

US EPA ARCHIVE DOCUMENT



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

January 7, 2011

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Allen Rudek
Vice President
Allete Inc. Minnesota Power
30 West Superior Street
Duluth, Minnesota 55802-2093

Dear Mr. Rudek,

On May 17, 2010 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Clay Boswell Power Station 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 Clay Boswell Power Station 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 Clay Boswell Power Station 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 Clay Boswell Power Station 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 February 7, 2011. 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 or 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

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

Sincerely,
/Suzanne Rudzinski/, Director
Office of Resource Conservation and Recovery

Enclosures

Enclosure 2
Clay Boswell Power Station Recommendations

4.2 Hydrologic and Hydraulic Recommendations

Review of the Minnesota Administrative Rules for Dam Safety does not indicate storage is required within the pond for any specific rainfall event. Minnesota Power provided a hydrologic calculation summary showing that the 12-inch 48-hour rainfall event can be successfully contained using the wet storage capacity of the Active Ash Pond Complex.

AMEC recommends Minnesota Power determine what rainfall event the Active Ash Pond Complex, Waste Water Treatment Plant Basins and Inactive Bottom Ash Pond are capable of containing. A more complete evaluation would determine the effect of the Probable Maximum Flood (PMF) event on the ash ponds and the Boswell Energy Center site.

4.3 Geotechnical and Stability Recommendations

AMEC recommends a stability analyses be completed for the Inactive Bottom Ash Pond that includes 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. Additionally, for the Waste Water Treatment Plant Basins, Minnesota Power should document the stability of the structure (for all critical stages), and provide design documentation to verify this, including a stability analysis, if appropriate.

4.4 Instrumentation Monitoring Recommendations

AMEC recommends additional instrumentation to monitor slope stability and landslide conditions. In order to monitor these parameters, Minnesota Power 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.

Due to the limited outflow capacities of the ponds, AMEC recommends Minnesota Power create an Emergency Action Plan in the event of the PMF or other significant event. The emergency action plan should relate pool elevation to specific response actions, identify potential emergency conditions and prescribe procedures to be followed to minimize damage.

4.5 Inspection Recommendations

AMEC has reviewed provided information and inspection records and determined that Minnesota Power has adequate inspection practices. We recommend that Minnesota Power continue the current inspection program and practices.