

Prepared for



Dominion
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**COAL COMBUSTION RESIDUALS
INITIAL HAZARD POTENTIAL CLASSIFICATION
ASSESSMENT**
for

**VIRGINIA ELECTRIC AND POWER COMPANY
CHESTERFIELD POWER STATION
LOWER ASH POND
CHESTERFIELD COUNTY, VIRGINIA**

Prepared by

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1. CERTIFICATION/STATEMENT OF PROFESSIONAL OPINION

The Initial Hazard Potential Classification Assessment (Assessment) for the Chesterfield Power Station Lower Ash Pond was prepared by Geosyntec Consultants, Inc. (Geosyntec). The Assessment was based on certain information that, other than for information Geosyntec originally prepared, Geosyntec has relied on but not independently verified. This Certification/Statement of Professional Opinion is therefore limited to the information available to Geosyntec at the time the Assessment was written. 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 the Assessment 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 Assessment was prepared consistent with the requirements of section 257.73 of the United States Environmental Protection Agency's "Disposal of Coal Combustion Residuals From Electric Utilities," published in the Federal Register on April 17, 2015 with an effective date of October 19, 2015 (40 CFR 257 Subpart D).

The use of the words "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.

Geosyntec Consultants, Inc.



Scott Sheridan, P.E.
Principal

Date 10/14/2016

2. INTRODUCTION

The Chesterfield Power Station (Station) is owned by Virginia Electric and Power Company d/b/a Dominion Virginia Power (Dominion) and is located in Chesterfield County, Virginia. The Station includes the Lower Ash Pond (LAP) impoundment, which is a component of the Station's wastewater treatment system utilized to manage and settle solids, including CCRs.

The LAP is located on Dominion property at the Chesterfield Power Station in Chesterfield County, Virginia (coordinates 37.3737° North and 77.3795° West) and is bounded by the Old Channel of the James River and the Upper Pond on the south, Henricus Park Road on the east, Coxendale Road on the north, and the thermal channel to the west.

The LAP is regulated as an existing CCR surface impoundment under the Environmental Protection Agency's "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments" [40 CFR 257 Subpart D] published in the Federal Register on April 17, 2015 with an effective date of October 19, 2015 (CCR Rule). The LAP is also regulated as a dam by the Virginia Department of Conservation and Recreation (DCR) with Inventory Number 00823 (DCR Dam Permit).

3. PURPOSE

This Assessment is prepared pursuant to the requirements in 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 (CCR Rule), § 257.73(a)(2) [40 CFR § 257.73(a)(2)].

4. HAZARD CLASSIFICATION DEFINITIONS

According to § 257.53 of the CCR Rule [40 CFR § 257.53], hazard classifications are:

- Low hazard, which means that "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."
- Significant hazard, 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."
- High hazard, where "failure or mis-operation operation will probably cause loss of human life."

The initial hazard classification of the LAP, pursuant to the CCR rule, is assigned a “significant hazard potential CCR surface impoundment” [40 CFR § 257.53, 40 CFR § 257.73(a)(2)].

5. HAZARD CLASSIFICATION ASSESSMENT

The references listed in Section 5.0 of this Assessment were used as the basis to make this initial “significant hazard” classification. The following items are noted:

1. The LAP is located within close proximity of the James River through the Farrar Gut and the Dutch Gap Conservation Area.
2. *Dam Breach Analysis Report and Inundation Mapping, Lower Ash Pond*, July, 2015 (prepared by Schnabel Engineering, LLC) evaluated the predicted inundation from the LAP for the following scenarios:
 - “Sunny day” breach scenario;
 - Structure breach during Spillway Design Flood (SDF);
 - Baseline outflow of the SDF with no structure breach; and
 - Structure breach with Probable Maximum Flood (PMF)

The report concluded, “Based on the results of these analyses, none of these flooding scenarios impacted roads, bridges, residences, or businesses” (Schnabel, 2015). The report concluded that only economic impact was expected.

In Geosyntec’s opinion, there is a potential for environmental damage and economic loss due to release of CCR material through a breach. Additionally, the current dam breach analysis report did not indicate any expected loss of human life. These criteria correspond to a Significant Hazard Potential designation per the CCR Rule [40 CFR § 257.53]. The LAP is being classified as a significant hazard potential classification in this Assessment.

6. REFERENCES

Code of Virginia, 4VAC50-20-40. Hazard potential classifications of impounding structures; effective November 8, 2012.

Schnabel Engineering, *Dam Breach Analysis Report and Inundation Mapping, Lower Ash Pond*; July 2015.

Virginia DCR Dam Permit, Inventory No. 00823