HALEY & ALDRICH, INC.
6500 Rockside Road
Suite 200
Cleveland, OH 44131
216.739.0555

15 October 2021
File No. 129342-046

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

Attention: Mrs. Jenny Jones
Senior Environmental Analyst

Subject: Periodic Hazard Potential Classification Assessment
Pond 003
New Madrid Power Plant
New Madrid, Missouri

Mrs. Jones:

This document presents the results of our Periodic Hazard Potential Classification Assessment for the Associated Electric Cooperative, Inc. (AECI) coal combustion residuals (CCR) surface impoundment referred to as Pond 003 located at the New Madrid Power Plant (NMPP) in New Madrid, Missouri.

Haley & Aldrich, Inc. (Haley & Aldrich) completed an inspection on behalf of AECI on 19 July 2021 and have completed this assessment as a follow up activity. This work was completed by Haley & Aldrich, Inc. (Haley & Aldrich) 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 POND 003 IMPOUNDMENT

Pond 003 is a CCR surface impoundment located to the southeast of the NMPP. Pond 003 was originally constructed in 1972. Pond 003 has a surface area of approximately 110 acres in size.

Historically, Pond 003 has been utilized for process water management and to provide settling capacity for fly ash and boiler slag. Currently, boiler slag, coal pile runoff, and process water are managed by the unit prior to decant water discharge through the permitted NPDES outfall to a drainage way to the Mississippi River. The impoundment is surrounded by earthen berms on all sides.

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 003 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 003 south embankment and discharges from the NPDES-permitted Outfall #003 into an earthen open channel before flowing to 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 003 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. 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 the Pond 003 CCR surface impoundment at the AECI New Madrid Power Plant 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:

Steven F. Putrich
Digitally signed by Steven F. Putrich
Date: 2021.10.15 14:01:12 -04'00'