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File No. 129342-015

SUBJECT: Liner Design Criteria for CCR Surface Impoundments  
Associated Electric Cooperative, Inc.  
New Madrid Power Plant – Inactive Lined Pond  
New Madrid, Missouri

Haley & Aldrich, Inc. has developed this Liner Design Criteria demonstration on behalf of Associated Electric Cooperative, Inc. (AECI) New Madrid Power Plant located near New Madrid, Missouri. AECI operated the inactive coal combustion residuals (CCR) surface impoundment referred to as the Inactive Lined Pond (Lined Pond) for management of CCRs generated at the site. This document has been developed to address the liner design criteria certification from the U.S. Environmental Protection Agency's Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257 (CCR Rule), specifically §257.71. Based on the USEPA's issued CCR Rule Partial Vacatur in 2016, the inactive Lined Pond impoundment at the NMPP is subject to applicable requirements of the CCR Rule.

*§257.71(a)(1): No later than October 17, 2016<sup>1</sup>, the owner or operator of an existing CCR surface impoundment must document whether such unit was constructed with any one of the following:*

- (i) A liner consisting of a minimum of two feet of compacted soil with a hydraulic conductivity of no more than  $1 \times 10^{-7}$  cm/sec;*
- (ii) A composite liner that meets the requirements of §257.70(b); or*
- (iii) An alternative composite liner that meets the requirements of §257.70(c).*

The Lined Pond was constructed with a compacted subgrade consisting of native soils and overlaid with 60-mil (side slopes) and 80-mil (bottom) geomembrane liners. However, the construction method documentation is insufficient to define the compacted subgrade as meeting the requirements listed above. Therefore, for purposes of the CCR Rule, the Lined Pond is considered an unlined CCR surface impoundment.

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<sup>1</sup> Note that this date reflects the original CCR Rule language and does not apply to this unit since it is an inactive surface impoundment.

§257.71(b): The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer attesting that the documentation as to whether a CCR unit meets the requirements of paragraph (a) of this section is accurate.

I certify that the Inactive Lined Pond at the New Madrid Power Plant was not constructed with the USEPA defined liners listed under §257.71(a)(1) of the CCR Rule based on available documentation and that the inactive CCR surface impoundment is considered unlined.

Signed:   
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Certifying Engineer

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Title: Project Principal  
Company: Haley & Aldrich, Inc.

Professional Engineer's Seal:

