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Secretary

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MEMORANDUM

April 22, 2016

To: Secretary Donald R. van der Vaart

From: Jon Risgaard
Division of Water Resources
Central Office

Subject: Meeting Officer's Report and Recommendations
Coal Ash Impoundment Classification(s)
Marshall Steam Station

On March 29, 2016, I served as meeting officer for a public meeting held at Catawba Valley Community College in Hickory, NC. The purpose of the public meeting was to allow the public to comment on the proposed risk classification for coal combustion residuals impoundments at the Marshall Steam Station.

In addition to listening to oral comments at the public meeting, I have reviewed all written comments received during the public comment period. In preparing this report I have considered all of the public comments in making a recommendation on the proposed risk classification for the Marshall Steam Station.

This report has been prepared using the following outline:

- I. History/Background
- II. March 29, 2016 Public Meeting and Oral Comments Summary
- III. Written Public Comments Summary
- IV. Attachments

I. History/Background

Under the historic Coal Ash Management Act (CAMA) of 2014, all coal ash impoundments in North Carolina are required to be closed. The deadlines for closure depend on the classification of each impoundment as low, intermediate, or high. CAMA requires the Department of Environmental Quality, or DEQ, to make available to the public the initial draft proposed classifications no later than Dec. 31, 2015. These draft proposed classifications are based on the information available to the department as of December 2015. They are of critical importance because of the environmental impact and closure costs associated with each classification. Impoundments classified as intermediate or high must be excavated at a potential cost of up to \$10 billion for all impoundments, while environmentally protective, less costly options are available for low priority impoundments. Closure costs could be passed on to the ratepayer. It is also important to note that these are not the final proposed classifications. After the release of the draft proposed classifications, CAMA requires the following process:

- DEQ must make available a written declaration that provides the documentation to support the draft proposed classifications within 30 days, which will be made available on the DEQ website. The written declaration will provide the technical and scientific background data and analyses and describe in detail how each impoundment was evaluated.
- DEQ will publish a summary of the declaration weekly for three consecutive weeks in a newspaper in each county where a coal ash facility is located.
- The declaration will be provided to each local health director and made available in a library in each county where a coal ash facility is located.
- The summary of the declaration will be provided to each person who makes a request.
- A public meeting will be held in each county where a coal ash facility is located.
- Following completion of the public meetings and the submission of comments, the department will consider the comments and develop final proposed classifications.

Subsequent to the issuance of DEQ's initial draft proposed classifications, fourteen public meetings were held across the state to receive oral comments from the public in addition to the open public comment period that ended on April 18, 2016. Meetings were held in each County in which a site is located. DEQ will consider all public comments received and issue its final classification for each impoundment by May 18, 2016.

II. March 29, 2016 Public Meeting and Oral Comments Summary

Approximately 95 people attended the public hearing, including staff members of the DEQ and the meeting officer. A total of 85 individuals completed sign-in forms at the meeting (Attachment I). As meeting officer, I provided opening comments and Steve Lanter, hydrogeologist from the Central Office, presented a brief presentation on the proposed risk classification for the Marshall Steam Station.

Thirty-four individuals registered before the meeting to make comments and no additional individuals made comments after the 34 that registered were finished speaking. Speakers were

given five minutes for initial presentations and additional time was provided after everyone that registered to speak was finished. The list of speakers is included as Attachment II. The following is a summary of oral comments received at the public meeting by topic (in no particular order):

- **Air Quality** – Citizens expressed concerns about fly ash from the sites and the possible health concerns.
- **Beneficial Reuse** – There was a suggestion to not beneficially reuse coal ash due to its toxicity. A citizen noted that residents in the area have used coal ash as fill on their properties and their neighbor used lots of coal ash to fill in their driveway and what potential health risks are posed by this use.
- **Costs** – Most comments asked that Duke not pass on the costs of cleanup to the ratepayers. One citizen was willing to pay a little extra on their electric bill if it meant cleaning up the site. Another comment suggested that Duke look at a cost/benefit analysis for future lawsuits if they do not clean up the site.
- **Dam Safety** – Most of the citizens that commented were concerned about the possible failure of the dam. One citizen noted that the site has minimal security and a terrorist could easily penetrate the site and cause a negative impact to the site or the dam.
- **Dust** – Two people commented on dust. Both people mentioned that fly ash dust from the site was getting on their cars and they were both concerned with the health effects of breathing it in.
- **Economics** – All of the comments revolved around the possible negative economic impacts that could occur from a spill at the site.
- **Excavation** – Several of the comments requested that the coal ash be removed and placed in lined storage away from waterways. A few comments suggested that cap-in-place is equal to pollute-in-place. It was also noted that Duke's report suggests that removal of the ash would be the most protective.
- **Groundwater Assessment** – Several commenters pointed out that the coal ash is sitting in the groundwater table and capping-in-place would not be adequate as a result. One of the commenters noted that the EPA coal ash rule states that coal ash cannot sit within 5 feet of the groundwater table. Several citizens suggested that Duke manipulated the models by creating no-flow boundaries between the residents and pits; considering bedrock to be impermeable; and predicting that the ash would remain dry. One citizen questioned Duke's consultants since they were hired and paid for by Duke. Several comments were about the levels of contaminants found in Duke's monitoring wells. One citizen suggested that Duke may be storing radioactive waste at the site. One citizen suggested that groundwater flow is unpredictable and could be flowing upstream. One citizen commented on the frequency of Duke's monitoring and suggested that it should be more frequent.
- **Health Issues** – Many citizens spoke of their own personal health issues and/or health issues of others in the area that they suggest may be a result of their drinking water.
- **Home Values** – One citizen was concerned about the value of their home declining due to contamination found in their well.
- **Risk Classification** – All of the commenters wanted the site classified as intermediate or high.
- **Surface Water** – There was a concern about the fish consumption warnings for the lake. One citizen noted that there are three coal ash sites within a 29-mile span of the river and

they are upstream of drinking water supplies and therefore they pose the greatest risk to the 1 million users downstream.

