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Revision 0

Initial Hazard Potential Classification Assessment
EPA Final CCR Rule
GMF Recycle Pond
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 GMF Recycle Pond.

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 the GMF Recycle Pond's perimeter containment dike. A breach failure scenario was modeled along the eastern embankment of the containment dike. The breach was modeled to discharge eastward into an unnamed creek that flows south into the eastern cove of Coffeen Lake. The breach scenario was simulated using water volumes corresponding to the maximum water surface elevation calculated within the GMF Recycle Pond during the Probable Maximum Precipitation (PMP) storm event.

Model results indicate that the resultant breach discharge would flow into the unnamed creek and overtop County Road 450 N at an approximate maximum depth and velocity of 3 feet and 15 feet per second, respectively. This roadway is intermittently used and the at-risk populations are considered transient. In accordance with Federal guidelines, probable loss of life does not exist for scenarios where persons are only temporarily in the potential inundation area. Per these findings, it was concluded that a breach failure of the GMF Recycle Pond 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.

Design with community in mind



Based on the results of the analysis summarized above, the GMF Recycle Pond 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 the Coffeen Power Station GMF Recycle Pond was conducted in accordance with the requirements specified in 40 CFR 257.73.

SIGNATURE 

DATE 10/12/2016

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