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Via E-Mail and Overnight Courier

January 15, 2010

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

RE: US EPA Request/ICR # 2350.01
Belews Creek Steam Station
3195 Pine Hall Road
Belews Creek, North Carolina

Dear Mr. Hoffman,

Duke Energy Carolinas, LLC (DEC) received and has reviewed the final report for Belews Creek Steam Station that resulted from the site assessment of the Ash Pond conducted by the US EPA and its engineering contractors on September 8th and 9th, 2009. Duke Energy supports the EPA's objective to ensure ash basin dam safety. We have a comprehensive and robust monitoring, maintenance, and inspection program in place for all of our coal ash basin dams and remain committed to operating and maintaining these facilities safely.

Effective January 1, 2010, the impoundment facilities at Belews Creek are under the regulatory authority of the North Carolina Department of Environment and Natural Resources (NCDENR), Land Quality Section, Office of Dam Safety. The new state regulator has asked Duke Energy to continue to have an inspection performed every five years by an independent consultant using qualified licensed Professional Engineers, as was required by the former regulator, the North Carolina Utility Commission. The consultants utilized by Duke Energy to meet this requirement are equally qualified as those used by the EPA for its assessment. The Office of Dam Safety will conduct an assessment/inspection of the impoundments at a minimum of once every two years and in practice, plans to do the inspections once a year. Duke Energy also plans to continue our rigorous internal inspection program.

Duke Energy remains committed to meeting all state and federal requirements and to managing its coal combustion byproducts impoundments in a very safe and responsible manner. We are confident, based on our ongoing monitoring, maintenance and inspections, that each of our ash basin dams has the structural integrity necessary to protect the public and the environment. EPA's report on the Belews

Creek facilities supports this conclusion and found that acceptable performance is expected in accordance with the applicable safety regulatory criteria. EPA's contractor did; however, make several recommendations to address minor deficiencies and secondary studies/investigations to provide further assurance of continued structural integrity. Duke Energy responds to each of these recommendations as follows:

4.2 Maintaining Vegetation Growth

Appropriate grass 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.

Duke Energy will address areas of sparse vegetation in accordance with our current vegetation management practices. If areas are damaged routinely by mowers, alternative grass cutting methods will be considered. Duke Energy will re-seed the identified areas prior to July 1, 2010.

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.

Duke Energy will continue to monitor the condition of the drainage swales and will investigate the source of the erosion as necessary. If clogging occurs, the rip rap will be cleaned of sediment. This recommendation is considered complete.

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.

Duke Energy will address all trees and roots in these areas by October 1, 2010, in accordance with the guidance issued by the North Carolina Department of Environment and Natural Resources, Land Quality Section, Office of Dam Safety.

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.

The seepage from the abandoned outlet pipe will be monitored. Analytical testing or dye testing will be performed by July 1, 2010 to confirm the source of the seepage.

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.

Duke Energy will develop a methodology to better quantify the seepage from the open stone and embankment materials. Duke Energy will continue a monthly monitoring frequency to ascertain if this is a long term or seasonal condition. Duke Energy's consultant will review the monitoring program and make recommendations as to which peizometers and observation wells should be included in the monthly monitoring effort. This will account for the fact that many of the well locations were installed to replace adjacent older wells which are no longer needed and unnecessary to monitor. This review effort will be complete by December 31, 2010. The recommended monitoring will be installed and the data collected and reviewed by July 1, 2011.

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.

Duke Energy has reviewed regulatory compliance issues for this impoundment with the North Carolina Department of Environment and Natural Resources, Office of Dam Safety, and is awaiting the results of their evaluation. This recommendation is considered complete.

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.

Duke Energy will have the hydrologic and hydraulic analysis updated to confirm that the ash basin can safely store or pass the design storm. This recommendation will be completed no later than October 1, 2010.

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.

The North Carolina Utilities Commission had classified the ash basin dike as high hazard under the North Carolina (NC) Dam Safety Rules due to the potential environmental damage of an ash release in the event of failure. In discussions with the North Carolina Department of Natural Resources, Land Quality Section, Office of Dam Safety, late last year, this high hazard rating will remain in effect for the same reasoning expressed. This rating is not an indication of structural integrity of the dike, but of the hazard potential if the dike were to fail. The North Carolina rating criteria is not directly equivalent to the National Inventory of Dams criteria where high hazard potential is reserved for those cases where there would be a probable loss of human life. The North Carolina criteria also uses high hazard for those structures where economic damage of greater than $200,000 is expected if the dike were to fail.

Although not discussed during EPA's site assessment, a breach/dam break analysis was conducted for the Belews Creek Steam Station ash basin dike on or about 1992. Based on this analysis, the peak downstream flood is within the normal flood plain boundary.

In the appendix of the Contractor's report on the EPA "Coal Combustion Dam Inspection Checklist Form", the definition for "High Hazard Potential" given on page 2 of this form states, "Dams assigned the high hazard potential classification are those where failure or misoperation will probably cause loss of human life." In the next paragraph with the heading "DESCRIBE REASONING FOR HAZARD RATING CHOSEN", the Contractor's reasoning states, "...with possible loss of life..." Based on the stated reasoning by the Contractor, the correct National Inventory of Dam's hazard classification would be "Significant Hazard Potential". The area in and around the ash dike structure is rural in nature and lightly populated. Route 1909 (Middleton Loop) is a lightly traveled county secondary road. As such, Duke Energy agrees that the ash basin dike does not meet EPA's definition of "High Hazard Potential".

As the breach analysis has been conducted and as Duke Energy has completed discussions with the NC Office of Dam Safety concerning the high hazard rating assigned per the North Carolina rating criteria, this recommendation is considered complete.

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.

Phreatic surface monitoring and data collection will be completed as per Recommendation 4.6 above by July 1, 2011. This data will then be used to complete the stability model and analysis per this recommendation by December 31, 2011.

If you have any questions regarding the above responses, please contact Ed Sullivan at our corporate offices at 980-373-3719 or via e-mail.

Sincerely,
Duke Energy Carolinas, LLC

Don Faulkner

Don Faulkner
Vice President, Belews Creek Steam Station
Duke Energy Regulated Generation