

US EPA ARCHIVE DOCUMENT



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

March 8, 2010

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Donald Fulkerson, Environmental Affairs Director  
Indiana Kentucky Electric/Ohio Valley Electric  
3932 U.S. Route 23  
P.O. Box 468  
Piketon, Ohio

Dear Mr. Fulkerson,

On October 15, 2009 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the Kyger 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 Kyger 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 Kyger 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 Kyger 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 April 12, 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  
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  
Kyger Creek Recommendations

#### **4.2 Maintaining Vegetation Growth**

Trees and brush should be cleared from all of the interior and exterior slopes of all the Bottom Ash and South Fly Ash Pond dikes. Tree roots can allow for seepage of the retained water through the dikes, which could lead to internal erosion. Internal erosion could weaken the dikes and cause slope failures.

Additionally, the uprooting of trees during storms can create large voids in the embankments that are then susceptible to erosion. Considering the progressive erosion that could occur during a storm which blows the tree over during heavy rains (i.e., hurricane type storm systems) progressive erosion could potentially result in enough loss of soil from the dike to create an unstable situation, which if failure occurs could result in a release of ash. CHA recommends that vegetation be cut on a regular basis to ensure that adequate visual observations are being made by during routine inspections.

#### **4.3 Erosion Protection and Repair**

Erosion rills and subsequent loss of grass cover were observed on multiple embankment slopes of the Bottom Ash Pond and South Fly Ash Pond as discussed in Sections 2.2.1 and 2.3.1. Thinning and loss of grass cover due to concentrated flow was noted on the embankment slopes. CHA recommends repairing these areas by filling all rills with compacted material and reseeded to establish grass where applicable (i.e. exterior embankment slopes).

#### **4.4 Animal Control**

Evidence of animal burrows was observed on the exterior dike of Bottom Ash Pond and the South Fly Ash Pond. CHA recommends OVEC personnel make note of areas disturbed by animal activity, trap animals, and make repairs to areas to protect the integrity of the dikes. Although not seen on other dikes, vegetation cover hides these features.

#### **4.5 Stability Analysis**

It is recommended that detailed stability analyses be performed for the Bottom Ash Pond and South Fly Ash Pond. CHA was not provided with information regarding stability analyses performed prior to or following construction of the ponds nor was information regarding properties of the embankment and foundation soils provided.

The stability analyses for each pond should include a subsurface investigation to determine existing soil parameters in the embankments and foundation soils and the installation of piezometers to determine the current phreatic surface. Loading conditions that should be modeled should include those listed in Table 3, Section 3.3.