

US EPA ARCHIVE DOCUMENT



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

June 27, 2011

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Ms. Lisa Messinger, Senior Environmental Scientist
Vectren
P.O. Box 209,
Evansville, Indiana 47702

Dear Ms. Messinger,

On August 17, 2010 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the FB Culley 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 FB Culley 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 FB Culley 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 FB Culley facility. These recommendations are listed in Enclosure 2.

Since these recommendations relate to actions which could affect the structural stability of the CCR management units 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 explain why. Please provide a response to this request by July 27, 2011. 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

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

Enclosures

6.1 DEFINITIONS

Priority 1 Recommendations: Priority 1 Recommendations involve the correction of deficiencies where action is required to ensure the structural safety and operational integrity of the facility or that may threaten the safety of the impoundment.

Priority 2 Recommendations: Priority 2 Recommendations are where action is needed or required to prevent or reduce further damage or impair operation and/or improve or enhance the O&M of the facility, that do not appear to threaten the safety of the impoundment.

Based on the observations made during the site assessment, it is recommended that the following actions be taken at the F. B. Culley Power Generating Station.

6.2 PRIORITY 1 RECOMMENDATIONS

1. Perform stability, seepage, and seismic analyses by 08/01/2011. The upstream slopes of the West and East Ash Ponds appear to be as steep as 1H:1V, and their stability is unknown. Downstream slopes along the Ohio River are difficult to inspect due to vegetation. The steepness of the river channel banks is also unknown. Due to the lack of engineering analysis, a subsurface investigation with stability, seepage, and seismic analyses of both impoundments should be completed.

2. Evaluate large trees on south bank downstream slopes by 08/01/2011. The large mature trees that exist on the south bank's downstream slopes should be further evaluated as part of an overall engineering subsurface investigation, including slope stability, seepage, and seismic analyses (Priority 1 Recommendation #1) of the East Ash Pond. As part of this study, the "minimum design embankment prism" of the south bank of the East Ash Pond should be defined. With additional topographic survey information of the south bank geometry, further evaluation can determine the relationship of the large trees on the downstream slope to the minimum design embankment prism. Once this information is available, a determination regarding the removal of the large trees on the downstream slope of the south bank of the East Ash Pond can be made. The south bank downstream slope of the West Ash Pond appears to be a long established slope with many mature trees. No visible signs of significant slope distress were observed in the upper portions of the downstream slope or the crest. Given the potential complications associated with disturbing well-established, large rootballs on a slope next to a major waterway, further discussion should be initiated with state agencies and the Corps of Engineers for guidance. Also, given the relative inactivity of the West Ash Pond, perhaps monitoring the south bank would be an appropriate next step for evaluation of the West Ash Pond. The results of the engineering study for the south slope of the East Ash Pond should also be used to assist in making decisions for the West Ash Pond's south slope.

3. Control vegetation on the upstream and downstream slopes by 08/01/2011 and ongoing. Refer to Federal Emergency Management Agency (FEMA) Manual 534, "Impact of Plants on Earthen Dams" for guidance on vegetation removal. This manual is available on the FEMA website.

4. Repair erosion and over-steepening of upstream slopes by 08/01/2011.

Minor erosion and over-steepening of the upstream slopes were observed for both the West and East Ash Ponds. Where erosion has occurred, these areas should be filled in, and the slopes should be re-dressed with the appropriate fill materials to keep erosion from cutting into and compromising the embankment further. The slopes should have a consistent, well-maintained cover of short grasses.

Preliminary upstream slope angle recommendations are no steeper than 2.5H:1V. Once the engineering stability evaluation is complete, more detailed recommendations should be available.

Once the upstream slopes have been restored, the crest should be covered with a driving/wearing surface of crushed aggregate, where it currently is soil or ash covered.

5. Update the EAP for the facility by 08/01/2011. The EAP should be updated to be in accordance with current safety guidelines for action and response during an emergency at the facility.

6. Perform a hydrologic and hydraulic study by 08/01/2011. This study should be performed to determine if the existing ponds are capable of impounding the appropriate inflow design flood. A dam break analysis should also be completed to determine the possible effects on the safety of people and the environment downstream of the facility.

7. Perform an emergency spillway study by 08/01/2011. This study should be performed to evaluate alternatives for an emergency outlet system to release flows during extreme precipitation events.

6.3 PRIORITY 2 RECOMMENDATIONS

1. Develop an Operation and Maintenance (O&M) manual for the impoundments and the facility 08/01/2011. An O&M manual has not been developed for the site and should be completed using the current staff's knowledge, as well as engineering judgment. The EAP should be included as part of this O&M manual once it has been updated.

2. Maintain a log of maintenance and other activities at the impoundments and supporting facilities.

3. The pump for the West Ash Pond should be tested annually.

4. The pump for the East Ash Pond should be tested annually.