



Office Memorandum

Date: October 12, 2021

To: Cynthia Vodopivec

cc: Charles Koudelka
Phil Morris

From: Vic Modeer

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

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

Purpose

This letter documents the certification of the initial hazard potential classification assessment for the Vermilion Power Plant New East Ash Pond (NEAP).

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 by Geosyntec to evaluate potential hazards associated with a failure of the NEAP'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 NEAP's reservoir full of water and a resultant overtopping of the perimeter containment dike's crest. The overtopping breach failures were modeled along the NEAP's eastern 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 eastern perimeter containment dike would inundate the undeveloped floodplain area immediately to the east of the NEAP. 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 NEAP would result in no probable loss of human life. However, a NEAP 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 hazard classification was conducted in accordance with Section 845.440, with the NEAP 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

