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File No. 40616-300

Associated Electric Cooperative, Inc.  
New Madrid Power Plant  
P.O. Box 156  
New Madrid, MO 63869

Attention: Ms. Jennifer Burns  
Environmental Analyst

Subject: Initial Hazard Potential Classification Assessment  
Pond 004  
New Madrid Power Plant  
New Madrid, Missouri

Ms. Burns:

This letter presents the results of our Initial Hazard Potential Classification Assessment for the Associated Electric Cooperative, Inc. (AECI) coal combustion residuals (CCR) surface impoundment referred to as Pond 004 located at the New Madrid Power Plant (NMPP) in New Madrid, Missouri.

Haley & Aldrich, Inc. (Haley & Aldrich) was contracted by AECI to perform this Initial Hazard Potential Classification Assessment for the Pond 004 impoundment. This work was completed in accordance with the US Environmental Protection Agency's (EPA's) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257, specifically §257.73(a)(2).

## **1.1 DESCRIPTION OF POND 004 IMPOUNDMENT**

Pond 004 is a CCR surface impoundment located to the east of the NMPP. Pond 004 was originally constructed in 1984. Pond 004 has a surface area of approximately 10 acres in size.

Pond 004 has been utilized for process water management and to provide settling capacity for boiler slag. Portions of the impoundment footprint have been used for staging as well. Decant water discharges through the permitted NPDES outfall to the Mississippi River. The impoundment is surrounded by earthen berms on all sides with only a portion of the northern section of the impoundment being incised.

The embankments are constructed from clay fill obtained from an on-site borrow source. The embankments are underlain by naturally deposited alluvial soils consisting of silty sand, poorly graded sand, silt, lean clay, and fat clay.

The outlet structure from Pond 004 consists of a rectangular concrete drop inlet tower equipped with concrete stop logs. Decant water enters the structure and flows through a pipe that penetrates the Pond 004 east embankment and discharges from the NPDES-permitted Outfall #004 into the Mississippi River. There is no emergency spillway.

## 1.2 HAZARD POTENTIAL CLASSIFICATION ASSESSMENT

### 1.2.1 General

The Hazard Potential Classification of a surface impoundment is based on the potential for loss of human life, economic losses, environmental damage, and/or disruption to lifelines caused by failure or mis-operation of the surface impoundment.

EPA's Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257 requires the owner or operator of a CCR surface impoundment to determine which of the following three hazard potential classifications characterizes their CCR unit:

- High Hazard Potential Classification – A diked surface impoundment where failure or mis-operation will probably cause loss of human life.
- Significant Hazard Potential Classification – A diked surface impoundment where failure or mis-operation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.
- Low Hazard Potential Classification – A diked surface impoundment where failure or mis-operation results in no probable loss of life, and low economic and/or environmental losses. Losses are principally limited to the surface impoundment's owner's property.


### 1.2.2 Hazard Potential Classification

Based on observations during our previous site visit and our review of available information, Haley & Aldrich has judged the Pond 004 CCR surface impoundment as having **Significant** Hazard Potential Classification in accordance with 40 CFR Part 257. The **Significant** Hazard Potential Classification is due to no probable loss of life in the event of a failure, but the potential for economic impacts and potential environmental damage due to the proximity of the impoundment's berms to the Mississippi River.

### 1.3 CERTIFICATION

*§257.73(a)(2)(ii): The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the initial hazard potential classification and each subsequent periodic classification specified in paragraph (a)(2)(i) of this section was conducted in accordance with the requirements of this section.*

I certify that this initial hazard potential classification for the Pond 004 CCR surface impoundment at the AECI New Madrid Power Plant was conducted in accordance with §257.73(a)(2) of the CCR Rule.

Signed:   
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Certifying Engineer

Print Name: Steven F. Putrich  
Missouri License No.: 2014035813  
Title: Project Principal  
Company: Haley & Aldrich, Inc.

Professional Engineer's Seal:

