associated electric cooperative, inc.

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August 18, 2011

Mr. Stephen Hoffman
US Environmental Protection Agency
1200 Pennsylvania Avenue, NM
Washington, DC 20460

Dear Mr. Hoffman:

RE: Plan for Addressing Recommendations in the Site Assessment Report
Associated Electric Cooperative Inc., New Madrid Power Plant

Associated Electric Cooperative Inc. (AECI) is responding to your July 26, 2011 letter requesting AECI to follow up to the recommendations made in the June, 2011 Dam Assessment for Coal Combustion Waste Impoundments at the New Madrid Power Plant.

The following is our response to the recommendations listed in your letter.

**Section 3.2 Studies and Analyses**

1. *Confirm that the elevation of the SP2 Impoundment embankments meet the State of Missouri and the COE requirements for industrial impoundments within the Mississippi River flood plain.*

   AECI Response – The State of Missouri or the Army Corps of Engineers do not have criteria addressing industrial impoundment embankments within the Mississippi River Flood Plain. Slag Pond 2 is not a permanent CCR disposal facility but used for temporary storage of processed bottom ash material. The pond also serves as temporary storage for a redundant sluice line should the primary sluice line experience a disruption in operations. Stockpiled bottom ash material is either loaded onto barges for beneficial reuse or transported to the permitted utility waste landfill. All bottom ash stockpiled in this pond can be removed well in advance of Mississippi River flooding at the New Madrid Plant as demonstrated in the spring of 2011 record flood event.

2. *Perform a hydraulic/hydrologic analysis of the impoundments including the adequacy of the impoundments to accommodate the PMP event required by the State of Missouri and the COE.*

AECI Response – AECI will perform a hydraulic/Hydrologic analysis of Slag Pond 1/Ash Pond 1, Ash Pond 2, and Slag Pond 2 to determine the impoundments ability to accommodate the PMP event using State of Missouri dam safety criteria. Work will be conducted in 2012.

3. *Perform a complete structural and seepage analysis of the impoundments that includes an analysis of the stability of the impoundments during the PMP and flooding of the Mississippi River. The analysis should also account for surcharge loads created by the stockpiling of ash near the impoundment embankments.*

   AECI Response – AECI performed a global stability analysis of Slag Pond 1/Ash Pond 1, and Ash Pond 2 in July 2009. Ash pond embankments were given a factor of safety rating of 1.5 or higher. A seepage analysis of the impoundments that includes an analysis of the stability of the impoundments during the PMP and flooding of the Mississippi River will be completed. A surcharge load analysis will also be conducted for active areas of the impoundment to account for stockpiling of ash near embankments. This work will be completed in 2012.

4. *Evaluate the extent of wave action on the impoundment embankments and impacts on the stability of the slope; repair as necessary.*

   AECI Response – An evaluation of the wave action on impoundment embankments and the impacts on the stability of the slopes will be conducted in 2012. AECI will repair stability issues brought to our attention.

5. *Based on its position as a downstream pond in the water treatment and discharge of ash products at the NMPP, it is likely that the Raw Water Pond contains ash products. GZA recommends the Raw Water Pond be included in future inspections and be subject to the operations and maintenance recommendations made herein.*

   AECI Response – The raw water pond adjacent to the Slag Pond 1 impoundment will be included in all future inspections and will operated and maintained under the same criteria as CCR impoundments.

6. *Develop an EAP to reduce the potential for property damage, environmental damage, and/or loss of life in the areas affected by an impending dam break.*

   The average height of the impoundment embankment ranges between 15 to 20 feet, which falls well beneath the criteria for regulated dams, in the State of Missouri Dam Safety Program. In 2009, a geotechnical evaluation was conducted on the CCR material

within the impoundments and it was determined that the material was not "flowable" which would result in a lateral spread of CCR should an embankment failure take place. Due to the remote location of the impoundments, the distance from environmentally sensitive area, the small embankment heights, and non-flowable CCR material, AECI does not intend to develop an EAP as recommended by the consultant.

7. *Evaluate the cause of sloughing on the western embankment of the AP1 Impoundment and SP2 Impoundment.*

   AECI Response – A geotechnical evaluation of the sloughing on the western embankment of the AP1 Impoundment and SP2 Impoundment will be performed in 2011.

8. *Evaluate the impact of toe removal on the stability of the western embankment of the SP2 Impoundment; repair if necessary.*

   AECI Response – The impacts of the toe removal on the stability of the western embankment of the SP2 Impoundment will be conducted by a geotechnical engineer and repairs made as necessary in 2012.

9. *Conduct video inspection of outlet pipes from decant structures.*

   AECI Response - A video inspection of the outlet pipes from decant structures will be performed in 2012.

**3.3 Recurrent Operation & Maintenance Recommendations**

1. *Increased mowing of the grasses on the embankments currently vegetated with tall grasses. The COE recommends vegetation be kept to less than 12 inches in height on embankments to facilitate inspections and reduce the risk of burrowing animals (COE ETL 1110-2-571 "Guidelines For Landscape Planting And Vegetation Management At Levees, Floodwalls, Embankment Dams, And Appurtenant Structures", April 2009.)*

   AECI Response - Grasses on the embankments will be kept to less than 12 inches in height.

2. *Routine measurements of the groundwater levels in the monitoring wells to evaluate changes in groundwater and seepage conditions.*

   AECI Response – Routine groundwater level measurements were taken for a period of 12 months. A geotechnical engineer will review the data and if deemed necessary,

continuous groundwater level monitoring will be performed on a frequency set forth by the recommendation of the engineer.

3. *Repair the erosion and grade the gravel access road on the southern embankment of the AP2 Impoundment to allow proper drainage.*

   AECI Response – Repairs to erosion and the road graded as recommended in 2012.

4. *Clear deep rooted vegetation from embankments, top of impoundments, and within 50 feet of the embankment toes as recommended by the COE (COE ETL 1110-2-571 "Guidelines For Landscape Planting And Vegetation Management At Levees, Floodwalls, Embankment Dams, And Appurtenant Structures", April 2009.).*

   AECI Response – Deep rooted vegetation will be removed from impoundments and 50 feet of embankment toes. This work will be performed in 2012.

5. *Topsoil and seed areas of poor vegetation in the AP1 Impoundment, AP2 Impoundment and SP2 Impoundment.*

   AECI Response - Areas of poor vegetation will be addressed in 2012.

6. *Provide protective cover over the HDPE liner in the AP2 Impoundment.*

   AECI Response - The HDPE liner will be covered with a protective layer of fly ash in 2012.

**3.4 Repair Recommendations**

GZA recommends the following minor repairs which may improve the overall condition of the impoundment, but do not alter the current design. The recommendations may require design by a professional engineer and construction contractor experienced in impoundment construction.

1. *Repair sloughed soil on the western embankment of the AP1 Impoundment.*

   AECI Response – Sloughed soil on the western embankment of the AP1 Impoundment will be repaired in 2012.

2. *Repair areas of erosion on the AP1 Impoundment, SP1 Impoundment, AP2 Impoundment, and SP2 Impoundment.*

AECI Response – areas of erosion on the AP1 Impoundment, SP1 Impoundment, AP2 Impoundment, and SP2 Impoundment will be repaired in 2012.

3. *Repair rutting present on the SP2 Impoundment crest access road.*

AECI Response – Rutting on the SP2 Impoundment crest access road will be repaired in 2012.

Sincerely,

Duane Highley
Director, Power Production

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cc: Rusty Rice
Brent Ross
Dave White