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Revision 0

**Initial Hazard Potential Classification Assessment**  
**EPA Final CCR Rule**  
**Bottom Ash Pond**  
**Baldwin Energy Complex**  
**Randolph County, Illinois**

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**1.0 PURPOSE**

This report documents Stantec's certification of the initial hazard potential classification assessment for the Baldwin Energy Complex Bottom 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 Bottom Ash Pond. Breach failure scenarios were modeled at west face of the Bottom Ash Pond and southwest face of the Tertiary Pond, as a breach of the Bottom Ash Pond would likely result in overtopping and a potential breach of the Tertiary Pond embankment. 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 crest of the Bottom Ash Pond, Secondary Pond, and Tertiary Pond.

Analyses indicate that a potential breach of the Bottom Ash Pond impacts Conservation Road from overland flow traveling south and west, with discharge to the Kaskaskia River predicted in both scenarios. No occupied structures are located within the inundation area. Conservation Road is a secondary road with intermittent traffic and the at-risk populations are considered transient. In accordance with the Federal guidelines, loss of life is not considered probable for scenarios where persons are only temporarily in the potential inundation area. Based on the breach simulation resultant maximum depths and velocities at various locations in the vicinity of Baldwin Power Station, it does not appear likely that such an event would result in probable loss of human life. The event could cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.

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, the Bottom Ash 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 Baldwin Energy Complex Bottom Ash Pond was conducted in accordance with the requirements specified in 40 CFR 257.73.

SIGNATURE Matthew A. Hoy

DATE 10/12/16

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Design with community in mind