



Stantec Consulting Services Inc.
1859 Bowles Avenue Suite 250, Fenton MO 63026-1944

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Revision 0

Initial Hazard Potential Classification Assessment
EPA Final CCR Rule
Ash Pond No. 1
Coffeen Power Station
Montgomery County, Illinois

1.0 PURPOSE

This report documents Stantec's certification of the initial hazard potential classification assessment for the Coffeen Power Station Ash Pond No. 1.

40 CFR 257.73(a)(2) requires the owner or operator of an existing CCR surface impoundment to conduct an initial hazard potential classification assessment and document the hazard potential classification, and the basis for the classification, of the CCR unit as either a high hazard potential CCR surface impoundment, a significant hazard potential CCR surface impoundment, or a low hazard potential CCR surface impoundment.

2.0 FINDINGS

A breach analysis was performed to evaluate potential hazards associated with a failure of Ash Pond No. 1's perimeter containment dike. Breach failure scenarios were modeled near the northwest and northeast corners of the containment dike. The breach from the northwest corner was modeled to discharge west towards the Coffeen Power Station facilities (parking lot, buildings, stacks, etc.) and the northeast corner breach was modeled to discharge eastward into the eastern cove of Coffeen Lake. Breach scenarios were simulated using water volumes corresponding to the maximum water surface elevation calculated within Ash Pond No. 1 during the Probable Maximum Precipitation (PMP) storm event.

Model results from the breach analyses indicate that the northeast breach will be contained within the eastern cove of Coffeen Lake, while a westward breach from the northwest corner will inundate portions of the Coffeen Power Station property and may cause damages to onsite equipment and infrastructure. However, the resultant maximum flood depths and velocities at locations of regularly occupied structures/areas do not indicate concern for loss of human life. Per these findings, it was concluded that a breach failure of the Ash Pond No. 1 containment dike will result in no probable loss of human life. However, it is anticipated that a breach failure of the containment dike will result in the release of the stored CCR materials into Coffeen Lake and cause environmental damage.

40 CFR 257.53 defines a "significant hazard potential CCR surface impoundment" as 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.

Based on the results of the analysis summarized above, Ash Pond No. 1 was assigned a Significant hazard potential classification per 40 CFR 257.53.

3.0 QUALIFIED PROFESSIONAL ENGINEER CERTIFICATION

I, Matthew Hoy, being a Professional Engineer in good standing in the State of Illinois, do hereby certify, to the best of my knowledge, information, and belief that;

1. the information contained in this report and the underlying data in the operating record was prepared in accordance with the accepted practice of engineering and is accurate as of the date of my signature below; and
2. the initial hazard potential classification assessment for Coffeen Power Station Ash Pond No. 1 was conducted in accordance with the requirements specified in 40 CFR 257.73.

SIGNATURE

DATE 10/12/2016

ADDRESS: Stantec Consulting Services Inc.
1859 Bowles Avenue Suite 250
Fenton MO 63026-1944

TELEPHONE: (636) 343-3880



Design with community in mind