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File No. 128064-006

SUBJECT: Liner Design Criteria for CCR Surface Impoundments
Associated Electric Cooperative, Inc.
Thomas Hill Energy Center – Inactive Cell 002 West
Clifton Hill, Missouri

Haley & Aldrich, Inc. has developed this Liner Design Criteria demonstration on behalf of Associated Electric Cooperative, Inc. (AECI) Thomas Hill Energy Center located near Clifton Hill, Missouri. AECI operated the inactive coal combustion residuals (CCR) surface impoundment referred to as Cell 002 West 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 Cell 002 West impoundment at the THEC is subject to applicable requirements of the CCR Rule.

§257.71(a)(1): No later than October 17, 2016¹, 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 1×10^{-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).*

Cell 002 West was constructed on natural grades that consist of clayey soils. However, the in-situ construction method did not render a liner sufficient to meet the requirements listed above as defined by the USEPA. Therefore, for purposes of the CCR Rule, Cell 002 West is considered an unlined CCR surface impoundment.

¹ 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 Cell 002 West impoundment at the Thomas Hill Energy Center 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: 

Certifying Engineer

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

Professional Engineer's Seal:

