

US EPA ARCHIVE DOCUMENT



AEP Glen Lyn Plant
Glen Lyn, Virginia
US EPA Inspection – February 2011
Action Plan based on Final Recommendations – February 12, 2012

AEP has reviewed the final report provided by Dewberry and Davis, LLC as part of their assessment of the ash impoundment facilities at the Glen Lyn Plant. As explained in Section 1.1.1 of the FINAL Dam Assessment Report the Fly Ash Pond is not in service and has no or minimal volume of CCR. AEP plans to submit permit documents for the closure of the Fly Ash Pond and anticipates making this submittal by November 2012. The responses to the recommendations below reflect the impending closure of the Fly Ash Pond and declassification of the structure as a dam.

AEP's comment is denoted in *italic* print after Dewberry and Davis's recommendation.

1.2.1 Recommendations Regarding the Structural Stability

Maintain the on-going inspection program for the Fly Ash Pond and Bottom Ash Pond. Perform a stability analysis of the Fly Ash Pond assuming it behaves as a surface impoundment. Alternatively propose breaching the perimeter dike of the Fly Ash Pond in accordance with appropriate regulations and requirements so that it does not impound water.

AEP will continue its dam inspection and maintenance program, and perform any necessary repairs to ensure a safe facility. With the impending closure of the Fly Ash Pond, AEP will not operate the Fly Ash Pond as a surface impoundment, therefore a stability analysis assuming this operating condition will not be necessary. Closure of the Fly Ash Pond will include modifications to the diking system whereas no water will be impounded. Appropriate engineering calculations will be provided for this closure.

Address the potential for liquefaction at the Fly Ash Pond and Bottom Ash Pond.

A "Simplified Procedure" (Idriss, 1982) will be performed to determine the potential for liquefaction at the Bottom Ash Pond. If the factor of safety is unsatisfactory a further liquefaction assessment will be completed. The results of this analysis will be forwarded to VA DCR no later than March 2013. Due to the future modification and closure of the Fly Ash Pond an analysis of the potential for liquefaction will not be necessary. All closure documents will be submitted to the VA DCR.

The Virginia DCR has indicated it will request new structural stability calculations in 2012 based on a full pond.

AEP will respond to the Virginia DCR request as appropriate.

1.2.2 Recommendations Regarding the Hydrologic/Hydraulic Safety

It is recommended that the Owner perform hydrologic and hydraulic analyses to evaluate the safety of the Fly Ash Pond and Bottom Ash Pond in accordance with VA DCR DSFM requirements.

AEP recognizes the importance of hydraulics and hydrology to a dam and its safety. Additional hydrologic and hydraulic analysis will be performed in accordance with VA DCR DSFM requirements for the Bottom Ash Pond. This work will be complete no later than March 2013. With the impending closure of the Fly Ash Pond, additional analysis is not necessary. A hydrologic and hydraulic analysis will be included in the closure document for the Fly Ash Pond and will be submitted to the VA DCR DSFM.

1.2.3 Recommendations Regarding the Supporting Technical Documentation

It is recommended that technical documentation be prepared and submitted that addresses the potential for liquefaction at the Fly Ash Pond and Bottom Ash Pond.

A "Simplified Procedure" (Idriss, 1982) will be performed to determine the potential for liquefaction at the Bottom Ash Pond. If the factor of safety is unsatisfactory a further liquefaction assessment will be completed. The results of this analysis will be forwarded to VA DCR DSFM no later than March 2013. Due to the future modification and closure of the Fly Ash Pond an analysis of the potential for liquefaction will not be necessary. All closure documents will be submitted to VA DCR DSFM.

1.2.4 Recommendations Regarding the Maintenance and Methods of Operation

It is recommended that all underbrush and trees be removed from the Fly Ash Pond and Bottom Ash Pond in accordance with VA DCR DSFM requirements. This includes all woody vegetation at and beyond the toe of the Fly Ash Pond perimeter dike as well as the embankment and toe of the Bottom Ash Pond adjacent to East River.

AEP fully understands that maintenance of the facilities is part of the actions required to ensure the integrity of the dam and dikes at the AEP facilities. AEP will remove underbrush and trees in accordance with the VA DCR DSFM requirements from the Bottom Ash Pond. AEP is not currently operating the Fly Ash Pond and is working on closure of this facility by the end of 2012. The existing dikes are grassed-covered and mowed periodically throughout the year. Since closure plans would effectively prevent the water storage capabilities, the facility would be removed from the VA DCR list of regulated dams, therefore vegetation beyond the existing toe of dikes will not be removed.

It is recommended that any animal burrows located along the perimeter dike of the Fly Ash Pond and Bottom Ash Pond be backfilled in accordance with standard geotechnical engineering practices for dams, and monitored for future reoccurrence.

AEP will continue to monitor for animal burrows as part of its maintenance and monitoring program. As standard practice they are backfilled as they are found.

It is recommended that the Owner perform an interior inspection of the outlet pipe for the Bottom Ash Pond. Interior inspection should focus on the structural integrity of the pipe, seepage, and debris accumulation. The inspection report should summarize all findings and remedial action required, if any. An interior inspection of the outlet pipe for the Fly Ash Pond doesn't appear warranted at this time as the facility is currently inactive; however, if it becomes active then an interior pipe inspection should be performed as well.

AEP will perform video inspection of the outlet pipe of the Bottom Ash Pond no later than March 2013.