteville Media; Interested Parties; Little Washington; Louise; Major Media; Mooresville; Raleigh Media; Wilmington; Winston-Salem Media

## List of Media Contact Recipients

Name Outlet \begin{tabular}{rrr}

Status \& | Llinks |
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| Mr. Michael Abernathy | The Times News Burlington, NC | Not Opened | 0 |
| Michael Abraczinskas |  | Not Opened | 0 |
| Sarah Adair |  | Opened | 0 |
| Cathy Akroyd |  | Not Opened | 0 |
| Jennifer Allen |  | Opened | 0 |
| Kerri Allen |  | Opened | 0 |
| Greg Andeck |  | Not Opened | 0 |
| David Anderson |  | Opened | 0 |
| AP DESK |  | Not Opened | 0 |
| AP Raleigh |  | Not Opened | 0 |


| WSOC TV Assignment Desk | Not | 0 |
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| Nancy Avery | Opened |  |


| Cal Bryant Editor | Roanoke-Chowan News-Herald |  | 0 |
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| Ron Bryant |  |  | 0 |
| Tim Buckland |  |  | 0 |
| Kevin Burk |  | $\begin{array}{r} \text { Not } \\ \text { Opened } \end{array}$ | 0 |
| Jenny Callison | Wilmington Journal | Not Opened | 0 |
| Scott Calvert |  | Not Opened | 0 |
| John Camp | ABC 11 Eyewitness News Extra - WTVD-TV | Not Opened | 0 |
| Christine Carroll Editor | Richmond County Daily Journal | Not Opened | 0 |
| Chrysta Carroll |  | Not Opened | 0 |
| Chrysta Carroll | Bladen Journal | Not Opened | 0 |
| Gerard Carroll |  | Opened | 0 |
| Charles Carter |  | Opened | 0 |
| Tony Caudle |  | $\begin{array}{r} \text { Not } \\ \text { Opened } \end{array}$ | 0 |
| Dan Charles |  |  | 0 |
| Sterling Cheatham |  |  | 0 |
| Catherine Clabby |  | Not <br> Opened | 0 |
| Cobey Culton |  | $\begin{array}{r} \text { Not } \\ \text { Opened } \end{array}$ | 0 |
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| Chris Coudriet |  | $\begin{array}{r} \text { Not } \\ \text { Opened } \end{array}$ | 0 |
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| Michael Cramer |  | Not Opened | 0 |
| Mike Cronin |  | Not Opened | 0 |
| Valerie Crowder |  | Opened | 0 |
| Linda Culpepper |  | Not Opened | 0 |
| Emery Dalesio |  | $\begin{array}{r} \text { Not } \\ \text { Opened } \end{array}$ | 0 |
| Amin Davis |  | Not <br> Opened | 0 |
| Candice Davis HR | The Citizen Times | Not Opened | 0 |
| Mike Davis |  | Opened | 0 |
| Shannon Deaton |  | Not <br> Opened | 0 |
| John Deem Editor | Statesville Record \& Landmark | Not Opened | 0 |
| Marion Deerhake |  | Opened | 0 |
| Debra Derr |  | Opened | 0 |
| Donald Dixon |  | Opened | 0 |
| Tyler Dukes |  |  | 0 |
| Stephanie Ebbs |  | Opened | 0 |
| Beth Eckert |  |  | 0 |
| Charlotte Edens |  | Opened |  |
| Charles Elam |  | Not Opened |  |


| Kelsey Ellis |  | Not Opened | 0 |
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| Quintin Ellison Editor | Sylva Herald \& Ruralite | Not Opened | 0 |
| Kimberly Fail |  | Not Opened | 0 |
| Travis Fain |  | Not Opened | 0 |
| Mr. Travis Fain Statehouse Reporter | WRAL-TV | Not <br> Opened | 0 |
| Crystal Feldman |  | Not Opened | 0 |
| Jim Fletchner |  | Not Opened | 0 |
| Mr. Steve Garland Advertising Sales Manager | Taylorsville Times | Not Opened | 0 |
| Mitch Gillespie |  | Opened | 0 |
| Steve Ginley |  | Not Opened | 0 |
| Gail Goodman |  | Opened | 0 |
| Larry Goodwin |  | Opened | 0 |
| Leslie Griffith |  | Opened | 0 |
| Vaughn Hagerty |  | Opened | 0 |
| Christina Haley |  | Opened | 0 |
| Lindsey Hallock |  | Opened | 0 |
| Ann Hardy |  | Opened | 0 |
| Cris Harrelson |  | Not Opened | 0 |
| Maria Hegsted |  | Not Opened | 0 |



