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

March 29, 2011

OFFICE OF
SOLID WASTE AND
EMERGENCY RESPONSE

Mr. Daniel Siegfried, Managing Attorney
Alliant Energy Corporate Services
Legal Department
200 First Street SE
PO Box 351
Cedar Rapids, IA 52406-0351

Dear Mr. Siegfried,

Re: EPA Response to Alliant Energy March 23, 2011 Letter: Significant Structural Stability Concerns at the Burlington Generating Station

Thank you for your March 23, 2011 response to the Agency's March 18, 2011 letter which noted significant structural stability concerns at the Burlington Generating Station. EPA appreciates the Alliant Energy's ongoing cooperation in this important effort.

Based on your response, I believe there is agreement that: 1) the Economizer Pond does not meet a minimum factor of safety under projected seismic loadings and 2) that the entire impoundment complex may become fluidized under anticipated seismic loadings. Alliant indicated in the March 23, 2011 letter that it is willing to undertake the following to address these concerns:

1. Retrench the existing flow patterns of the Economizer Ash Pond away from the western embankment.
2. Install upgrades to increase capacity of the outfall for the Upper Ash pond to improve freeboard during storm events.
3. Authorize Aether (engineering firm) to investigate the cyclic resistance capacity of the soils under the embankments on the former Ash Seal Pond, Main Ash Pond, Lower Ash Pond, and Upper Ash Pond to determine if the foundations soils are subject to liquefaction under projected seismic loadings.
4. Authorize Aether to investigate the north bank of the Economizer Pond to further evaluate this pond's factors of safety.
5. Provide EPA with the results of all related studies.

U.S. EPA agrees that the proposed activities noted above should be implemented. In addition, Alliant should implement additional activities which we believe will improve stability of the Coal Combustion Residuals (CCR) management units at the site. These additional activities are as follows:

A. Conduct a formal dam break analysis based on a catastrophic failure of the Economizer Ash Pond, with accompanying calculations and reference material, signed by a Professional Engineer on letterhead.
B. Conduct a hydraulic study that verifies only water is released in the event of an Economizer embankment failure.
C. Avoid stockpiling reclaimed Economizer Ash on the north side of the pond.
D. Relocate handling and loading operations for the reclaimed Economizer Ash to the south side of the pond.
E. Establish an equipment-free perimeter (minimum 10 feet) along the entire water's edge of the Economizer pond.
F. Install slope inclinometers in association with the new borings. The slope inclinometer data should provide locations and magnitude of horizontal movement within the Economizer Ash Pond embankment and underlying materials. Periodic measurements should provide data on the rate of movement. This data should be part of a geotechnical report that describes the actions taken by Alliant to address the embankment stability issue.
G. If the studies find that the foundation soils are subject to liquefaction under projected seismic loadings, Alliant should submit detailed engineering plans which would describe the actions necessary to assure that the impoundments meet acceptable factors of safety.

Please submit a written response by close of business April 1, 2011 noting whether Alliant is willing to implement EPA's additional activities noted above. If Alliant Energy believes that a meeting or conference call would be useful to further discuss these issues, the Agency is more than willing to accommodate such a request.

We look forward to your prompt response and appreciate your continued cooperation.

Sincerely,

Stephen Hoffman
Senior Environmental Scientist