



Memorandum

Date: October 12, 2021

To: Cynthia Vodopivec

cc: Charles Koudelka
Phil Morris

From: Vic Modeer

Subject: Dynegy Midwest Generation, LLC
Vermilion Power Plant – North Ash Pond

Documentation of Initial Hazard Potential Classification Certification Vermilion Power Plant North Ash Pond.

Purpose

This letter documents the certification of the initial hazard potential classification assessment for the Vermilion Power Plant North Ash Pond area. The NAP area is adjacent to and overlaps the Old East Ash Pond (OEAP) area. The OEAP area does not pond water. A surface impoundment is located on the NAP area.

The *Illinois Administrative Code (IAC), Title 35, Part 845.440* requires the owner or operator of an existing coal combustion residuals (CCR) surface impoundment to conduct an initial hazard potential classification assessment, and the basis for the classification, of the CCR unit as either a Class 1 (high hazard) or Class 2 (significant hazard) CCR surface impoundment.

Results

A breach analysis was performed to evaluate potential hazards associated with a failure of the NAP area's perimeter containment dike. Breach locations were selected based on nearby downstream areas that could be potentially impacted. The breach failure mode consisted of the NAP area's reservoir full of water and a resultant overtopping of the perimeter containment dike's crest. The overtopping breach failures were modeled along the NAP area's northern perimeter containment dike for two downstream conditions along the Middle Fork Vermilion River: 1) "Full Riverbank Flow"; and 2) "100-Year Flow" scenarios.

Model results indicate that a breach of the northern perimeter containment dike would inundate the undeveloped floodplain area immediately to the north of the North Ash Pond. The model results indicate that breach discharge would flow into the Middle Fork Vermilion River and not result in any structures being impacted. Therefore, failure or mis-operation of the North Ash Pond would result in no probable loss of human life. However, a NAP area breach event would result in off-site release of

CCR material onto immediate downstream areas and into the Middle Fork Vermilion River, resulting in environmental damage.

Section 845.120 defines a "Class 2 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 initial hazard potential classification was conducted in accordance with Section 845.440, with the NAP area assigned a Class 2 hazard potential classification. Accordingly, the certification below satisfies the requirements of Section 845.440(a)(2).

Sincerely,



Vic Modeer, PE, D.GE
(IL, MO, IN, KY, OH, LA)
Engineering Manager