| Donna King |  | Not Opened | 0 |
| :---: | :---: | :---: | :---: |
| Richard King |  | Not Opened | 0 |
| Jamie Kritzer |  | Not Opened | 0 |
| Ms. Laura LaFleur |  | Not Opened | 0 |
| Ms. Laura LaFleur |  | Not Opened | 0 |
| Laura LaFleur |  | Not Opened | 0 |
| Bill Lane |  | Opened | 1 |
| Coby LaRue <br> Publisher | The Alleghany News | Opened | 0 |
| Leigh Lawrence |  | Opened | 0 |
| Teresa Laws General Manager | Ashe Post \& Times (West Jefferson, NC) | Opened | 0 |
| Dr. Suzanne Lazorick |  | Opened | 0 |
| Kristine Leggett |  | Not Opened | 0 |
| Connie Leinback <br> Editor/ Publisher | Ocracoke Observer | Not Opened | 0 |
| Laura Leonard |  | Opened | 0 |
| Laura Leslie | WRAL-TV | Opened | 0 |
| Jim Lister |  | Opened | 0 |
| Melissa Long |  | Not Opened | 0 |
| Ellen Lorscheider |  | Not Opened | 0 |
| John Lucey |  | Opened | 0 |


| Janet Mack |  | Not Opened | 0 |
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| Chris Mackey |  | Not Opened | 0 |
| Angela Marshall |  | Not Opened | 0 |
| Lance Martin Editor | RRSpin (Roanoke Rapids, NC) | Not <br> Opened | 0 |
| Sharon Martin |  | Opened | 0 |
| Lynn Matheson |  | Not Opened | 0 |
| Tom Mayor Editor | Mountain Times | Not Opened | 0 |
| Jim McCleskey |  | Opened | 0 |
| Mr. Gareth McGrath Local Editor | StarNews | Not Opened | 0 |
| Stanley Meiburg |  | Opened | 0 |
| Anderson Miller |  | Not Opened | 0 |
| Eric Millsap Regional Editor | Hickory Daily Record | Not Opened | 0 |
| Beau Minnick |  | Not Opened | 0 |
| Jeff Moore |  | Opened | 0 |
| jerome Moore |  | Opened | 0 |
| Molly Moore |  | Not Opened | 0 |
| Jordan Morley |  | Not Opened | 0 |
| James Morrisson |  | Not Opened | 0 |
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| Gary Morrow |  | Opened | 0 |
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| Carolyn Moser |  | Opened | 0 |
| Katie Mosher |  | Not | 0 |
| Communications Director |  | Opened |  |
| Jennifer Mundt |  | Opened | 0 |
| Bridget Munger |  | Opened | 0 |
| Mr. John Murawski The News \& Observer |  | Not | 0 |
| Business Reporter |  | Opened |  |
| Ed Mussler |  | Opened | 1 |
| John Nichols |  | Not | 0 |
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| John Nicholson |  | Opened | 0 |
| Sheila Nicholson |  | Not | 0 |
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| Joe Nolan |  | Not | 0 |
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| North State Journal |  | Not | 0 |
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| Shrikar Nunna |  | Opened | 0 |
| Alaina Oakes |  | Not | 0 |
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| Nick Ochsner |  | Opened | 0 |
| Governors Office |  | Not | 0 |
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| Elizabeth Ouzts |  | Opened | 0 |
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| Sarah Ovaska-Few |  | Not | 0 |
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| Jenni Owen |  | Not Opened | 0 |
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| Jodie Owen |  | $\begin{array}{r} \text { Not } \\ \text { Opened } \end{array}$ | 0 |
| Tim Owens |  | Not Opened | 0 |
| Charles Petersen |  | Opened | 0 |
| Kendra Pierre-Louis |  | Opened | 0 |
| Michael Pjetraj |  |  | 0 |
| Mark Plemmons Editor | Independent Tribune | $\begin{array}{r} \text { Not } \\ \text { Opened } \end{array}$ | 0 |
| Ely Portillo |  | Opened | 0 |
| Adam Powell Editor | The News of Orange County | Opened | 0 |
| Kevin Powell General Manager | Tryon Daily Bulletin | $\begin{array}{r} \text { Not } \\ \text { Opened } \end{array}$ | 0 |
| Tammy Proctor |  | Opened | 0 |
| Candace Prusiewicz |  | Not Opened | 0 |
| Bill Puette |  |  | 0 |
| Rachael Raney <br> Publisher | The Sanford Herald | Opened | O |
| Michael Regan |  | Not Opened |  |
| Regina |  | Not <br> Opened |  |
| William Richardson |  | Not Opened |  |


