



North Carolina Department of Environment and Natural Resources

Division of Water Resources

Water Quality Programs

Pat McCrory
Governor

Thomas A. Reeder
Director

John E. Skvarla, III
Secretary

March 20, 2014

CERTIFIED MAIL 7010 1060 0000 3059 5977
RETURN RECEIPT REQUESTED

John Velte, Environmental Manager
Duke Energy
526 South Church Street
Charlotte, NC 28202

Subject: **Notice of Violation**
Cape Fear Steam Electric Power Plant
NPDES Permit No. NC0003433
Chatham County

Dear Mr. Velte:

On March 11, 2014, Danny Smith, Rick Bolich, Autumn Romanski, and Cory Larsen of the Division of Water Resources (DWR) Raleigh Regional Office (RRO) conducted an inspection of the Cape Fear Steam Electric Power Plant in Chatham County. This inspection included sampling of outfalls 001, 005 and 007, and sampling of several other locations to evaluate the characteristics of water adjacent to active or relic ash ponds, and to view stormwater and wastewater outfalls and structures.

During this visit, ash ponds known as 1978 (Outfall 001) and 1985 (Outfall 005) were both observed to have been pumped down. Specifically, Godwin pumps were located on the berm at the outfall location for each of the respective ash ponds. Neither Godwin pump was operating during the site visit. However, ash pond 1978 was approximately 6 feet below the normal water elevation and the 1985 ash pond was approximately 7-8 feet below normal water elevation.

On March 18, 2014, Danny Smith and Autumn Romanski returned to the Cape Fear Steam Electric Power Plant, to finish conducting a review of the existing ash ponds. During this visit, we received copies of the pump records for the Godwin pumps. This office estimated the 1978 ash pond dewatered 17.4 million gallons of wastewater during 31 days during January, February, and March, based on the Duke Energy Progress pump records. Similarly, the 1985 ash pond dewatered 44.4 million gallons of wastewater during 78 days during September, October, November, December, January, February, and March.

The 1978 ash pond has three pages of records from 1/13/14 thru 3/11/14 with specific pump dates of: January – 13, 14, 15, 16, 20, 21, 22, 23, 27, 28, 29, 30

February – 3, 4, 10, 11, 12, 17, 18, 19, 20, 24, 25, 26, 27
March – 3, 4, 5, 6, 10, 11

Total No. Days of Pumping for the 1978 Ash Pond = 31

Photo #1 – Godwin Pump Located on Berm of 1978 Ash Pond on March 11, 2014



The 1985 ash pond has seven pages of records from 9/30/13 thru 3/11/14 with specific pump dates of:
September – 30

October – 1, 2, 3, 7, 8, 9, 10, 14, 15, 16, 17, 21, 22, 23, 24, 28, 29, 30, 31

November – 4, 5, 6, 7, 11, 12, 13, 14, 18, 19, 20, 21

December – 2, 3, 4, 5, 9, 10, 11, 12, 18, 19, 23, 24, 30, 31

January – 6, 7, 8, 9, 15, 16, 20, 21, 22, 23, 27, 28, 30

February – 4, 5, 10, 11, 12, 17, 18, 19, 20, 24, 25, 26, 27

March – 3, 4, 5, 6, 10, 11

Total No. Days of Pumping for the 1985 Ash Pond = 78

Photo #2 – Godwin Pump Located on Berm of 1985 Ash Pond on March 11, 2014



During the above mentioned site visits, Duke Progress Energy staff explained the following:

- 1) The ash ponds were dewatered in order to conduct maintenance on riser structures.
- 2) The dewatering of the ash ponds will abate/stem groundwater contamination.

- 3) A permittee may allow bypass provided no limits are contravened (Part II, Condition 4. *Bypassing of Treatment Facilities*).
- 4) Duke Progress also explained they called Raleigh Regional Office in August of 2013, and that the RRO confirmed that they could dewater so that they could affect repairs as a part of normal/routine maintenance.

Accordingly, from the two site visits and a file review, the Division of Water Resources Raleigh Regional Office's position is that the dewatering of approximately 61 million gallons of wastewater to conduct maintenance on a riser outlet for a plant and ash basin that is being decommissioned does not constitute essential maintenance to assure efficient operation in the manner that was performed by Duke Progress Energy at this facility.

Accordingly, the March 11, 2014 and the March 18, 2014 site inspections and the subsequent file review revealed violations of conditions of your NPDES permit (NC0003433), as follows:

NPDES Permit No. NC0003433:

The following items specify permit conditions and limitations that were in violation during the time of the inspections:

Part II

Section C. Operation and Maintenance of Pollution Controls

Condition 2. "The permittee shall at all times provide the operation and maintenance resources necessary to operate the existing facilities at optimum efficiency. The Permittee shall at all items properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the Permittee to install and operate backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit [40CFR 122.441 (e)].

Condition 4. Bypassing of Treatment Facilities

b. Notice [40 CFR122.41 (m)(3)]

- 1) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass; including an evaluation of the anticipated quality and effect of the bypass.

c. Prohibition of Bypass

- 1) Bypass from the treatment facility is prohibited and the permit Issuing Authority may take enforcement action against a permittee for bypass, unless:
 - A) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage.

