

US EPA ARCHIVE DOCUMENT



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

June 13, 2013

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

VIA E-MAIL

Ms. Cynthia Anderson, Senior Manager, Water and Waste Compliance  
Fossil Generation Development & Construction  
Tennessee Valley Authority  
1101 Market Street, BR 4A  
Chattanooga, TN 37402-2801

Re: Request for Action Plan regarding Tennessee Valley Authority - Shawnee Fossil Plant

Dear Ms. Anderson,

On September 19, 2011 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Tennessee Valley Authority - Shawnee Fossil 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 Tennessee Valley Authority - Shawnee Fossil 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 Tennessee Valley Authority - Shawnee Fossil Plant facility can be accessed at the secured link below. The secured link will expire on July 31, 2013.

Here is the link: <http://www.yousendit.com/download/UVJnT0NkOW5veE43czhUQw>

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 Tennessee Valley Authority - Shawnee Fossil Plant facility. These recommendations are listed in Enclosure 1.

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 **July 15, 2013**. 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),  
[dufficy.craig@epa.gov](mailto:dufficy.craig@epa.gov), [kelly.patrickm@epa.gov](mailto:kelly.patrickm@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

**Tennessee Valley Authority - Shawnee Fossil Plant Recommendations (from the final assessment report)****CONCLUSIONS**

Based on the ratings defined in the USEPA Task Order Performance Work Statement (Satisfactory, Fair, Poor and Unsatisfactory), the information reviewed and the visual inspection, the overall condition of the Ash Pond No. 2 is considered to be SATISFACTORY. Acceptable performance is expected under all applicable loading conditions and no existing or potential safety deficiencies were noted during the course of this assessment.

The slope stability analyses reviewed during this assessment indicate satisfactory factors of safety for all applicable loading conditions. Liquefaction potential analyses indicate that the sluiced ash supporting a portion of the upper dike and the native sand forming the dike foundation will undergo liquefaction during the 2,500 year earthquake; however, post-earthquake stability analyses using reduced residual shear strengths for the liquefied materials indicate that the dike is not anticipated to undergo significant deformation as a result of the liquefaction and the factor of safety meets applicable criteria. The analyses appear to have been performed in accordance with standard engineering practice, and O'Brien & Gere concurs with the results of the analyses.

Based on the new spillway design report prepared by Stantec, the hydrologic/hydraulic capacity of the pond is capable of safely passing the 6-hr PMP storm event, which is considered adequate. The engineering technical documentation is adequate. TVA has implemented a programmatic regular inspections and maintenance procedure which allow for tracking of identified deficiencies and maintenance items, followed by corrective action in a timely manner. Our interviews with TVA personnel responsible for the operation of the impoundment indicate that a regular operations plan is in use at the Ash Pond No. 2 unit. The regular operating procedures of the facility do not appear to be impacting the structural integrity of the impounding embankments.

The plant engineering staff maintains all design documents and inspection reports in a well organized manner. The plant operations personnel have received training in dam safety inspections and implement daily, weekly, monthly, and annual internal inspections, supported by periodic inspections by an outside consultant. Based on these findings, the operations and maintenance procedures practiced at the Ash Pond No. 2 appear adequate.

**RECOMMENDATIONS**

No urgent action is needed for continued safe and reliable operation of Ash Pond No.2.

**MONITORING AND FUTURE INSPECTION**

TVA's programmatic operations and maintenance document is a well organized plan that clearly specifies the roles and responsibilities of CCR management unit operations personnel and provides detailed schedules and procedures outlining internal inspection frequencies and documentation practices. O'Brien & Gere recommends continued internal inspections by personnel trained in dam safety and periodic inspections by independent licensed dam safety engineers.