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Associated Electric Cooperative, Inc.  
Thomas Hill Energy Center  
5693 Highway F  
Clifton Hill, Missouri 65244

Attention: Mrs. Jenny Jones  
Senior Environmental Analyst

Subject: Periodic Hazard Potential Classification Assessment  
Pond 001 - Cell 001  
Thomas Hill Energy Center  
Clifton Hill, Missouri

Mrs. Jones:

This document presents the results of our Periodic Hazard Potential Classification Assessment for the Associated Electric Cooperative, Inc. (AECI) Pond 001 - Cell 001 CCR Surface Impoundment located at the Thomas Hill Energy Center (THEC) in Clifton Hill, Missouri.

Haley & Aldrich, Inc. (Haley & Aldrich) completed an inspection on behalf of Haley & Aldrich, Inc. (Haley & Aldrich) was contracted by AECI to perform this Periodic Hazard Potential Classification Assessment for the Cell 001 impoundment. This work was completed in accordance with the US Environmental Protection Agency's (EPA's) CCR Rule effective 19 October 2015 including subsequent revisions, specifically Code of Federal Regulations Title 40 (40 CFR) §257.73(a)(2).

The Initial Hazard Potential Classification Assessment was completed on 16 October 2016 by Haley & Aldrich. This document serves as the 5-year periodic update as required by the CCR Rule.

## **1.1 DESCRIPTION OF CELL 001 IMPOUNDMENT**

Cell 001 is a coal combustion residuals (CCR) surface impoundment used for settling and temporary wet storage of bottom ash and boiler slag sluiced from Thomas Hill Units 1 and 2. Historically, CCR sluice water was pumped from the power plant to Cell 001. Recently, AECI constructed a Concrete Dewatering Tank (CDT) for the purpose of managing the same sluice water. Currently, the CDT is being tested and initiated, but is not yet fully functional. Once fully operational, the CDT will provide treatment to remove CCR from the waste-stream and provide settling capacity for the related sluice water. During this testing phase, treated sluice water is being discharged from the CDT into Cell 001 one 15-in. outside diameter HDPE pipe. This flow is then conveyed through Cell 001 until it enters the existing rectangular concrete

decant structure equipped with 60-inch wide wood stop logs, and flow via a 30-in. diameter concrete outlet pipe to a drainage channel which conveys flows into Cell 003. This outlet structure and conveyance channel remain unchanged from historic operations.

It is understood that Cell 001 was originally designed by Burns & McDonnell in 1978-1979 and constructed shortly thereafter. The embankments were constructed from clayey fill which is underlain by naturally deposited clay with varying amounts of sand and gravel, which in turn is underlain by shaley to sandy clay.

The Cell 001 impoundment has an area of approximately 1.8 acres based on a normal operating water level of 740.13. The Cell 001 embankments are generally 10 ft or less in height, with a crest width generally ranging from 15 to 20 ft. A processing and containment pad exists adjacent to the southwestern edge of the impoundment. The southern edge of the processing and containment pad is defined by a 5-ft high containment berm. Beyond the containment berm, ground surface slopes downward to Cell 002 with a slope height of up to 30 ft.

## 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 21 July 2021 site visit and our review of available information, Haley & Aldrich has judged the Cell 001 impoundment as having **Low** Hazard Potential Classification in accordance with 40 CFR Part 257. The **Low** Hazard Potential Classification is due to no probable loss of life in the event of a failure, low economic and environmental impacts, and losses limited to the impoundment owner's property which extends approximately 5 miles south (downstream) of Cell 001. These findings from the Periodic Hazard Potential Classification Assessment are consistent and

unchanged from the Initial Hard Potential Classification Assessment completed on 16 October 2016 by Haley & Aldrich.

### 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 Periodic Hazard Potential Classification for Pond 001 – Cell 001 CCR surface impoundment at the AECl Thomas Hill Energy Center was conducted in accordance with §257.73(a)(2) of the CCR Rule.

Signed:   
Certifying Engineer

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

Professional Engineer's Seal:

