

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. John Voyles, Jr., Vice President, Transmission and Generation Services  
Louisville Gas & Electric  
220 West Main Street,  
P.O. box 32020  
Louisville, Kentucky 40232

Dear Mr. Voyles,

On September 14-15, 2009 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Mill Creek 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 Mill Creek 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 Mill Creek 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 Mill Creek 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 or hand delivery mail, please use the following address:

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

You may also provide a response by e-mail to [hoffman.stephen@epa.gov](mailto: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

## Enclosure 2 Mill Creek Recommendations

### 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

All of the deficient conditions observed during the inspection are considered to be maintenance items that do not require immediate attention, but should be implemented in the near future as part of a regular maintenance plan.

The recommended maintenance actions are provided below:

1. Inboard slopes – repair eroded inboard slope of northern embankment prior to filling. Repairs should be completed in accordance with an engineered design. Inspect and maintain erosion that may develop on exposed portions of all inboard slopes on a regular basis.
2. Outboard slopes – remove trees and mow vegetation at least twice annually. Perform follow-up inspection of north and west outboard slopes after vegetation is mowed to check for adverse conditions such as sloughs, erosion, and seepage. Trap burrowing rodents and fill animal burrows. Monitor the old slough on the south end of the west dike outboard slope.
3. Divider Dike – maintain outboard slope of divider dike by routinely repairing erosion rills. Monitor for seepage, which could lead to uncontrolled breach.

### 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 ATC Associates, 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.

Based on our review of the engineering records provided to us, a formal evaluation of embankment stability has not been performed since the late 1970's/early 1980's. Considering that embankment conditions such as the water level within the embankments and slope geometry can change over time, it may be prudent to perform an updated slope stability analysis and seismic stability analysis on critical sections of the north and west dikes to confirm that these embankments continue to meet current stability criteria for earth dams. It does not appear that a previous study had been performed for earthquake loading. The stability evaluation should also include installation of permanent observation wells or piezometers so that water levels in the embankments can be monitored during future inspections.

### 6.4 Time Frame for Completion of Repairs/Improvements

Erosion repair and flattening of the north inboard slope should be completed prior to filling this recently excavated and dewatered portion of the pond. Based on our conversations with LG&E personnel, it is anticipated that the refilling of this area will be completed in coordination with the US Army Corps of Engineers (USACE) and the Louisville Metropolitan Sewer District (MSD). The owner should continue toward this schedule as planned.

Removal of trees and mowing of vegetation on the outboard north and west slopes should be completed as soon as practical and a follow-up inspection of these slopes should be performed shortly

after completion of this task. Performing this task during the early winter months after the vegetation has gone dormant may help to simplify the work.

After the mowing is completed, the follow-up inspection should also focus on identification of any animal burrows, which should be filled as soon as practical.

If the ash divider dike is expected to remain in service for more than one month, the outboard slope of the dike should be restored with additional bottom ash to mitigate the erosion rills.

We recommend completion of a comprehensive embankment stability evaluation within one year. The results of this evaluation should be provided to KDEP for review and formal filing.