

DOMINION ENERGY

PERIODIC HAZARD POTENTIAL CLASSIFICATION ASSESSMENT

BREMO STATION INACTIVE CCR SURFACE IMPOUNDMENT: EAST POND

APRIL 2023





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1 CERTIFICATION

This periodic Hazard Potential Classification Assessment for the Bremono Station's East Pond was prepared by WSP USA Inc. (WSP; formerly d/b/a Golder Associates USA Inc.). The document and Certification/Statement of Professional Opinion are based on and limited to information that WSP has relied on from Dominion Energy and others, but not independently verified, as well as work products previously produced by Golder.

On the basis of and subject to the foregoing, it is my professional opinion as a Professional Engineer licensed in the Commonwealth of Virginia that this document has been prepared in accordance with good and accepted engineering practices as exercised by other engineers practicing in the same discipline(s), under similar circumstances, at the same time, and in the same locale. It is my professional opinion that the document was prepared consistent with the requirements in §257.73(a)(2) of the United States Environmental Protection Agency's "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments," published in the Federal Register on April 17, 2015, with an effective date of October 19, 2015 (40 CFR §257.73(a)(2)), as well as with the requirements in §257.100 resulting from the EPA's "Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals from Electric Utilities; Extension of Compliance Deadlines for Certain Inactive Surface Impoundments; Response to Partial Vacatur" published in the Federal Register on August 5, 2016, with an effective date of October 4, 2016 (40 CFR §257.100).

The use of the word "certification" and/or "certify" in this document shall be interpreted and construed as a Statement of Professional Opinion and is not and shall not be interpreted or construed as a guarantee, warranty, or legal opinion.

Donald Mayer, PE

Print Name



Signature

Vice President

Title

4/12/2023

Date



2 INTRODUCTION

This Periodic Hazard Potential Classification Assessment was prepared for the Bremono Station's (Station) inactive Coal Combustion Residuals (CCR) surface impoundment known as the East Pond. This Assessment was prepared in accordance with 40 CFR Part §257, Subpart D and is consistent with the requirements of 40 CFR §257.73(a)(2).

The Station, owned and operated by Virginia Electric and Power Company d/b/a Dominion Energy Virginia (Dominion Energy), is located in Bremono Bluff, Virginia, at 1038 Bremono Road. The station includes an inactive CCR surface impoundment, the East Pond, as defined by the Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule and Direct Final Rule (40 CFR §257, the CCR rule).

Dominion Energy performed closure by removal activities in East Pond by removing the stored CCR and over-excavating soil pursuant to its solid waste permit closure plan (SWP 618). The Virginia Department of Environmental Quality (DEQ) verified removal activities in October 2019. The Pond remains subject to the CCR Rule requirements due to observed groundwater impacts that prevent full closure of the unit under the rule even though the Pond no longer impounds CCR materials.

3 PURPOSE

This certification and assessment is required under 40 CFR §257.73(a)(2), Periodic Hazard Potential Classification Assessments, regarding the hazard potential classification assessment of the East Pond at the Bremo Power Station. The initial hazard potential classification was completed in April 2018 and is required to be updated every five (5) years pursuant to 40 CFR §257.73(f)(3). The Hazard Potential Classification Assessment was updated in September 2020 following removal of CCR materials. The East Pond remains subject to the CCR Rule requirements, including this periodic hazard potential classification assessment update, even though all CCR materials have been removed.

4 HAZARD POTENTIAL CLASSIFICATION

As defined in 40 CFR §257.53 of the CCR rule [40 CFR §257.53], the hazard potential classifications are:

- 1) *High hazard potential CCR surface impoundment* means a diked surface impoundment where failure or mis-operation will probably cause loss of human life.
- 2) *Significant hazard potential CCR surface impoundment* means 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.
- 3) *Low hazard potential CCR surface impoundment* means a diked surface impoundment where failure or mis-operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment owner's property.

The East Pond was assigned an initial hazard potential classification of “significant” [40 CFR §257.53, 40 CFR §257.73(a)(2)]. Following removal of CCR materials in 2019, the hazard potential classification was updated in 2020 to a “low” hazard potential. The East Pond is assigned a hazard potential rating of “low” [40 CFR §257.53, 40 CFR §257.73(a)(2)] in this periodic Assessment.

5 PERIODIC HAZARD POTENTIAL CLASSIFICATION ASSESSMENT

5.1 ASSESSMENT

The analyses conducted within the previous Periodic Hazard Potential Classification Assessment were reviewed for consistency and applicability based on the current site conditions at the East Pond. Additionally, the following sources of data used in the hazard potential classification were accessed for confirmation of use of current information.

- Federal Emergency Management Agency (FEMA). Flood Insurance Rate Map (FIRM) Community Panel #51065C0260C, dated 5/16/2008. (<https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html>). Accessed February 27, 2023.
 - National Oceanic and Atmospheric Administration (NOAA). Precipitation Frequency Data Server. (<https://hdsc.nws.noaa.gov/hdsc/pfds/>). Accessed February 3, 2023.
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5.2 HAZARD POTENTIAL CLASSIFICATION DETERMINATION

Based on the hazard classification definitions, review of the site and surroundings, and review of the prior hazard potential classification analysis, WSP recommends that the East Pond remain classified as a Low Hazard Potential CCR surface impoundment. This recommended designation is based on the following:

- The potential inundation zone downstream of the East Pond embankment does not contain occupied structures, nor is the embankment regularly occupied by plant personnel, resulting in no probable loss of human life.
- Due to removal of all CCR materials from the East Pond, environmental impact of a failure or mis-operation of the East Pond has been minimized. All CCR materials were removed in accordance with the Solid Waste Permit (SWP #618) *CCR Surface Impoundment Closure Plan* prepared by Golder and approved by the Virginia Department of Environmental Quality on June 5, 2019, and documented in the Closure by Removal certification letter (Golder, 2020).

6 CONCLUSIONS

The East Pond is subject to a periodic hazard potential classification assessment update (due every 5 years from the original assessment performed in April 2018). The pond remains subject to the CCR Rule requirements, even though it no longer impounds CCR materials, due to observed groundwater impacts that prevent full closure of the unit under the rule.

The review conducted for the hazard potential of Bremono Station's East Pond shows that a failure or mis-operation of the East Pond would have no impact to manmade structures and would be unlikely to result in a loss of human life or environmental damage. Therefore, the East Pond in its current condition is assigned a hazard potential rating of "low" as defined under 40 CFR §257.53.

REFERENCES

- Federal Emergency Management Agency (FEMA). Flood Insurance Rate Map (FIRM) Community Panel #51065C0260C, dated 5/16/2008. (<https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html>). Accessed February 27, 2023.
- Golder Associates. Initial Hazard Potential Classification Assessment, Bremo Power Station CCR Surface Impoundment: East Ash Pond. April 2018.
- Golder Associates. Periodic Hazard Potential Classification Assessment, Bremo Power Station CCR Surface Impoundment: East Ash Pond. September 2020.
- National Oceanic and Atmospheric Administration's National Weather Service. Precipitation Frequency Data Server. 2017. Available online: <https://hdsc.nws.noaa.gov/hdsc/pfds/>. Accessed February 3, 2023.