

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. Michalene Reilly, Manager of Environmental Services
Hoosier Energy
P.O. Box 908
Bloomington, Indiana 47402-0908

Dear Ms. Reilly,

On August 19, 2010 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the FE Ratts 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 FE Ratts 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 FE Ratts 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 FE Ratts 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

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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

4.2.1 Hydrologic and Hydraulic Recommendations

Draft Report

AMEC recommends that an appropriate design storm rainfall and freeboard depth in accordance with MSHA guidelines be applied to the impoundment's watershed to assess whether the dams and decant systems can safely store, control, and discharge the design flow. Based on the size and rating for the Ponds 1, 2, and 3, the MSHA design storm would be the 100-year storm. Based on the size and rating for Pond 4, the MSHA design storm would be the ½ PMF. Hydraulic calculations should also be completed to determine the rate at which the discharge structure and associated piping could pass the design storm, if necessary, or draw down elevated water surfaces following such an event. The analysis should consider all critical stages over the life of the pond including full pond conditions.

Final Report

AMEC continues to recommend that hydrologic and hydraulic calculations be completed for the ponds as described above for the September 2010 Draft Report. An appropriate operating freeboard, per MSHA, should be determined and applied based on the results of the calculations.

4.2.2 Geotechnical and Stability Recommendations

Draft Report

AMEC recommends that stability analyses be completed for Ponds 1, 2, 3, and 4 that include the maximum design water levels and appropriate steady-state phreatic surfaces. Likewise, the stability analyses should consider all critical stages during the life of the facility, such as maximum pool area and any potential surcharges, as well as likely loading combinations. AMEC recommends that the slope stability analyses include slip surface optimization to allow for noncircular failure surfaces.

Final Report

AMEC continues to recommend that stability analyses be completed for Ponds, 1, 2, 3, and 4 as described above.

4.2.3 Monitoring and Instrumentation Recommendations

AMEC recommends additional instrumentation to monitor slope stability and landslide conditions. In order to monitor these parameters, Hoosier Energy should install combination slope inclinometers and additional piezometers in the river side dike of each ash pond. These instruments may be installed within the same borehole. Routine monitoring should be established with corresponding elevations within the ash ponds at the time of the measurement in order to establish an understanding of the embankment behavior.

In order to monitor change of water surface, a gauge should be added to Ponds 1 and 4. Routine monitoring should be established and read in conjunction with slope inclinometer and piezometer readings.

4.2.4 Inspection Recommendations

Hoosier Energy plant personnel state they currently perform quarterly inspections of the ash ponds. Although inspections by Hoosier Energy is commendable, a more detailed and documented record would be appropriate. AMEC recommends that the current inspection program by the plant be expanded to include inspections which identify potential problems, areas inspected, instrumentation monitoring (when installed), and pond and river levels. Inspections of the ponds should be performed after significant rainfall events.

AMEC understands a Professional Engineer performed an inspection in 2007. We recommend this type of inspection program and report by a Professional Engineer be continued at least annually, in addition to the recommended monthly inspections by facility personnel.

4.2.5 Vegetation Removal

Due to heavy vegetation including tall grasses, brush, and trees, AMEC could not readily evaluate the embankments. AMEC recommends the trees and brush be removed from the

interior and exterior embankment slopes. Additionally, any animal burrows should be located and filled