| William Richardson |  | Not Opened | 0 |
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| Mr. Deon Roberts Business Reporter | The Charlotte Observer | Not Opened | 0 |
| Gary Robertson |  | Not Opened | 0 |
| Fritz Rohde |  | Not <br> Opened | 0 |
| Kirk Ross |  | Not Opened | 0 |
| Krik Ross |  | Opened | 0 |
| Albert Rubin |  | Not Opened | 0 |
| Leslie Rudd |  | Not Opened | 0 |
| Editor Sanford Herald |  | Not Opened | 0 |
| News Desk Sanford Herald |  | Not Opened | 0 |
| Michael Scott |  | Not Opened | 0 |
| Eliza Sease |  | Not Opened | 0 |
| Jamie Shell Editor | Avery Journal-Times | Not Opened | 0 |
| Christy Simmons |  | Opened | 1 |
| Butch Smith |  | Not Opened | 0 |
| Erin Smith |  | Opened | 0 |
| Janet Joye Smith |  | Not Opened | 0 |


| Patricia Smith | Not <br> Ruth Ravitz Smith <br> Opened |  |
| :--- | ---: | ---: |
| Tricia Smith | Opened | 0 |
| John D. Solomon | Not | 0 |
| Mike Soraghan | Opened |  |

## Comment Period: Duke requests Sutton variance to extend closure deadline

| Phillip Tarte |  | Opened | 0 |
| :---: | :---: | :---: | :---: |
| Jeff Thompson |  | Opened | 0 |
| Joyce Thompson <br> Administration | The Times News Burlington, NC | Not Opened | 0 |
| Megan Thorpe |  | Not Opened | 0 |
| William Toler Editor | The Anson Record | Not Opened | 0 |
| Mike Trainor |  | Not Opened | 0 |
| WBTV TV | WBTV-TV | Opened | 0 |
| WILM TV | WILM-TV | Not Opened | 0 |
| WSPA TV | WSPA-TV | Opened | 0 |
| WWAY TV | WWAY-TV | Not Opened | 0 |
| Therese Vick |  | Not Opened | 0 |
| Curt Vincent <br> General Manager/ Editor | Bladen Journal | Not Opened | 0 |
| W. Curt Vincent Editor | The Laurinburg Exchange | Not Opened | 0 |
| Toby Vinson |  | Opened | 0 |
| Adam Wagner |  | Opened | 1 |
| Adam Wagner |  | Not Opened | 0 |
| Glen Walker |  | Not Opened | 0 |
| Lisa Wall <br> Editor | The News-Herald (Morganton, NC) | Not Opened | 0 |

## Comment Period: Duke requests Sutton variance to extend closure deadline



## Attachment E

# AFFIDAVIT OF PUBLICATION 

## STATE OF NORTH CAROLINA

COUNTY OF NEW HANOVER
NOTICE FOR PUBLIC MEETNG AND
PUBLIC COMMENT PERIOD
ON REQUEST FOR VARIANCE TO
EXTEND CLOSURE DEADLINE TO
Duke Energy Sutton Plant
Duke Energy has made a request to the North Carolina Department of Environmental Quality (DEO) for a variance to extend the Coal Ash Management Act closure deadline by six months for the sutton coal Ash facility located at 801 Sutton Steam Plant Road, Wilmington, NC 28401.

