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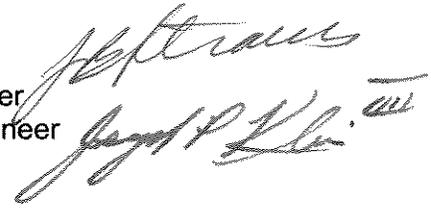
Memorandum

To: Stephen Hoffman, EPA Project Manager

From: Jerry Strauss, PE, Dewberry Project Manager
Joseph Klein, PE, Senior Geotechnical Engineer

Date: March 24, 2011

Re: Recommended Immediate Actions
Economizer Ash Pond Stability
Burlington IA Generating Stations
Interstate Power & Light Company



On Tuesday afternoon, March 22, during our conference call with Alliant, Interstate Power and Light (IPL), and Aether, Alliant agreed to develop a plan for implementing recommendations presented in the Aether report. The utility indicated their response would probably involve conducting a detailed geotechnical investigation. Although the need to proceed with a sense of urgency was recognized by all parties, it was also acknowledged that the planning, field work and geotechnical analysis would take time measured in weeks and months.

The purpose of this memo is to provide EPA with suggestions for short term, operational changes that can be made at the plant immediately to mitigate the risk of Economizer Pond embankment failure during the period that longer term solutions are being developed. To help EPA visualize the situation, we are attaching 3 photographs taken from the roof of the main power plant building:

Photo 1: Shows the Economizer Ash Pond and Upper Ash Pond (note stockpile and equipment on the narrow dike between the two ponds)

Photo 2: Shows the Upper Ash Pond and Lower Ash Pond (coal pile in the foreground)

Photo 3: Lower Ash Pond and Mississippi River (RR embankment between them)

Based on a review of the operations at the time of Dewberry's site visit, we have three suggestions for actions that Alliant should take immediately:

- **Avoid further stockpiling of reclaimed economizer ash on the north side of the pond** (between the Economizer Ash Pond and Upper Ash Pond).

At the time of Dewberry's site visit a stockpile of ash from the Economizer Ash Pond was being stockpiled along the crest of the pond embankment between the Economizer Ash pond and the Upper Ash Pond (see Photo #1). The stockpile is on the upstream side of the embankment, and its presence does not appear to have been included in previous analyses. As the static safety factor is below minimum requirements already, the presence of additional loading on the embankment should be avoided. **Therefore Alliant should cease the stockpiling of economizer ash on the north embankment to the south side of the pond.**

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- **Relocate handling and loading operations for reclaimed Economizer Ash to the south side of the pond.**

At the time of Dewberry's site visit reclaimed economizer ash from the stockpile on the north side of the pond was being loaded into trucks for transportation off-site. Equipment on the embankment includes a track-hoe exactor and two tractor-trailer bulk haulers (see Photo #1). Since the engineering report indicates the ash is susceptible to liquefaction under static loading; the presence of operating equipment and heavy truck on the embankment should be avoided. Vibrations caused by the equipment and vehicles can increase the risk of ash liquefaction without the occurrence of a seismic event. Therefore **as soon as possible move heavy equipment off of the embankment between the Economizer Ash Pond and Upper Ash Pond.** If further studies prove and/or actions are taken to improve the structural stability of the embankment to an acceptable factor of safety, then Alliant may operate heavy equipment on the north embankment.

- **Establish an equipment-free perimeter along the entire water's edge of the economizer pond.** Tracked equipment should be kept a minimum of 10 feet from the edge of the water and rubber tired vehicles should be kept a minimum of 20 feet from the water's edge. As such, ash handling operations can continue on the downslope side of the existing south side ash pile.