



North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

John E. Skvarla, III  
Secretary

**NOTICE OF DEFICIENCY**

June 13, 2014

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Duke Energy Corporation  
Attention: Mr. Sean DeNeale, Engineer II  
Environmental Services  
Post Office Box 1006  
Mail Code EC 13K  
Charlotte, North Carolina 28201-1006

**7011 1570 0000 0154 7296**

Duke Energy Corporation  
Attention: Mr. John Elnitsky, Vice President  
Project Management and Construction  
Post Office Box 1007  
Mail Code ST-28U  
Charlotte, North Carolina 28201-1007

**7011 1570 0000 0154 7302**

RE: Cliffside Inactive Ash Basin 1 - 4 Main Dam  
CLEVE-047 – High Hazard Potential  
Broad River Basin  
Cleveland County

Dear Mr. DeNeale and Mr. Elnitsky:

The "Dam Safety Law of 1967," as amended, provides for the certification and inspection of dams in the interest of public health, safety, and welfare, in order to reduce the risk of failure of such dams; to prevent injuries to persons, damage to property; and to insure the maintenance of stream flows. Our records indicate that you are the owner/and or responsible for the referenced dam, which is located off McGraw Road in Cleveland County.

On March 5, 2014, a Notice of Deficiency (Notice) was issued for the referenced dam as a result of observations of the dam during inspections conducted by Land Quality Section personnel on March 1, 2014 and March 4, 2014. The deficiencies observed were:

1. The corrugated metal spillway barrel (CMP) has deteriorated to the point a Duke representative documented increased flow during a routine internal inspection. A makeshift system consisting of sandbags, PVC pipe and tanks to collect the flow from the barrel was in place at the barrel outlet. Duke personnel stated the flow was measured at approximately 0.75 gallons per minute (over 1,000 gallons per day).
2. The embankment drains along the toe of the dam, adjacent to Broad River, have varying degrees of seepage and corrosion. At least two of the drains have broken/corroded, separated portions of the pipes lying on the dam toe.

This office is in receipt of your correspondence dated March 14, 2014, April 17, 2014, and April 25, 2014, all in response to the March 5, 2014 Notice. Responses were issued for the two earlier letters on March 19, 2014 and April 21, 2014. The April 25, 2014 correspondence included submittal of a repair plan by Duke Energy to address the Notice. The repair plan is currently under review by our Dam Safety Section.

On May 6, 2014, this Office received a digital copy of an internal inspection of the spillway system for the referenced dam. This submittal was in response to an information request issued by this Division on March 5, 2014, in which this Division requested that Duke Energy camera inspect all facilities that have decant structures with corrugated metal pipe (CMP) and concrete components. The decant structure for this dam is comprised of a concrete riser with a CMP barrel.

A preliminary review of the camera inspection video of the decant structure has been performed by personnel of the Land Quality Section for the referenced dam. The video documented holes/voids and deterioration of the CMP barrel.

The condition of the decant structure appears serious. Your dam is categorized as a "High Hazard" dam. In the event of dam failure, significant environmental damage to the Broad River could occur due to release of coal ash stored behind the dam. **In order to ensure the safety of this dam, please closely monitor your dam until the repair plan is approved and fully implemented. If you notice a sudden increase in flow or an unusual condition developing, please contact this Division as soon as possible.**

Please note any excavations in the dam or major repair work to this dam must be approved by this Division before any work is done. Additionally, please note that this dam may not be breached, meaning the dam may not be drained by cutting a notch in the dam, without prior engineered breach plans being submitted to and approved by this Division.

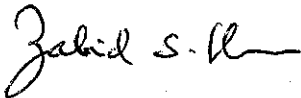
**Please submit a written response as soon as possible, but no later than ten (10) days following receipt of this Notice and subsequent Approval to Repair to advise us of your schedule for repair plan implementation. If positive action is not taken within thirty (30) days after issuance of the Approval to Repair, we shall present the case information for appropriate**

**enforcement action in accordance with North Carolina General Statute 143-215.36. Enforcement action could include a civil penalty of up to \$500.00 per day of violation, and/or issuance of a Dam Safety Order requiring the repair or removal of this dam, and/or injunctive relief to gain compliance.**

Please notify this Office in writing if you wish to assert that you have no ownership or are otherwise not responsible for maintenance or repairs to the subject dam. If you have an emergency situation during non-office hours, you should notify 911 and the State Emergency Operations center at 1-(800) 858-0368. They will notify the appropriate personnel in this office of the situation.

It is recommended that you or your engineer direct questions related to repair applications or the dam plan review process to our dam safety staff at (919) 707-9220. All plans, specifications design data, and calculations must be submitted to the State Dam Safety Engineer. If you have any questions regarding this letter, please contact me at (704) 663-1699. Your cooperation and consideration in maintaining a safe dam is appreciated.

Sincerely,



Zahid S. Khan, CPM, CPESC, CPSWQ  
Regional Engineer  
Land Quality Section

ec: Steven M. McEvoy, PE, State Dam Safety Engineer  
cc: Water Quality Regional Operations Section