B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated waste or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent bypass which occurred during normal periods of equipment downtime or prevention maintenance; and

C) The Permittee submitted notices as required under Paragraph b. of this section.

Section D. Monitoring and Records

1. Representative Sampling

Samples collected and measurements taken, as required herein, shall be characteristic of the volume and nature of the permitted discharge. Samples collected at a frequency less than daily shall be taken on a day and time that is characteristic of the discharge of the entire period of the sample represents. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by another wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and approval of the Permit Issuing Authority [40 CFR122.41 (j)].

Section E. Reporting Requirements

1. Changes in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of permit.

2. Planned Changes

The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility [40 CFR122.41 (1)]. Notice is required only when:

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42 (a) (1).

3. Anticipated Noncompliance

The permittee shall give advanced notice to the Director of any planned changes to the permitted facility or other activities that might result in noncompliance with the permit [40 CFR 122.41 (1)(2)].

9. Noncompliance Notification

The permittee shall report by telephone to either the central office or the appropriate regional office of the Division as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:

a. Any occurrence at the water pollution control facility which results in the discharge of significant amounts of waste which are abnormal in quantity or characteristic, such as the

dumping of the contents of a sludge digester; the known passage of a slug of hazardous substance through the facility, or any other unusual circumstances.

Part III

Section E. Facility Closure Requirements

The permittee must notify the Division at least 90 days prior to the closure of any wastewater treatment system covered by this permit. The Division may require specific measures during deactivation of the system to prevent adverse impacts to waters of the state. This permit cannot be rescinded while any activities requiring this permit continue at the permitted facility.

Please understand these types of violations permit conditions violations may be unsafe for the public and surface waters. Also, these violations may result in a civil penalty assessment of up to \$25,000 per day per violation.

Please respond to this letter in writing within 30 days of receipt. Your response should be sent to the attention of Danny Smith at 3800 Barrett Drive, Raleigh NC, 27609, and it should minimally address the following items:

- 1) Please explain in writing how 31 days of pumping from the 1978 ash pond with an estimated wastewater discharge of 17.4 million gallons constitutes operation and essential maintenance necessary to operate the existing facilities at optimum efficiency.
- 2) Please explain in writing how 78 days of pumping from the 1985 ash pond with an estimated wastewater discharge of 44.4 million gallons of constitutes operation and essential maintenance necessary to operate the existing facilities at optimum efficiency.
- 3) The saturated ash located in ash basins 1978 and 1985 is able to further drain into the open water portion of the ponds during the subject dewatering process. Please detail what additional sampling efforts were undertaken to identify the concentrations of dissolved metals or other pollutants that may have increased during and as a result of the dewatering process.
- 4) It is understood that the Cape Fear Steam Electric Plant is no longer in operation and is being decommissioned. Please explain how there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, the use of divers to repair joints etc.
- 5) For the 1985 ash pond, the pump logs indicate that the pumping was started late on February 5, 2014. The log indicated the following "waiting for water samples to be collected." Please explain why sampling did not occur when the basin was being dewatered. Also please clearly explain how the samples collected and measurements taken, as required herein, were characteristic of the volume and nature of the permitted discharge.
- 6) Please explain whether you provided notice to the Director as to how the alteration (use of Godwin pumps for 31 and 78 days) could significantly change the nature or increase the quantity of pollutants discharged.

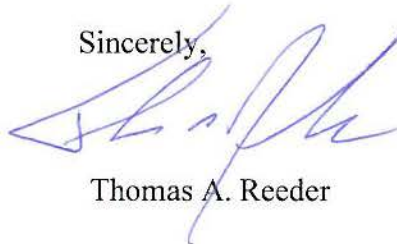
- 7) Please explain whether you gave advance notice to the Director of any planned changes to the permitted facility or other activities (use of Godwin pumps for 31 and 78 days).
- 8) Please explain whether you reported by telephone to either the central office or the appropriate regional office of the Division as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence(s) or first knowledge occurrence at the water pollution control facility which results in the discharge of significant amounts of waste which are abnormal in quantity or characteristic.
- 9) On November 24, 2014 the RRO received 90-Day Notice of closure for Wastewater Treatment Units that addressed the extended aeration package plant and the oil/water separator. The letter explained that in the future Duke Energy will also be closing the effluent channel and ash ponds. You explained the ash pond closure plans will be submitted to DWR for approval one year prior to its closure. Please clearly explain whether the dewatering of the 1978 and 1985 ash basins, basins that no longer receiving ash, was a part of plant closure efforts.

Thank you for your attention to this matter. **This office requires that the violations, as detailed above, be abated immediately and properly resolved.** Environmental damage and/or failures to properly maintain or manage your wastewater have been documented for the subject site as stated above. Your efforts to undertake activities to bring the subject site back into compliance are an action that must be taken in order to begin to resolve ongoing environmental issues.

These violations and any future violations are subject to a civil penalty assessment of up to a maximum of \$25,000.00 per day for each violation. Your written response to this letter will be considered as a part of this process.

If you have any questions concerning this Notice, please contact Danny Smith at 919 791-4200.

Sincerely,



Thomas A. Reeder

cc: S. Jay Zimmerman
Matt Matthews
Danny Smith - RRO