

US EPA ARCHIVE DOCUMENT



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

December 14, 2009

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Thomas Shaw
Big Rivers Electric Cooperative
145 N. Main Street
P.O. Box 1518
Henderson, KY 42419-1518

Dear Mr. Shaw,

On September 17-18, 2009 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Reid/Green/HMPL 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 Reid/Green/HMPL 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 Reid/Green/HMPL facility is enclosed. This report includes a specific 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 Reid/Green/HMPL 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 January 15, 2010. Please send your response to:

Mr. Stephen Hoffman
US 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
US Environmental Protection Agency
Two Potomac Yard
2733 S. Crystal Drive
5th Floor, N-237
Arlington, VA 22202-2733

You may also provide a response by e-mail to hoffman.stephen@epa.gov

This request has been approved by the Office of Management and Budget under EPA ICR Number 2350.01.

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.

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 ongoing efforts to ensure protection of human health and the environment.

Sincerely,
/Matt Hale/, Director
Office of Resource Conservation and Recovery

Enclosures

6.1. Urgent Action Items

None of the recommendations are considered to be urgent, since the issues noted above do not appear to threaten the structural integrity of the dam in the near term.

6.2. Long Term Improvement

The deficient conditions observed during the inspection do not require immediate attention, but should be implemented in the near future as part of a regular maintenance plan. The recommended maintenance/improvement actions are provided below, along with Big Rivers Electric's plans to address these recommendations:

Reid/HMPL Ash Pond

- Crest – fill ruts on crest and re-establish vegetative cover. We understand from the utility representative that the ruts have been filled with crushed stone to provide support for vehicles.
- Inboard slopes – repair eroded inboard slopes. Repairs should be completed in accordance with an engineered design. Inspect and maintain erosion that may develop on freeboard section of all inboard slopes on a regular basis. Keep vegetation under control to allow for visual inspection of the exposed portion of the slope above the waterline. We understand that these issues are currently being evaluated by the utility's engineering consultant.
- Outboard slopes – restore the eastern slope to its design inclination and re-vegetate. The slope restoration should be performed in accordance with an engineered design with reference to the original design. Remove wooden poles embedded in slope and backfill with compacted fill consistent with the original design. We understand that an engineering specification for the slope repairs has been prepared and a solicitation for bids has been issued. The poles will be removed and the holes backfilled.
- Outboard toe – re-grade the swale along the toe to improve drainage. The swale may need to be lined with alternate materials, such as crushed stone or concrete to alleviate the soft soil condition. Consider installing a V-notch weir to monitor seepage flow rate. Remove wooden poles and fill with compacted material consistent with the dike design. We understand that the utility is planning to re-grade the swale to improve drainage, and will consider installing a weir.
- Additional studies – perform geotechnical investigation, cross-sectional topographic survey, and slope stability analyses of critical slopes. Install piezometers to check phreatic levels within the embankment. Analyze for normal pool with steady state seepage, maximum surcharge pool, and seismic loading conditions. The utility has requested a proposal to complete these recommended action items and will establish an implementation schedule upon review of the proposal.

Green Ash Pond

Inboard slopes – repair eroded inboard slopes. Repairs should be completed in accordance with an engineered design. Inspect and maintain erosion that may develop on freeboard section of all inboard slopes on a regular basis. Keep vegetation under control to allow for visual inspection of the exposed portion of the slope above the waterline. We understand that these issues are currently being evaluated by the utility's engineering consultant.

- Emergency outlet – replace emergency overflow outlet pipes. Repairs should be completed in accordance with an engineered design. We understand that a repair design has been completed and bids are being solicited to complete the repairs, which is expected to be complete by the end of 2010.
- Outboard toe – re-grade poorly drained swale along west and south toe to reduce ponding stormwater. We understand that the utility plans to complete the re-grading by the end of 2010.
- Additional studies – perform geotechnical investigation, cross-sectional topographic survey, and slope stability analyses of critical slopes. Install piezometers to check phreatic levels within the embankment. Analyze for normal pool with steady state seepage, maximum surcharge pool, and seismic loading conditions. The utility has requested a proposal to complete these recommended action items and will establish an implementation schedule upon review of the proposal.

6.3. Monitoring and Future Inspection

O'Brien & Gere recommends continued participation in state biennial inspections. Consideration should also be given to independent inspections, such as the one conducted by Associated Engineers, Inc., by licensed dam safety engineers on at least a biennial basis. Consideration should be given to development of an O&M Plan that would establish a firm schedule for operations, maintenance, and inspection activities.

6.4. Time Frame for Completion of Repairs/Improvements

The majority of the identified deficiencies for both ponds were noted in the previous impoundment inspections by Associated Engineers, Inc. Based on our conversations with representatives of Big Rivers Electric and Associated Engineers, Inc. engineering designs for items such as erosion repairs, Reid/HMPL Pond east slope repair, and emergency overflow outlet pipe restoration are currently underway and are expected to be implemented upon completion of the design. We recommend that the owner continue toward this schedule as planned. We recommend that the other improvements and stability analyses recommended above be completed prior to the next scheduled inspection by KDEP, or by the end of 2010. The results of the stability analyses should be provided to KDEP for review and formal filing.