This notice serves as a Notice of Public Meeting and Opportunity for Public Comment for this request The public meeting will be held at 6 pom. jan 14 2019 at Cape pear Community College, McLeod Building Room S-002, 411 Front Street, Wilmington, N.C.
A copy of the variance request is posted on the DEQ website at deq.nc.gov/Sutton-Variance. Interested persons are invited to provide comment on the variance request. Written comments may be sent to: Ellen Lorscheider
1546 Mail Service Center
Raleigh, North Carolina 276991646 Phone/Fax: (919)707-8200
The comment period began on Dec. 14, 2018 and ends on feb. 4 , 2019 Written comments may also be submitted during the public commont period via email at the following address:
publiccomments@ncdenr.gov.
Please type "Sutton Variance Request" in the subject line. After weighing all relevant comments received, DEQ will decide whether to grant the request.

## Jarimy Springer

Who, being duly sworn or affirmed, according to the law, says that he/she is

## Accounting Specialist

of THE STAR-NEWS, a corporation organized and doing business under the Laws of the State of North Carolina, and publishing a newspaper known as STAR-NEWS in the City of Wilmington

## NOTICE FOR PUBLIC MEETING AND PUBLIC COMMENT PERIOD ON REQUEST FOR VARLANCE TO EXTEND CLOSURE DEADLINE Duke Energy Sutton Plant Duke Energy has made a request to the North Carolina Department of Environmental Quality DEQ for a variance to extend the Coal

was inserted in the aforesaid newspaper in space, and on dates as follows:
12/20 Ix, s12/27 lx, s1/3 Ix

And at the time of such publication Star-News was a newspaper meeting all the requirements and qualifications prescribed by Sec. No. 1-597 G.S. of N.C.



Title: Accounting Specialist
Sworn or affirmed to, and subscribed before me this $\square$ February , A.D., 2019

In Testimony Whereof, I have hereunto set my hand and affixed year aforesaid.


My commission expires $\qquad$ day of Nous. , 2023

Upon reading the aforegoing affidavit with the advertisement thereto annexed it is adjudged by the Court fifttat said publication was duly and properly made and that the summons has been duly and legally served on the defendants).

This $\qquad$ day of $\qquad$

## Attachment F



## Attachment G

HEARING OFFICER'S SPEECH January 14, 2019
I would like to call this public hearing to order.
My name is Jim Gregson. I am the Deputy Director of the Division of Water Resources, Department of Environmental Quality, for the State of North Carolina.

This hearing is being held in accordance with North Carolina General Statute 130A-309.214 in response to an application on the part of Duke Energy for a variance to extend the deadline to close the Sutton Plant CCR Surface Impoundments, in accordance with North Carolina General Statute 130A-309.215.

On November 16, 2018 the North Carolina Department of Environmental Quality received an application from Duke Energy for Variance to Extend the Deadline to Close the Sutton Plan CCR Surface Impoundments. Additional information regarding the application was received from Duke Energy on December 14, 2018.

The application requests that the Department issue a variance to extend the CAMA closure deadline for the Sutton Plant CCR Impoundments by six months; from August 1, 2019 to February 1, 2020.
The Department reviewed the submitted application and in accordance with the law;

- Opened a public comment period that started on December 14, 2018. The public comment period will end on February 4, 2019 at 5:00 PM,
- Announced this public hearing would be held to gather public comment, and
- Provided public notice in the Wilmington area newspapers [Megan, please edit]

In addition to comments gathered here tonight, written comments on the request for variance can be sent to the attention of;

Jim Gregson
1646 Mail Service Center
Raleigh, N.C. 27699-1646.
Comments may also be submitted by email to:
publiccomments@ncdenr.gov
Please include the term "Sutton Variance Request" in the email's subject line. The deadline for submitting comments is Feb. 4, 2019.

