

US EPA ARCHIVE DOCUMENT



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

January 12, 2012

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

VIA E-MAIL

Mr. Fred Holt  
Progress Energy Carolinas  
P.O. Box 1551  
Raleigh, North Carolina 27602

Re: Request for Action Plan regarding Progress Energy Carolinas Inc - L. V. Sutton  
Power Station

Dear Mr. Holt,

On February 17, 2011 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Progress Energy Carolinas Inc - L. V. Sutton Power Station 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 Progress Energy Carolinas Inc - L. V. Sutton Power Station 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 Progress Energy Carolinas Inc - L. V. Sutton Power Station facility is enclosed. This report includes a specific condition 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 Progress Energy Carolinas Inc - L. V. Sutton Power Station facility. These recommendations are listed in Enclosure 2.

Since these recommendations relate to actions which could affect the structural stability of the CCR management unit(s) 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 provide a rationale. Please provide a response to this request by February 13, 2012. Please send your response to:

Mr. Stephen Hoffman  
U.S. 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  
U.S. Environmental Protection Agency  
Two Potomac Yard  
2733 S. Crystal Drive  
5<sup>th</sup> Floor, N-5838  
Arlington, VA 22202-2733

You may also provide a response by e-mail to [hoffman.stephen@epa.gov](mailto:hoffman.stephen@epa.gov), [kohler.james@epa.gov](mailto:kohler.james@epa.gov), and [englander.jana@epa.gov](mailto:englander.jana@epa.gov).

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.

Please be advised that providing false, fictitious, or fraudulent statements of representation may subject you to criminal penalties under 18 U.S.C. § 1001.

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 efforts to ensure protection of human health and the environment.

Sincerely,  
/Suzanne Rudzinski/, Director  
Office of Resource Conservation and Recovery

Enclosure

**Progress Energy Carolinas Inc - L. V. Sutton Power Station Recommendations  
(from the final assessment report)**

**1.0 CONCLUSIONS AND RECOMMENDATIONS**

**1.1 CONCLUSIONS**

Conclusions are based on visual observations from a one-day site visit on February 17, 2011, and review of technical documentation provided by Progress Energy.

**1.1.1 Conclusions Regarding the Structural Soundness of the Management Unit(s)**

The dike embankments and spillway appear to be structurally sound based on a review of the engineering data provided by the owner's technical staff and Dewberry engineers' observations during the site visit. We note that one area along the 1971 ash pond embankment did have a factor of safety at the minimum acceptable value.

**1.1.2 Conclusions Regarding the Hydrologic/Hydraulic Safety of the Management Unit(s)**

Adequate capacity and freeboard exists to safely pass the design storm.

**1.1.3 Conclusions Regarding the Adequacy of Supporting Technical Documentation**

The supporting technical documentation is adequate. Engineering documentation reviewed is referenced in Appendix A of the final report.

**1.1.4 Conclusions Regarding the Description of the Management Unit(s)**

The description of the management unit provided by the owner was an accurate representation of what Dewberry observed in the field.

**1.1.5 Conclusions Regarding the Field Observations**

Overall, the visual assessment of the ash pond embankment system is satisfactory; however, up to 12-inch diameter trees and numerous shrubs were found on the outer slope of the south embankment of the 1971 Ash Pond (State ID No. NEWHA-004) adjacent to the canal. The 1971 Ash Pond is active. Although this pond does not receive ash sluice continuously, it is a NPDES-permitted pond that receives coal ash sluice water. The management or removal of these trees is being coordinated with the North Carolina Department of Environment Natural Resources (NCDENR). Within the 1984 Ash Pond (State ID No. NEWHA-005) there were also a few areas of minor depressions, non-structural surface erosion, and multiple burrows that require remediation. These areas are reportedly being addressed on a regular maintenance schedule. In September 2010, an intense local rainfall event of approximately 20 inches caused minor overflow of the 1984 Ash Pond primary dike leading to down cut erosion along the dike exterior. The dike was temporarily repaired under observation and approval of NCDENR at the time of the site visit. (Appendix A: Doc 02 of the final report – Ash Pond Summary). Embankments appear structurally sound. After the site visit, Progress Energy provided a completion report and NCDENR's approval of the repair which was dated March 29, 2011. (See Appendix A of the final report, Doc 16: Final Approval to Impound and Doc 14: Repair Completion Package.)

**1.1.6 Conclusions Regarding the Adequacy of Maintenance and Methods of Operation**

The current maintenance and methods of operation appear to be adequate for the ash ponds.

**1.1.7 Conclusions Regarding the Adequacy of the Surveillance and Monitoring Program**

The surveillance program appears to be adequate. The management unit dikes are instrumented. Piezometers were installed in February of 2009 so there is limited data from the instrumentation.

**1.1.8 Classification Regarding Suitability for Continued Safe and Reliable Operation**  
The 1984 Ash Pond and 1971 Ash Pond are rated Satisfactory for continued safe and reliable operation.

**1.2 RECOMMENDATIONS**

**1.2.1 Recommendations Regarding the Structural Stability**

A liquefaction potential analysis should be performed. Also Section B-2 of the 1971 Ash Pond is marginally acceptable for meeting Minimum Factors of Safety for both static and seismic conditions. We would recommend that Progress Energy monitor the slope's performance and potentially add buttressing or take other actions to improve the stability of the slope.

**1.2.2 Recommendations Regarding the Field Observations**

The following issues need to be addressed with routine maintenance:

Continue coordinating with NCDENR about trees on downstream slope to determine a resolution.

Re-vegetate downstream embankment where necessary.

Re-vegetate interior embankment where recent work has taken place.

Address burrows along downstream slope.

Address rill erosion at locations along downstream embankment.

Address undercutting and erosion around outfall.

**1.2.3 Recommendations Regarding Continued Safe and Reliable Operation**

None warranted except those cited above.