- **Not Applicable** – A representative from Duke Energy spoke about Duke’s ongoing efforts to close basins around the state. The remainder of the comments were not relevant to the risk classification for the site.

III. Written Public Comment Summary

In addition to the public meeting, DEQ received written comments during the public comment period. DEQ received 13 comments hand-submitted during the public meeting, 19 letters sent via United States Postal Service mail, and 568 comments received via email. Written comments received during the public comment period include the following summarized by topic (in no particular order):

- **Air Quality** – Citizens expressed concerns about fly ash from the sites and the possible health concerns.
- **Beneficial Reuse** – A member of the National Ash Management Advisory Board presented information that suggests that the aggressive closure schedules preclude the pursuit of beneficial reuse opportunities. Several citizens were concerned about the coal ash that their neighbors used to construct their driveways. One citizen suggested that Duke focus on providing coal ash to cement companies for use.
- **Costs** – Most comments asked that Duke not pass on the costs of cleanup to the ratepayers.
- **Dam Safety** – Most of the citizens that commented were concerned about the possible failure of the dam due to its high ranking.
- **Dust** – Two people commented on dust. Both people mentioned that fly ash dust from the site was getting on their cars and they were both concerned with the health effects of breathing it in.
- **Economics** – All of the comments revolved around the possible negative economic impacts that could occur from a spill at the site.
- **Environmental Justice** – A research assistant at Duke University submitted their report on the impact of the coal ash ponds on low-income and communities of color, as well as cumulative impacts from nearby emitting facilities. A representative from the Southern Alliance for Clean Energy provided a petition that asks that Duke Energy be required to remove all of the coal ash at each of its 14 power plants sites to dry, lined storage away from waterways and groundwater, and from our most vulnerable communities such as low-income communities or communities of color.
- **Excavation** – The National Ash Management Advisory Board suggested other alternatives to excavation such as capping-in-place, monitored natural attenuation, slurry cutoff walls, in-place stabilization/fixation, pumping wells, permeable reactive barriers and volume reduction of impounded ash through escalation of beneficial use. They also suggested that the additional risk imposed by excavating and transporting ash from one location to another can exceed the potential risk posed by leaving the ash in place. Most of the citizen comments requested that Duke excavate the ash and place it safe, dry, lined storage away from waterways. A signed petition from the North Carolina Conservation Network asked that State government leaders and state regulators take appropriate action to require the

removal of coal ash out of all unlined pits and into safer, lined storage away from our waterways and ensure that coal ash ponds and landfills do not put at risk the safety, health, and economic well-being of downstream communities, receiving communities, and communities along transportation routes.

- **Groundwater Assessment** – The National Ash Management Advisory Board stated that licensed engineers and geologists, with support from health and environmental risk assessors, have determined that there is no imminent hazard and that those same professionals have determined that existing conditions at these sites do not present a substantial likelihood that death, serious illness, severe personal injury, or a substantial endangerment to health, property, or the environment will occur. Numerous comments stated that Duke has detected concentrations of pollutants such as boron and sulfate above the standards and some of these constituents are associated with negative health effects. Several comments focused on the need to test groundwater at depths similar to the private wells. Several comments suggested that cap-in-place would not be an adequate solution since the coal ash sits in the groundwater table.
- **Health Issues** – Many citizens spoke of their own personal health issues and/or health issues of others in the area that they suggest may be a result of their drinking water.
- **Home Values** – Several citizen was concerned about the value of their home declining due to contamination found in their well.
- **Landfills** – A majority of the comments focused on the amount of ash being stored in on-site landfills and how these landfills are constructed on top of unlined coal ash ponds. They also reference an on-site sulfur dioxide scrubber waste landfill and an asbestos landfill.
- **Private Well Issues** – Many comments mentioned the fact that State health officials have warned local residents not to drink their water due to exceedances of pollutants and the Duke has even advised its own workers not to drink water from the on-site well. Many other citizens are concerned about their own drinking water from their wells.
- **Risk Classification** – All of the commenters wanted the site classified as intermediate or high. Duke supplied a massive report for consideration in the risk classification for all of their sites. SELC submitted a large report with their comments on the risk classification.
- **Surface Water** – Most commenters were concerned about seeps and discharges threatening Lake Norman and the nearly 1 million people and wildlife that rely on the water for drinking. One citizen was concerned that the site lies within the 100-year floodplain yet DEQ gave the site a low-risk classification for surface water.
- **Not Applicable** – A representative from Duke Energy spoke about Duke's ongoing efforts to close basins around the state. The remainder of the comments were not relevant to the risk classification for the site.

IV. Attachments

1. Public Notice of March 29, 2016 Meeting
2. Public Meeting Sign-in Forms
3. Public Meeting Speaker List
4. Audio File of Public Meeting
5. Written Public Comments Received
6. Supporting documentation received during public hearing
7. Emails
8. Meeting Notes
9. Public Comment Summary Spreadsheet
10. Meeting Agenda
11. Presentation