As hearing officer, it is my responsibility to listen to your comments and assist in the preparation of a report, which summarizes the information presented tonight and provides recommendations on the request for a variance. To aid in preparing the report, audio of tonight's hearing is being recorded, In addition, I ask that you provide me with a written copy of your comments if possible. Comments should be relevant to the issue of the request for a Variance to Extend the Deadline to Close Sutton Plant CCR Surface Impoundments to be considered in the Department's final decision.

At this time, I will provide an overview of how the hearing will be conducted:

1. I will call on speakers in the order they signed up.
2. Each speaker will be limited to 5 minutes.
3. There will be no cross-examination of speakers or division staff.
4. All public comments will be directed to me as the hearing officer.
5. I ask that everyone respect the right of others to speak without interruption.

At this time, I will give a brief summary of the closure requirements for the coal ash impoundments at Sutton Steam Station. Section 3(b) of the Coal Ash Management Act, Session Law 2014-122 deemed the coal combustion residuals surface impoundments at Sutton Steam Station as high risk. Sections 3(b)(4) and 3(c) of Session Law 2014-122 further required that the surface impoundments be closed by excavation no later than August 1, 2019.

The Coal Ash Management Act allows for a variance in the deadlines imposed under the law. The General Assembly authorized the Secretary of the Department of Environmental Quality to grant a variance on the basis that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public. The owner of the impoundment must provide the site-specific circumstances that support the need for the variance. The owner must also provide information showing that the owner has substantially complied with all other requirements and deadlines established by CAMA, that the owner has made good faith efforts to comply with the applicable deadline, and that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public. The application by Duke Energy requests an extension of 6 months to complete the closure of the coal combustion residuals surface impoundments at Sutton Steam Station.

The variance request cites a number of issues and circumstances that has resulted in Duke Energy's inability to complete the excavation and closure of the impoundments at Sutton Steam Station. These include delays due to Hurricane Matthew in 2016, permit delays for the on-site landfill, weather delays in 2017, record rain in July of 2018, and Hurricane Florence in September 2018.

After review of this variance request, DEQ's preliminary evaluation is that a 3 to 6 month extension is appropriate, and is here tonight to take comment on the potential granting of the variance.

Now, we will hear from audience members who wish to speak in the order that they registered.
The department may only consider technical and scientific information related to the request for Variance to Extend Deadline to Close Sutton Plant CCR Surface Impoundments when making recommendations the variance. Other issues concerning this facility, or the issue of coal combustion residuals as a whole are beyond the scope of this public hearing.

When your name is called, please come to the podium, state your name and indicate any group you may be representing or affiliated with. To ensure that we hear from all who wish to speak, there will be a 5minute time limit for providing comments. Staff will keep track of the time and raise a sign to indicate when you have 1-minute remaining and when you have 30 seconds remaining to finish your comments. Please keep your comments concise and limit them to the issue of the variance request for the deadline to complete the excavation of coal combustion residuals from impoundments at the Sutton Steam Station. I appreciate your cooperation in complying with these requests.

## (Call out names.)

That concludes tonight's line-up of speakers. Staff will be available for questions or comments after the hearing.

I would like to thank you all for attending tonight's hearing. Your input is greatly appreciated.
Remember that you will have until 5:00 pm on Monday, February $4^{\text {th }}, 2019$ to submit comments on this variance request.

After careful study of all comments received and the requirements of state laws, the department will make a decision on this variance application for the Sutton CCR Impoundments.
This hearing is closed.

