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

December 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 September 8-9, 2009 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Belews Creek facility. The purpose of this visit was to assess the structural stability of the impoundments or other similar management units that contain "wet" handled 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 the Belews Creek facility and requested that you submit comments on the factual accuracy of the draft report to EPA. Your comments were considered in the preparation of the final report .

The final report for the Belews Creek 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 the Belews Creek facility. These recommendations 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 by January 15, 2010. 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.

You may assert a business confidentiality claim covering all or part of the information requested, in the manner described by 40 C. F. R. Part 2, Subpart B. Information covered by such a claim will be disclosed by EPA only to the extent and only by means of the procedures set forth in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when EPA receives it, the information may be made available to the public by EPA without further notice to you. If you wish EPA to treat any of your response as "confidential" you must so advise EPA when you submit your response.

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

4.2 Maintaining Vegetation Growth

Appropriate grass has vegetated the dikes. However, there were areas of sparse vegetation where reseeding maintenance should be performed. There are also some areas where the grass cover appeared to be removed by sliding mower wheels. Duke Energy should perform reseeding as required yearly to maintain a good grass cover on the dikes. If mower damage routinely occurs in the same areas each time grass is re-established, consideration should be given to using alternative methods (such as weed-whacking) of cutting the grass in these areas.

4.3 Drainage Swale Maintenance

Sediment was evident in rip rap drainage swales and in some of the concrete swales. The sediment observed appeared to be related to surface runoff and tended to be accumulated at the toe of the swales. Duke Energy should monitor the condition of these drainage swales and if the sediment appears to be clogging the rip rap and impeding surface runoff from being adequately conveyed away from the earthen embankments, the rip rap should be cleaned of sediment.

4.4 Tree and Root Removal

Small trees and brush has become established over the upstream toe of the Ash Basin Dike and in a portion of the abutment areas. CHA recommends these trees be removed under the direction of a professional engineer.

4.5 Outlet Pipe Inspections

The seepage from the abandoned outlet pipe should be monitored. Analytical testing or dye testing may confirm if it is originating from the Ash Basin or is groundwater infiltration into the pipe

4.6 Monitoring

As discussed in Section 2.3.1, flowing seepage was observed at the toe of the lower bench of the dike from a repair area at the left abutment. Duke Energy was aware of this seepage and makes observations of this area during their routine inspections. CHA recommends that Duke Energy develop a methodology to better quantify the seepage from the open stone and embankment materials. Quantifiable measurements will allow Duke Energy and outside consultants to see changes if they occur. Any changes would need to be addressed.

Seepage from several of the horizontal drains has been noted to be increasing at the toe, right abutment and central portions of the downstream toe. CHA recommends that the monitoring frequency be returned to the previous monthly schedule used in 2006/07 to ascertain if this is a long term or seasonal condition.

All piezometers and observation wells should be included in the monthly monitoring effort considering the concern regarding the phreatic level in the downstream embankment. A detailed review of the collected data should be completed by Duke Energy.

4.7 Chemical Washdown Pond

Duke Energy should review regulatory compliance issues for this impoundment which will be under the jurisdiction of the North Carolina Department of Environment and Natural Resources after January 1, 2010.

4.8 Hydrologic and Hydraulic Evaluation Update

As discussed in Section 3.2, CHA recommends the hydrologic and hydraulic analysis be updated to confirm that the primary and secondary ponds can safely store or pass the design storm, which currently is the inflow from the ¾ PMP. A modification to the hazard classification will change the design storm to the PMP. The removal of the design storm from the impoundment within the specified regulatory time period of 15 days also needs to be reviewed as there currently is only one spillway.

4.9 Hazard Assessment

We recommend that a breach analysis be performed for the Ash Basin Dike to determine whether development downstream would suggest a high hazard classification under the rules of the North Carolina Department of Environment and Natural Resources is warranted for the impoundments. The EPA Hazard Potential checklist included in Appendix A identifies the facility as a high hazard impoundment due to the probable loss of human life resulting from a failure. Further study of the downstream reach of the dam including a review of the inundation resulting from the breach caused by the PMF as well as a review of the current level of development and human habitation may result in a lowering of this classification.

4.10 Stability Analysis

CHA recommends that soil properties, including shear strength under current conditions, be confirmed for the dike. Monitoring of the phreatic surface as previously noted will be required to accurately develop a model for an updated stability model.

We also recommend that a rapid drawdown analysis be performed for the dike once the soil properties are confirmed. A seismic review should also be completed in accordance with ACOE guidelines.