

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 - Johnsonville 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 - Johnsonville 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 - Johnsonville 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 - Johnsonville 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/UVJnT0NkOW44NVhOTzhUQw>

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 - Johnsonville 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
5th Floor, N-5838
Arlington, VA 22202-2733

You may also provide a response by e-mail to hoffman.stephen@epa.gov,
dufficy.craig@epa.gov, kelly.patrickm@epa.gov and 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 - Johnsonville Fossil Plant Recommendations (from the final assessment report)

CONCLUSIONS

The following conclusions pertain to the Active Ash Disposal Area (AADA) at the Johnsonville Fossil Plant. Conclusions are based on visual observations from a one-day site visit on September 20, 2011, and review of technical documentation provided by the Tennessee Valley Authority (TVA).

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

Based on a review of the engineering data provided by TVA's technical staff and Dewberry engineers' observations during the site visit, the improved perimeter dike embankment and new outlet works of the Active Ash Disposal Area appear to be structurally sound under static loading conditions. Based on review of the furnished pseudo-static slope stability analysis completed by TVA's consultant, Stantec Consulting Services Inc., in February 2012, the perimeter dike embankment appears to be stable under relatively conservative seismic loading conditions, which were based on the 2,500-year return period event with a PGA = 0.254g (hard rock site). Liquefaction can occur at this site, particularly with its proximity to the New Madrid fault. However, post-earthquake structural stability meets acceptable minimum FS criterion.

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

Furnished documentation shows that the AADA under current conditions should be able to pass the full 6-hour PMP event without overtopping the perimeter dike. Therefore, on the basis of furnished hydrologic/hydraulic documentation, the AADA appears to have satisfactory hydrologic/hydraulic safety.

Conclusions Regarding the Adequacy of Supporting Technical Documentation

The supporting technical documentation for the AADA is adequate. Engineering documentation reviewed is referenced in this report and selected parts of the documentation are included in Appendix A.

Conclusions Regarding the Description of the Management Unit(s)

The description of the management units provided by TVA is an accurate representation of what Dewberry observed in the field.

Conclusions Regarding the Field Observations

Dewberry staff was provided access to all areas in the vicinity of the management units required to conduct thorough field observations. The visible parts of the dike embankments, spillway, and outlet structures were observed to have no signs of overstress, significant settlement, shear failure, or other signs of instability. The dike embankments appeared structurally sound. There are no apparent indications of unsafe conditions or conditions needing emergency remedial action.

Conclusions Regarding the Adequacy of Maintenance and Methods of Operation

The current maintenance and methods of operation appear to be adequate for the CCR management units. There was no evidence of significant undocumented embankment repairs or prior releases observed during the field assessment.

Conclusions Regarding the Adequacy of the Surveillance and Monitoring Program

The surveillance program is adequate. The instrumentation monitoring program is adequate. In the absence of problem or suspect conditions, there is no need for additional performance monitoring instrumentation at this time.

Classification Regarding Suitability for Continued Safe and Reliable Operation

The Active Ash Disposal Area is **SATISFACTORY** for continued safe and reliable operation. No existing or potential management unit safety deficiencies are recognized in the field assessment and review of furnished operations, maintenance, surveillance, and monitoring information. Acceptable performance is expected under applicable static and seismic loading conditions and hydrologic conditions in accordance with the applicable criteria.

RECOMMENDATIONS

Recommendations Regarding the Structural Stability

No recommendations for physical or operational modifications to enhance structural stability appear warranted at this time.

Recommendations Regarding the Hydrologic/Hydraulic Safety

No recommendations for physical or operational modifications to enhance hydrologic/hydraulic capacity appear warranted at this time.

Recommendations Regarding the Supporting Technical Documentation

No recommendations appear warranted at this time.

Recommendations Regarding the Description of the Management Unit(s)

No recommendations appear warranted at this time.

Recommendations Regarding the Field Observations

No significant problems were observed in the field assessment that would require special attention outside of routine maintenance. The minor issues observed, mostly small eroded areas or areas of poor grass growth, should be addressed by TVA's routine maintenance activities. In the DRAFT Dam Assessment Report, it was recommended that the areas of the two small apparent seeps at either end of the gabion wall near the south end of the northeast dike be visually monitored in future inspections, to check for flowing seepage and movement of soil particles with any flowing seepage that may develop.

TVA has addressed the above comments and recommendation (see Stantec's letter dated October 3, 2012 in Appendix C, Doc 16). The two apparent seeps were determined to be wet-weather features.

Recommendations Regarding the Maintenance and Methods of Operation

No recommendations appear warranted at this time.

Recommendations Regarding the Surveillance and Monitoring Program

No recommendations appear warranted at this time.

Recommendations Regarding Continued Safe and Reliable Operation

No recommendations appear warranted at this time.