## Attachment H

| From: | Louanne Kaye [louannekaye@ymail.com](mailto:louannekaye@ymail.com) |
| :--- | :--- |
| Sent: | Friday, February 01, 2019 1:47 PM |
| To: | SVC_DENR.publiccomments |
| Subject: | [External] Coal Ash Wilmington area |

Sent:
To:
Subject:

Louanne Kaye [louannekaye@ymail.com](mailto:louannekaye@ymail.com)
Friday, February 01, 2019 1:47 PM
[External] Coal Ash Wilmington area

CAUTION: External email. Do not click links or open attachments uniess you verify. Send all suspicious email as an attachment to

## This clean up has been prolonged for TOO long

## Louanne Kaye Wilmington

| From: | Bruce Santhuff [Bruce@Spaloo.com](mailto:Bruce@Spaloo.com) |
| :--- | :--- |
| Sent: | Saturday, January 26, 2019 12:07 PM |
| To: | SVC_DENR.publiccomments |
| Subject: | [External] Sutton Variance Request |

CAUTION: External email Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to

Not sure why Duke would need more than 5 years to clean up the coal ash ponds. What did they do for the last 4 years? It was a mistake that these coal ash basins were located in flood-prone zones and water way areas to begin with! What is the guarantee that they will not ask for another extension or that more coal ash will contaminate our water system before the next hurricane season?

Thank you,
Bruce
Bruce Santhuff
$\square$ Virus-free. www.avast.com

## Gregson, Jim

## From:

Sent:
To:
Subject:
Janet Rodrick [jan.rodrick@gmail.com](mailto:jan.rodrick@gmail.com)
Friday, January 25, 2019 4:00 PM
SVC_DENR.publiccomments
[External] Duke Energy Variance request

CAUTION: E

Good Morning,
Duke Energy should not be granted any variances that would delay or prevent them from having to clean up coal ash and more right away.
It is a crying shame that they have even tried to make thus request and that it is up for consideration!!!
Where is the consideration for the citizens/taxpayers to our right for clean water, clean air, and to have companies that don't follow the legal rules to be punished!!!???
Please consider the future for all of us that will be living with this disgusting and disgraceful mess that Duke Energy has
knowingly created!
Just because you may not be receiving many letters of complaint does not mean that the citizens are not upset about having their water\& air quality be destroyed, Rather they are busy trying to live their lives in hope that our elected officials will ALWAYS do the right thing by its people!
PLEASE DO NIT GRANT SNY MIRE FAVORS TO DUKE ENERGY!
They must be held accountable right away
Thank you for your consideration,
Sincerely
Janet Rodrick

From:

## Sent:

To:
Subject:
angela ohare [ohare4ts@hotmail.com](mailto:ohare4ts@hotmail.com)
Friday, January 25, 2019 3:26 PM
SVC_DENR.publiccomments
[External] Sutton variance request.

CAUTION: External email, Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to

Please see to it that these coal stores get removed and cleaned up before damage is caused to our waterways and
environment. Thank you.
Sent from Mail for Windows 10

From:
Sent:
To:
Cc:
Subject:

Karen Hamilton [khamilton2188@yahoo.com](mailto:khamilton2188@yahoo.com)
Friday, January 25, 2019 9:42 AM
SVC_DENR.publiccomments
Karen Hamilton
[External] Fwd: Duke energy clean up Sutton Variance Request

CAUTION:

Sent from my iPad
Begin forwarded message:
From: Karen Hamilton [khamilton2188@yahoo.com](mailto:khamilton2188@yahoo.com)
Date: January 25, 2019 at 9:38:25 AM EST
To: publiccomments@ncdenr.gov
Subject: Duke energy clean up
Duke energy needs to clean up the coal ash in North Carolina. They have had five years to do this and have failed to complete the project. Clean water and a healthy environment for our children and grandchildren are imperative. Duke Energy's money and political power in this state should not excuse them from these detrimental conditions they continue to allow.
I am just a concerned citizen and not affiliated with any group.
Karen Hamilton 2188 Scotts Hill Loop Rd Wilmington, NC 28411 Sent from my iPad

From:
Sent:
To:
Subject:

Karen Hamilton [khamilton2188@yahoo.com](mailto:khamilton2188@yahoo.com)
Friday, January 25, 2019 9:38 AM
SVC_DENR.publiccomments
[External] Duke energy clean up

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov[mailto:report.spam@nc.gov](mailto:report.spam@nc.gov)

