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MEMORANDUM

28 May 2020
File No. 129638-007

TO: Associated Electric Cooperative, Inc.
Jenny Jones – Senior Environmental Analyst

FROM: Haley & Aldrich, Inc.
Jason M. Pokorny, P.E. (OH) -
Senior Project Manager
Steve F. Putrich, P.E. – Principal
Consultant

SUBJECT: Thomas Hill Energy Center
Cell 002 West CCR Surface Impoundment
Annual Inspection and Stability Assessments Documentation of Corrective Measures

Mrs. Jones:

Haley & Aldrich, Inc. (Haley & Aldrich) has prepared this documentation on behalf of Associated Electric Cooperative, Inc. (AECI) related to deficiencies identified during annual impoundment inspections or periodic stability assessments (SSA) for the coal combustion residuals (CCR) impoundment referred to as Cell 002 West at the Thomas Hill Energy Center located in Clifton Hill, Missouri. The attached table provides a summary of the completed inspection or SSA, the identified deficiencies, and the corrective measures completed by AECI to address the identified deficiency. This documentation has been 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 effective 19 October 2015 including subsequent revisions, specifically related to §257.73(d) and §257.83(b).

Haley & Aldrich has provided a summary of the remedies based on correspondence with AECI regarding the noted deficiencies in the attached Table I.

Document	CCR Rule Reference	Deficiency	Remedy
2019 Annual Inspection	§257.83	A minor slump was identified on the embankment face in the east basin.	AECI regraded the area of the slump and continues to monitor.
		Cell 2 currently has no instrumentation for determining water elevation.	AECI has ordered depth gages and will be installed in 2020.
2018 Annual Inspection	§257.83	Cell 2 currently has no instrumentation for determining water elevation.	AECI has ordered depth gages and will be installed in 2020.
2017 Annual Inspection	§257.83	Intermittent slumping of the downstream embankment face was observed just above the downstream water level along approximately half of the length of downstream embankment face.	THEC placed riprap extending from about two to three feet above the water level to about one to two feet below the water level along the length of the embankment to correct erosion and slumping identified.
2016 Structural Stability Assessment	§257.73	In the inactive Cell 002 West, the vegetation was generally 6 to 12 inches in height. At the time of our site visit, a strip of vegetation existed along the toe of the south and west interior slopes that was up to approximately 2 ft in height.	As part of the AECI THEC's operation and maintenance plan, vegetation is controlled through mowing and other mitigating measures on an as-needed basis to limit vegetation and woody growth.
		Update the Operating and Management Plan to reflect recent modifications to Cell 002 including the separator berm and new spillway pipe in the western basin, as well as the current functions of the Cell 002 eastern and western basins.	The changes to Cell 002 West included minimal operational impacts as this is an inactive impoundment. AECI may revise O&M Plan in the future if additional changes are made.
		Complete updated rapid drawdown of downstream Cell 003 as part of any future structural analyses performed for the Cell 002 dike.	AECI will consider this evaluation in the future if determined necessary to complete.