

US EPA ARCHIVE DOCUMENT



April 15, 2013

Mr. Stephen Hoffman  
US Environmental Protection Agency (5304P)  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Dear Mr. Hoffman,

In the USEPA email to Mr. Michael Menne dated March 13, 2013, the USEPA requested that we inform you on how Ameren intended to address recommendations found in the final report on the structural stability of the fly ash and bottom ash ponds at Ameren Energy Resources ("AER") Hutsonville Energy Center. This report was prepared by your engineering contractor (GZA GeoEnvironmental, Inc.) based on a site visit and review of engineering documentation provided by AER. Your engineering contractor then provided their evaluation of the structural stability of the fly ash and bottom ash pond and provided recommendations in their draft report dated April 27, 2012. AER responded to you with comments on the draft report with a letter dated June 28, 2012.

In 2010 and citing investigation authority under CERCLA, USEPA instituted a review of coal ash impoundments at electric generating facilities located throughout the United States. Ameren Corporation and its operating companies cooperated fully with that investigation and provided a variety of engineering documentation and made its facilities available for site inspections performed by USEPA's engineering consultant. That limited review effort has culminated in USEPA's issuance of reports regarding the structural stability of impoundments located at our facilities. While many of the observations are routine, we do have some concerns as to the methodology and process employed in drafting the reports.

In fact, USEPA's regulatory basis in both its initial investigation and most recent correspondence regarding structural assessments remains unclear. (As you are aware, USEPA has proposed revisions to RCRA which would allow for the direct regulation including the engineering and design of impoundments and landfills. That regulatory process, however, has not been finalized.) In fact, state regulatory authorities such as Illinois Department of Natural Resources (IDNR) traditionally have authority over the structural integrity of such facilities through their dam safety programs. Accordingly, in responding to USEPA's reports regarding the structural stability of ash ponds at our facilities, AER reserves its right to object to USEPA's assertion of jurisdiction in an area that appears to be outside of its regulatory purview.

It is worth noting that since this site assessment was performed by the USEPA on June 2, 2011, AER has constructed a closure cap in accordance with 17 Illinois Administration Code Rule "Subpart A – Closure of Ash Pond D, Hutsonville Power Station" adopted January 20, 2011 by the Illinois Pollution Control Board, which defines closure and post-closure care of Ash Pond D. Prior to construction of the closure cap on Ash Pond D, plans were reviewed and approved by the Illinois Pollution Control Board per Subpart A requirements. Also, the Hutsonville Power Station has been mothballed as of January 1, 2012. In addition, earlier this month Ameren Energy Resources filed a proposed site specific rulemaking with the Illinois Pollution Control Board that would provide a regulatory framework for the eventual closure of ash impoundments at its facilities. The closure process contained in that proposed rulemaking is based in pertinent part on the Hutsonville Ash pond D Site Specific Rule.

Subject to the above comments and objections, below are Ameren Energy Resources' responses to the conclusions and recommendations provided in the GZA GeoEnvironmental, Inc. draft dam safety assessment of the coal combustion waste (CCW) impoundments at the Hutsonville Energy Center.

### **Comments on Executive Summary**

AER takes strong exception to the "POOR" condition rating given to the impoundments based on the findings in the report as detailed herein:

#### *Comments on Condition of Pond A, page i:*

1. Animal burrows along the crest of Pond A are minor maintenance issues. AER will fill the burrows with compacted earth and continue to inspect the berms and perform maintenance as normal procedures dictate.
2. As noted in the report, the sloughing on the downstream slope is minor. It is shallow and does not affect the integrity of the berm. The berm will continue to be monitored and repair will be made if the sloughing becomes a dam safety issue.
3. Pond A is an IDNR permitted dam and the embankment was designed by a Professional Engineer per the requirements defined in 17 Illinois Administrative Code; Chapter I; Department of Natural Resources; Subchapter h: Water Resources; Part 3702 Construction and Maintenance of Dams; Section 3702.40 Requirements for Approval of Permits for Construction of New Dams and Major Modifications of Existing Dams. This Code defines Structural and Geotechnical Design Requirements, Hydrologic and Hydraulic Design Requirements, Erosion Protection Requirements, Operating Requirements, Maintenance Requirements, Financial Responsibility of Owner, and right of access for inspection by the IDNR. Prior to construction, IDNR reviewed and approved the Construction Permit Applications for Ash Pond A the design of which was submitted and approved as meeting the requirements of the state and no further hydrologic and hydraulic analysis is deemed necessary.
4. The condition leading to inadequate freeboard was a maintenance issue that developed shortly before the inspection and was in the process of being corrected by the plant at the time of inspection. The maintenance was subsequently completed and the pond was returned to normal operating conditions. No further action is required for this issue.

#### *Comments on Condition of Pond B, page ii:*

1. Pond B is not an IDNR permitted dam because it does not meet the Classification criteria of Section 3702.30 – Applicability defined in 17 Illinois Administrative Code; Chapter I; Department of Natural Resources; Subchapter h: Water Resources; Part 3702 Construction and Maintenance of Dams. Prior to construction, the embankment was designed by a Professional Engineer per the requirements defined in 17 Illinois Administrative Code; Chapter I; Department of Natural Resources; Subchapter h: Water Resources; Part 3702 Construction and Maintenance of Dams; Section 3702.40 Requirements for Approval of Permits for Construction of New Dams and Major Modifications of Existing Dams. Stability analysis of the embankment was performed by a Professional Engineer prior to construction, therefore no additional analysis is deemed necessary.

#### *Comments on Condition of Pond D, page ii:*

1. This deficiency regarding the calculated safety factor under seismic loading being less than 1.0 is not correct. Under seismic loading with a 2,500-year return time, the calculated factor of safety is 1.1. The safety factor of 0.9 referred to in the report is an analysis condition combining seismic mean return time of 2,500 years and flood stage at elevation 436.0. Discussions with the IDNR Dam Safety personnel indicate that this loading condition would not be appropriate for consideration, especially for low hazard dams, due to the extremely low probability of the simultaneous occurrence. AER feels that no additional seismic analysis is necessary.

### **Comments on Studies and Analyses, page ii**

1. Pond B is not an IDNR permitted dam because it does not meet the Classification criteria of Section 3702.30 – Applicability defined in 17 Illinois Administrative Code; Chapter I; Department of Natural Resources; Subchapter h: Water Resources; Part 3702 Construction and Maintenance of Dams. Prior to construction, the embankment was designed by a Professional Engineer per the requirements defined in 17 Illinois Administrative Code; Chapter I; Department of Natural Resources; Subchapter h: Water Resources; Part

3702 Construction and Maintenance of Dams; Section 3702.40 Requirements for Approval of Permits for Construction of New Dams and Major Modifications of Existing Dams. Stability analysis of the embankment was performed by a Professional Engineer prior to construction, therefore no additional analysis is deemed necessary.

2. The hydraulics and hydrology for this facility was designed by a Professional Engineer per the guidelines defined in 17 Illinois Administrative Code; Chapter I; Department of Natural Resources; Subchapter h: Water Resources; Part 3702 Construction and Maintenance of Dams; Section 3702.40 Requirements for Approval of Permits for Construction of New Dams and Major Modifications of Existing Dams. This Code defines Structural and Geotechnical Design Requirements, Hydrologic and Hydraulic Design Requirements, Erosion Protection Requirements, Operating Requirements, Maintenance Requirements, Financial Responsibility of Owner, and right of access for inspection by the IDNR. Prior to construction, IDNR reviewed and approved the Construction Permit Applications for Ash Pond A. The maximum water surface elevation at that time was set at 2-feet below top of berm. AER does not intend to perform additional hydrologic and hydraulic analysis for Pond A.
3. This deficiency regarding the calculated safety factor under seismic loading being less than 1.0 is not correct. Under seismic loading with a 2,500-year return time, the calculated factor of safety is 1.1. The safety factor of 0.9 referred to in the report is an analysis condition combining seismic mean return time of 2,500 years and flood stage at elevation 436.0. Discussions with the IDNR Dam Safety personnel indicate that this loading condition would not be appropriate for consideration, especially for low hazard dams, due to the extremely low probability of the simultaneous occurrence. AER feels that no additional seismic analysis is necessary.

#### **Comments on Recurrent Operation & Maintenance Recommendations**

1. As noted in the report, the sloughing on the downstream slope is minor. It is shallow and does not affect the integrity of the berm. The berm will continue to be monitored and repair will be made if the sloughing becomes a dam safety issue.
2. Animal burrows along the crest of Pond A are minor maintenance issues. AER will fill the burrows with compacted earth and continue to inspect the berms and perform maintenance as normal procedures dictate.
3. Stop logs have been removed and replaced. The slide gate was exercised in March 2012 and operated properly.
4. AER will continue to perform regular mowing to maintain control of vegetation.
5. The permitting agency, IDNR, does not require an Emergency Action Plan for Class III dams. Ponds A, B, and C were designed by a Professional Engineer per the guidelines defined in 17 Illinois Administrative Code; Chapter I; Department of Natural Resources; Subchapter h: Water Resources; Part 3702 Construction and Maintenance of Dams; Section 3702.40 Requirements for Approval of Permits for Construction of New Dams and Major Modifications of Existing Dams. This Code defines Structural and Geotechnical Design Requirements, Hydrologic and Hydraulic Design Requirements, Erosion Protection Requirements, Operating Requirements, Maintenance Requirements, Financial Responsibility of Owner, and right of access for inspection by the IDNR. Prior to construction, IDNR reviewed and approved the Construction Permit Applications for Ash Pond A. Ponds B, C, and D do not meet criteria to qualify as permitted dams per the above listed Code and therefore have not been permitted as such. Hence, Ameren feels that this noted deficiency of not having an Emergency Action Plan (EAP) is not relevant. AER does not plan to take further action on this recommendation of providing an EAP for Ponds A, B, C and D.

#### **Comments on Remedial Measures Recommendations**

1. Hydrologic and hydraulic analysis shows that an emergency overflow spillway is not required.
2. Stability analysis does not require additional embankment improvements due to deficiencies.
3. As noted above, the Pond D embankment does not require additional improvements or modifications due to seismic loading.

#### **Comments on Report**

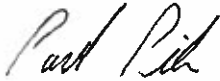
Paragraph 1.2.7 on page 5 of the report incorrectly states that the maintenance of the impoundments is regulated by the EPA. The maintenance of the impoundments in the State of Illinois is regulated by the IDNR.

**Business Confidentiality Claim**

We request the draft Dam Safety Assessment Report for the Hutsonville Energy Center prepared by GZA GeoEnvironmental, Inc. as well as our responses to this report remain confidential. This request is made in accordance with the procedures described in 40 CFR, Part 2, Subpart B. We also request that engineering documents initially submitted to GZA GeoEnvironmental, Inc. for preparation of their draft report along with the stability analysis submitted for consideration in Ameren's response to the draft report be designated as Confidential Business Information.

If you need further information, please feel free to contact me at 314-554-2388.

Sincerely,



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