Duke energy needs to clean up the coal ash in North Carolina. They have had five years to do this and have failed to complete the project. Clean water and a healthy environment for our children and grandchildren are imperative. Duke Energy's money and political power in this state should not excuse them from these detrimental conditions they continue to allow.
I am just a concerned citizen and not affiliated with any group.
Karen Hamilton 2188 Scotts Hill Loop Rd Wilmington, NC 28411 Sent from my iPad

## From:

Sent:
Sue Skoda [sue.mort1228@yahoo.com](mailto:sue.mort1228@yahoo.com)
To:
Subject:

Thursday, January 24, 2019 4:01 PM
SVC_DENR.publiccomments
[External] Sutton Variance Request

CAUTION:

Hello Ellen Lorscheider,
I read the article "Duke could get coal ash extension" in the Star News on January 16. I had no idea and there was no advertisement regarding the Monday's hearing open to the public.

I am writing to comment that the extension should NOT be granted to February 1 of 2020. The reasons being that Duke had 5 years, under the 2014 Coal Ash Management Act, to close the "high priority" basins at Sutton and did not do so in a planned timely or emergent manner. They are well aware that our state is in the hurricane belt and major storms would impact this clean up at any time and yet, they waited until the storms came.

It's unfortunate that the weather was not cooperative with two hurricanes but, the longer these basins are left, the more contamination of our water, air and overall environment. Yes, another hurricane can impact us again this season and that is why these closures need to happen as soon as possible. This should not be debatable but closures mandated for the safety and welfare of our people and environment.

I strongly encourage the DEQ to examine that this variance request should not be allowed. Who can say that they will not ask for another extension in February 2020 thus again, risking the lives, health and welfare of everyone.

Thank you for the opportunity to express my strong health and community values. I hope that DEQ will do the right thing for the safety of its people and not a corporation.

Sue Skoda, RN, MSN


[^0]:    

[^1]:    ${ }^{1}$ North Carolina General Statutes Section 130A-309.203 directs NCDEQ to expedite permit reviews for permits necessary to complete basin closure activities under CAMA-60 days after the comment period on the draft permit decision closes.

[^2]:    ${ }^{4}$ In fact, new rainfall records were set in each of the months of May and September 2018. See htips $/ /$ w2. weather gov/climate/index.php?wo $=\mathrm{ilm}$.

    5 The flooding Cape Fear River triggered the shutdown of the entire plant, including its natural gas-fired operations-and evacuation of plant staff. The storm resulted in 1.8 million Duke Energy customers losing power.

[^3]:    ${ }^{6}$ Twenty-six of these basins are also regulated under the federal CCR rule.

[^4]:    ${ }^{1}$ North Carolina General Statutes Section 130A-309.215(a1) provides that Duke Energy may not apply for a variance "earlier than one year prior to the applicable deadline."

[^5]:    ${ }^{2}$ Outside of CAMA, Duke Energy submitted a Sutton comprehensive site assessment supplement dated August 31, 2016, and an updated comprehensive site assessment dated January 30, 2018.

[^6]:    ${ }^{1}$ North Carolina General Statutes Section 130A-309.203 directs NCDEQ to expedite permit reviews for permits necessary to complete basin closure activities under CAMA-60 days after the comment period on the draft permit decision closes.

[^7]:    ${ }^{2}$ Trucking and treating leachate is the alternate method of managing leachate, but the extent to which this can be done is dependent on the capacity of local vendors and municipalities. The limit is approximately 40,000 gallons per day, which would allow for only one landfill cell to be open at a time.
    ${ }^{3}$ Although the operation of three dredges was evaluated, the Company rejected this option due to safety concerns associated with the number of cables, anchors, and pipes that would be introduced.

[^8]:    4 In fact, new rainfall records were set in each of the months of May and September 2018. See

[^9]:    ${ }^{1}$ North Carolina General Statutes Section 130A-309.215(a1) provides that Duke Energy may not apply for a variance "earlier than one year prior to the applicable deadline."

[^10]:    ${ }^{2}$ Outside of CAMA, Duke Energy submitted a Sutton comprehensive site assessment supplement dated August 31, 2016, and an updated comprehensive site assessment dated January 30, 2018.

