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Revision 0

**Initial Hazard Potential Classification Assessment  
EPA Final CCR Rule  
East Ash Pond  
Joppa Power Station  
Massac County, Illinois**

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**1.0 PURPOSE**

This report documents Stantec's certification of the initial hazard potential classification assessment for the Joppa Power Station East Ash 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 East Ash Pond perimeter containment dike. Breach failure scenarios were modeled at six different locations around the circumference of the perimeter dike. Breach locations were selected based on locations of nearby downstream structures and locations that are typically occupied by people. Breach scenarios were simulated using water volumes corresponding to the maximum water surface elevation calculated within the East Ash Pond during the Probable Maximum Precipitation (PMP) storm event.

Analyses indicate that a potential breach of the East Ash Pond results in depths greater than two feet and velocities greater than or equal to five feet per second impacting occupied structures in the vicinity of the East Ash Pond. The analyses indicate that a failure of the East Ash Pond's east embankment would discharge into the low area to the east of Joppa Power Station reaching within approximately 400 feet of Joppa High School. Breaches of the East Ash Pond west and south embankments would primarily affect Joppa Power Station. A breach to the north would affect the properties to the north of the pond across County Road 1000 N. Due to breach simulation resultant maximum depths and velocities at various nearby residences and public facilities, it was concluded that a failure at certain locations along the East Ash Pond's perimeter dike will probably cause loss of human life.

40 CFR 257.53 defines a "high hazard potential CCR surface impoundment" as a diked surface impoundment where failure or mis-operation will probably cause loss of human life.



Based on the results of the analysis summarized above, the East Ash Pond was assigned a High 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 Joppa Power Station East Ash Pond was conducted in accordance with the requirements specified in 40 CFR 257.73.

SIGNATURE

  
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DATE

10/12/16

ADDRESS:

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Design with community in mind