UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 14 2009

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Ed M. Sullivan
Consulting Engineer
Duke Energy Corporation
526 South Church Street
Charlotte, North Carolina 28202

Dear Mr. Sullivan,

On May 27-28, 2009 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a site assessment of the Primary and Secondary Ponds at the Dan River facility. The purpose of this visit was to assess the structural stability of the impoundments or other similar management units that contain "wet" handled coal combustion residuals (CCRs). We thank you and your staff for your cooperation during the site visit. Subsequent to the site visit, EPA sent you a copy of the draft report evaluating the structural stability of the units at Dan River and requested that you submit comments on the factual accuracy of the draft report to EPA. We have received your comments and have considered them, as appropriate in the preparation of the final report.

The final report for the Dan River facility is enclosed. This report includes a specific rating for each CCR management unit and recommendations and actions that our engineering contractors believe should be undertaken to ensure the stability of the CCR impoundment(s) located at Dan River. These recommendations are found on pages 21-22 in the final assessment report and are listed in Enclosure 2.

Since these recommendations relate to actions which could affect the structural stability of the CCR management units and, therefore, protection of human health and the environment, EPA believes their implementation should receive the highest priority. Therefore, we request that you inform us on how you intend to address each of the recommendations found in the final report. Your response should include specific plans and schedules for implementing each of the recommendations. If you will not implement a recommendation, please explain why. Please provide a response to this request within 14 calendar days of receipt of this letter. Please send your response to:

Mr. Stephen Hoffman
US Environmental Protection Agency (5304P)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

If you are using overnight of hand delivery mail, please use the following address:

Mr. Stephen Hoffman
US Environmental Protection Agency
Two Potomac Yard
2733 S. Crystal Drive
5th Floor, N-237
Arlington, VA 22202-2733

You may also provide a response by e-mail to hoffman.stephen@epa.gov

This request has been approved by the Office of Management and Budget under EPA ICR Number 2350.01.

EPA will be closely monitoring your progress in implementing the recommendations from these reports and could decide to take additional action if the circumstances warrant.

You should be aware that EPA will be posting the report for this facility on the Agency website shortly.

Given that the site visit related solely to structural stability of the management units, this report and its conclusions in no way relate to compliance with RCRA, CWA, or any other environmental law and are not intended to convey any position related to statutory or regulatory compliance.

If you have any questions concerning this matter, please contact Mr. Hoffman in the Office of Resource Conservation and Recovery at (703) 308-8413. Thank you for your continued ongoing efforts to ensure protection of human health and the environment.

Sincerely,

Matt Hale, Director
Office of Resource Conservation and Recovery

Enclosures

Enclosure 2
Dan River Recommendations

4.1 RECOMMENDATION NO. 1

It is recommended that the stability study planned to be performed using the new instrumentation recommended in the last quintennial report and recently installed be performed as soon as enough data has been collected to provide an adequate baseline. In addition to re-evaluation of the embankment with the new data and in light of the apparent trend of seepage to move up the downstream face of the southern embankments, an incremental analysis should be performed to determine at what piezometric levels actions are required to remediate the structure. The embankments comprising the Primary and Secondary Ponds are susceptible to seepage based failure modes as they are constructed chiefly of silty materials and ash, have relatively steep design slopes, and were constructed without the benefit of internal drainage systems. It is possible that the surface slides noted in the inspection are related to localized pore pressure increases caused by the rising piezometric surfaces in the structures. As such, surface slides are likely to continue and potentially deepen if untreated.

Schedule: ASAP after a baseline trend has been established for the new instrumentation.

4.2 RECOMMENDATION NO. 2

It is recommended that in conjunction with continued monitoring of the riverbank movement monuments, a global stability study be performed to determine at what level of lateral movement of the riverbank that dam safety is compromised. Based on this analysis, action levels tied to the annual survey measurements should be established for remediation/stabilization of the riverbank.

Schedule: This analysis should be performed in conjunction with the next annual surveying of the monuments.

4.3 RECOMMENDATION NO. 3

It is recommended that efforts to control nuisance animal activity continue, including regular mowing of the embankments and removal of the animals. In addition, care should be taken when backfilling burrows, as improper or incomplete filling can provide a ready-made conduit for piping type failure modes. Useful resources for dealing with nuisance animals in embankments are available at www.damsafety.org and are listed below:

- *Plant and Animal Impacts on Earthen Dams* (FEMA 540);
- *Dam Owners Guide to Animal Impacts on Earthen Dams* (FEMA L-264); and
- *Technical Manual for Dam Owners: Impact of Animals on Earthen Dams* (FEMA 473).

Schedule: The current animal control practices should be continued, with additional care taken when backfilling per the referenced resources.

4.4 RECOMMENDATION NO. 4

Several decaying stumps were noted in the area of the southwestern corner of the Primary Pond. These stumps should be removed as completely as possible without affecting embankment stability and the holes backfilled with compacted material that is compatible with the existing embankment. Useful resources for dealing with nuisance plants in embankments are available at www.damsafety.org and are listed below:

- *Plant and Animal Impacts on Earthen Dams* (FEMA 540);
- *Dam Owners Guide to Plant Impacts on Earthen Dams* (FEMA L-263); and
- *Technical Manual for Dam Owners: Impact of Plants on Earthen Dams* (FEMA 534)

Schedule: Stump removal and backfill should be performed within the next two years.

4.5 RECOMMENDATION NO. 5

The current inspection frequencies and site maintenance appear to be suitable for the structures inspected. Continued vigilance and adherence to current schedules is recommended. In addition the recommendations provided in the Sixth Independent Consultant Report (repeated in **Section 3.2**) should be completed per the recommendations of the Consultant.

Schedule: Per the recommendations of the Sixth Independent Consultant Report.