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

SEP 15 2009

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Allen Wood
American Electric Power
1 Riverside Plaza,
Columbus, Ohio 43215-2373

Dear Mr. Wood,

On June 1-2, 2009 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a site assessment of the Bottom Ash Pond and the Stingy Run Ash Disposal Pond at the General James Gavin facility. The purpose of this visit was to assess the structural stability of the impoundments or other similar management units that contain "wet" handled coal combustion residuals (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 General James Gavin 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 General James Gavin 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 General James Gavin facility. These recommendations are found on pages 84-85 in the final assessment report and 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 within 14 calendar days of receipt of this letter. 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

4.2 Maintaining Vegetation Growth

The vegetation growth was cut on the embankments immediately prior to our site visit and during our site visit. We recommend that vegetation be cut prior to each quarterly performed by AEP representatives so that adequate visual inspections can be made.

4.3 Bottom Ash Pond South Dike Upstream Slope Stabilization and Wet Area

The upstream slope of the South Dike at the Bottom Ash Pond has experienced several surficial slumps, which are likely the result of over steepening of the slope by crest road grading activities which has resulted in a widening of the crest in combination with undercutting from wave action. CHA recommends the upstream slope be re-graded to correct the steepness and slumped areas for stabilization. This effort should be coordinated with the recommendations made in Section 4.11 to analyze the upstream slope.

4.4 Bottom Ash Pond South Dike Wet Area

At about the mid-point along the length of the south dike downstream slope, there is a wet area which appears to be perched water on surface soil layers. The area was recently re-graded to improve drainage. This area should be monitored on a continual basis. Should a change be observed in this area during an inspection, a qualified engineer should further evaluate this new condition.

4.5 Bottom Ash Pond East Dike Erosion

Areas of erosion gullies along the transition from the crest to the downstream slope were observed during our site visit. AEP should continue to monitor these areas and perform repairs, as part of ongoing maintenance of the dikes. Repairs should included stabilizing the areas with seed and mulching the areas to establish better vegetation.

4.6 Bottom Ash Pond East Dike Repair of Rodent Holes

As discussed in Section 2.2.1.2 – East Dike, several large rodent holes were observed. A few of these appeared to be plugged and AEP personnel indicated that they have had to trap rodents from time to time. CHA recommends that AEP continue with efforts to plug these holes and trap rodents. In addition, noting the locations that have been plugged will provide a record which can be used to more easily identify active versus inactive rodent burrows (i.e. stable versus potentially changing conditions).

4.7 Bottom Ash Pond East Dike Tree and Stump Removal

As discussed in Section 2.2.1.2 – East Dike, there are a few tree stumps along the toe of the east dike. AEP personnel did not know when these trees were cut or why the bench with the access road was apparently constructed around them. These stumps should be monitored for decay and the stumps and associated root balls removed under the direction of a professional engineer. Several small diameter trees were observed at the water line around the pond. These trees have been allowed to grow despite routine mowing efforts. CHA recommends that these trees be cut and the root mass be left in place for trees less than 5 inches in diameter. Trees equal to or larger than 5 inches in diameter should have the root masses removed under the direction of a professional engineer.

4.8 Bottom Ash Pond North Dike Runoff from Flushing the Conveyor

Previous inspection reports indicated that there was an area at the northeast corner where runoff from flushing dust from the coal conveyor was resulting in an erosion gully on the downstream slope. A concrete pad and knee wall was placed under the coal conveyor at this location to minimize the impact of routine cleaning of the coal conveyor on the dike. There are other areas along the conveyor at which coal dust runs out of the conveyor during this process. We recommend that best management practices be utilized during flushing operations to minimize erosion of the embankment.

4.9 Stingy Run Dam Hydraulic Analysis

We recommend that in the event of a major storm event that raises the pool elevation, AEP closely monitor the behavior of the structure. First filling of a dam is a sensitive time because of changes in stress on the earthen embankment. Because the normal pool and design flood storage elevations are significantly different, it is our opinion that storm events that cause the reservoir elevation to rise should be considered as first filling events and the appropriate level of observation be taken to ensure that the dam is not exhibiting signs of internal erosion, piping and/or other concerns as a result of the surcharge pool.

4.10 Recommendations for Additional Stability Analyses – Bottom Ash Pond

Based on our review of available information for the Bottom Ash Pond we recommend that the following tasks be performed to confirm that the embankments are indeed stable under the various loading conditions outlined in Section 3.3.

- We recommend that an investigation be performed in which the properties of the alluvium silt/clay layer can be investigated in more detail in order to determine the presence and thickness of the soft layer of material indicated in the boring logs from June 2009. This scope of work should include additional laboratory testing of samples retrieved from the alluvium layer. (AEP disagrees with this recommendation, see comment 1 on Section 4.11 (page 3 of 5) received from AEP on August 18, 2009)
- We recommend that additional borings be performed to provide better areal coverage of the dikes and the potential soft alluvium layer. This layer appears, from the borings already performed, to vary in elevation and thickness. While at the elevation encountered under the south dike this layer does not create a critical surface, at a higher elevation, and potentially revised design strength, we suggest that this layer may produce a critical surface. (AEP disagrees with this recommendation, see comment 1 on Section 4.11 (page 3 of 5) received from AEP on August 18, 2009)
- CHA modeled the upstream slope using the south embankment geometry and the steady state loading condition and the soil parameter provided in the June 2009 report. The calculated factor of safety was 1.3 which is below the minimum required factor of safety (according to the USACOE). We recommend that a model be prepared for this load case using the soil parameters for the soft alluvium layer described above. AEP indicated in review comments on the Draft version of this report that their consultant has confirmed that regrading the upstream slopes to design grades will result in a factor of safety of at least 1.5 using the soil parameters summarized in Table 4.
- The rapid-draw load case was not evaluated as part of the June 2009 investigation. CHA performed a preliminary analysis of the south embankment slope which indicated that the calculated factor of safety for the rapid draw-down load condition is close to 1.0, which is the minimum required value (according to the USACOE). We recommend that a model be prepared for this load case. While a rapid drawdown is not a scenario that has a high probability of occurrence, CHA recommends understanding the condition and meeting recommended stability factors of safety for the unlikely event that water must be evacuated rapidly via methods other than the existing outlet control structures such as pumping to prevent a more catastrophic release should an emergency condition develop in the embankment. (AEP disagrees with this recommendation, see comment 5 on Section 4.11 (page 3 of 5) received from AEP on August 18, 2009)

4.11 Stingy Run Dam Recommendations for Additional Stability Analyses

Based on our review of available information for the Stingy Run Dam we recommend that the following tasks be performed to confirm that the embankments are indeed stable under the various loading conditions outlined in Section 3.3.

- CHA recommends that AEP confirm that the Upper Sand and Lower Sand strata do not pose a liquefaction risk at this site.
- Although previously designed for a higher operating pool, the Stingy Run Dam has not