

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. Alan Wood  
American Electric Power  
1 Riverside Plaza,  
Columbus, Ohio 43215-2373

Re: Request for Action Plan regarding OK Public Service Co - Northeastern 3 & 4 Plant

Dear Mr. Wood,

On 16 February 2011 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the OK Public Service Co - Northeastern 3 & 4 Plant facility. The purpose of this visit was to assess the structural stability of the impoundment 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 unit at the OK Public Service Co - Northeastern 3 & 4 Plant 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 OK Public Service Co - Northeastern 3 & 4 Plant 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 OK Public Service Co - Northeastern 3 & 4 Plant 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 or 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

**OK Public Service Co - Northeastern 3 & 4 Plant 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, February 16, 2011, and review of technical documentation provided by AEP Public Service Company of Oklahoma.

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

The structural stability of the dike embankments and spillway cannot be fully determined based on a review of the engineering data and analyses provided by the owner's technical staff. No analyses were performed on structural stability under seismic loadings. Dewberry engineers did not observe any structural issues during the site visit.

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

A hydrologic analysis of the Bottom Ash Pond was provided to Dewberry in June 2011. The analysis demonstrated the pond can retain the 40% Probable Maximum Flood with a freeboard of 1.5 Ft.

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

The supporting technical documentation is inadequate for structural stability safety assessments of the Management Unit. 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**

Dewberry staff was provided access to all areas in the vicinity of the management unit required to conduct a thorough field observation. The visible parts of the embankment dikes and outlet structure were observed to have no signs of overstress, significant settlement, shear failure, or other signs of instability. Embankments appear structurally sound. There are no visual indications of unsafe conditions or conditions needing remedial action.

**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 bottom ash management unit. There was no evidence of significant embankment repairs or prior releases observed during the field inspection. However, there was indication that significant brushy vegetation and trees were cleared in the recent past. The remaining stumps and root balls may become an issue as they decay.

**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 not instrumented. Based on the size of the dikes, the portion of the impoundment currently used to store wet bottom ash and stormwater, the history of a current and regular inspection program, installation of a dike monitoring system is not needed at this time.

### **1.1.8 Classification Regarding Suitability for Continued Safe and Reliable Operation**

The Management Unit is rated **POOR** for continued safe and reliable operation until receipt of the deficient documentation concerning seismic stability.

## **1.2 RECOMMENDATIONS**

### **1.2.1 Recommendations Regarding the Structural Soundness of the Management Unit(s)**

It is recommended that AEP perform a seismic analysis of the dikes for the Bottom Ash pond using a 2%, 50-year ground acceleration value to determine the Factor of Safety for the impoundment.

### **1.2.2 Recommendations Regarding the Hydrologic/Hydraulic Safety**

None warranted at this time.

### **1.2.3 Recommendations Regarding the Maintenance and Methods of Operation**

The following recommendations are warranted:

1. Observe remaining tree stumps and root balls for deterioration,
2. Excavate deteriorated organic matter, then fill and compact as needed with select material with high Bentonite content.

### **1.2.4 Recommendations Regarding the Surveillance and Monitoring Program**

It is recommended that a document outlining maintenance and operations procedures be developed.