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## **MEMORANDUM**

April 22, 2016

To: Secretary Donald R. van der Vaart

From: Andrew Pitner  
Division of Water Resources  
Mooresville Regional Office

Subject: Meeting Officer's Report and Recommendations  
Coal Ash Impoundment Classification(s)  
Buck Combined Cycle Station

On March 22, 2016, I served as meeting officer for a public meeting held at Catawba College in Salisbury, 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 Buck Combined Cycle 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 Buck Combined Cycle Station.

This report has been prepared using the following outline:

- I. History/Background
- II. March 22, 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 22, 2016 Public Meeting and Oral Comments Summary**

Approximately 190 people attended the public hearing, including staff members of the DEQ and the meeting officer. A total of 190 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 Buck Combined Cycle Station.

Twenty-one individuals registered before the meeting to make comments and nine additional individuals made comments after the 21 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):

- **Beneficial Reuse** – Comments suggested alternate uses of coal ash such as fertilizer and encapsulation using polymers. Another commenter suggested that beneficial reuse would not work.
- **Dam Safety** – Comments were made concerning about the repair work to the dam and Notices of Deficiency that Duke received regarding the state of the dam.
- **Excavation** – Comments included following South Carolina’s lead by excavating the coal ash. Other comments suggested that capping in place will not work.
- **Groundwater Assessments** – Commenters referenced an expert report prepared by Dr. Steven Campbell and Dr. Richard Spruill (Groundwater Management Associates, Inc.) on February 29, 2016, that focuses on the Comprehensive Site Assessment and Corrective Action Plan Reports prepared by HDR, Inc. for the Buck Combined Cycle Station. Commenters also questioned the validity of Duke Energy’s consultants reports since they are being paid by Duke. One comment referenced a report prepared by Dr. Vengosh (Duke University) on radiation resulting from coal ash and wonders why DEQ did not have Duke sample for radiation. One commenter pointed out that the vanadium belt that runs through the state and noted that Duke’s coal ash ponds coincidentally fall within that zone. This commenter also stated that perhaps the ash from the stacks was responsible for the existence of this vanadium belt. One citizen believes that they saw a coal ash dump across from some vineyards and wants to know if DEQ has looked into it. Several citizens commented on Duke’s reports. A comment noted that the groundwater flow model was flawed as it had no-flow boundaries between Duke’s wells and the private water supply wells. Another comment stated that Duke’s report suggested that there were no coal ash ponds from 1926 to 1957 and that there was no disclosure about where the ash was stored during that timeframe. Other comments suggested that cap-in-place will not work since the coal ash sits in the groundwater table. A comment pointed out that Duke’s monitoring wells were about 70 feet deep but the private water supply wells are, on average, about 150 feet deep.
- **Health Issues** – Several 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.
- **Landfills** – A commenter believed that coal ash is a special waste and should not be put in municipal solid waste landfills but rather put into salt mines. They also brought up that the Environmental Protection Agency stated that all landfills will eventually leak. They also asked if there are monitoring wells at a landfill and contamination goes between them, how would DEQ know?
- **Private Water Supply Well Issues** – Citizens commented about being inconvenienced by the bottled water and that Duke should supply them with good clean water. A citizen stated that the average hexavalent chromium concentrations in public water supplies is 0.7 ug/L and the average concentration in private water supply wells around Buck was 1.73 ug/L. They stated that the science did not change but yet received the letters from DHHS stating their water was ok to drink after receiving the initial “do not drink” recommendations. Some commenters were concerned about having their wells tested and one particular commenter stated that they had not received their results of their well test.

- **Risk Classification** – All comments suggested that the site should be ranked either intermediate or high.
- **Surface Water** – Several comments claimed to have either seen contamination in the river or seeps entering the river.
- **Not Applicable** – A representative from Duke Energy spoke about Duke’s ongoing efforts to close basins around the state. One person stated that Duke was more focused on profits rather than people. Several commenters had comments relating to politics that were not applicable to risk classification of the site.

### III. **Written Public Comment Summary**

In addition to the public meeting, DEQ received written comments during the public comment period. DEQ received one comment hand-submitted during the public meeting, 97 letters sent via United States Postal Service mail, and 873 comments received via email. Written comments received during the public comment period include the following summarized by topic (in no particular order):

- **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 commenters suggested that Duke should research storage options that provide better long-term solutions than lined landfills; favoring those that reuse coal ash or fully encapsulate the ash above ground with a more permanent barrier than a synthetic liner. Other alternative uses of coal ash that commenters suggested were use in plastics, bricks, concrete, agricultural soil additive, and cinders that can be spread on snowy roads.
- **Costs** – A majority of the comments were requests de that Duke not pass on their cost to the consumers.
- **Dam Safety** – Several commenters suggested that the dam safety ranking should be high because we can’t assume that Duke will make the necessary repairs or correct the fundamental issues with the dam. Other comments referred to the notices Duke has received concerning the state of the dam.
- **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 our waterways and groundwater, and from our most vulnerable communities such as low-income communities or communities of color. A representative from Clean Water for North Carolina stated that, while only 17 % of the population living within a one-mile radius of the Buck Steam Station is minority, according to EPA’s Enforcement and Compliance History Online tool, 34% of the population is below the federal poverty level, and 55% have only a high school education or less.
- **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. The remainder of the comments suggested that Duke should remove the coal ash from the site to safe, lined storage areas away from waterways.

- **Groundwater Assessments** – 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. Several commenters mentioned the fact that harmful constituents have been detected in the monitoring wells at levels that exceed the standards. Several comments were about the coal ash sitting in the groundwater table and that capping-in-place would not be adequate. Other commenters pointed out flaws with Duke’s groundwater assessments including flaws in their models and not testing at depths comparable to the private wells.
- **Health Issues** – Several 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** – All of the citizen comments were concerning the value of their homes being lowered by the contamination found in their wells.
- **Private Well Issues** – A representative from the Southern Alliance for Clean Energy stated that no one should have to question the safety of their drinking water. A majority of the remaining comments were about people’s wells being contaminated presumably by the Buck ash ponds.
- **Risk Classification** – All citizen comments suggested ranking the site as intermediate or high risk. The National Ash Management Advisory Board stated that it may be appropriate for legislation to define the initiation of closure activities, but it should not stipulate a prescriptive approach with specific completion dates. 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 of the comments were regarding concerns about the ponds leaking into the river. Other comments were regarding NCDEQ cited Duke Energy for broken, failing corrugated metal storm water pipes at Buck that are cracked and leaking, the same problem that caused the Dan River coal ash spill in February 2014.
- **Not Applicable** – Several comments suggested that Duke should invest in renewable energy and move away from coal and natural gas. The remainder of the comments were not relevant to the risk classification for the site.

#### **IV. Attachments**

1. Public Notice of March 22, 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