



# Closure Plan

## *Bremo Power Station CCR Surface Impoundment: North Ash Pond*

Submitted to:



### **Bremo Power Station**

1038 Bremo Bluff Road  
Bremo Bluff, VA 23022

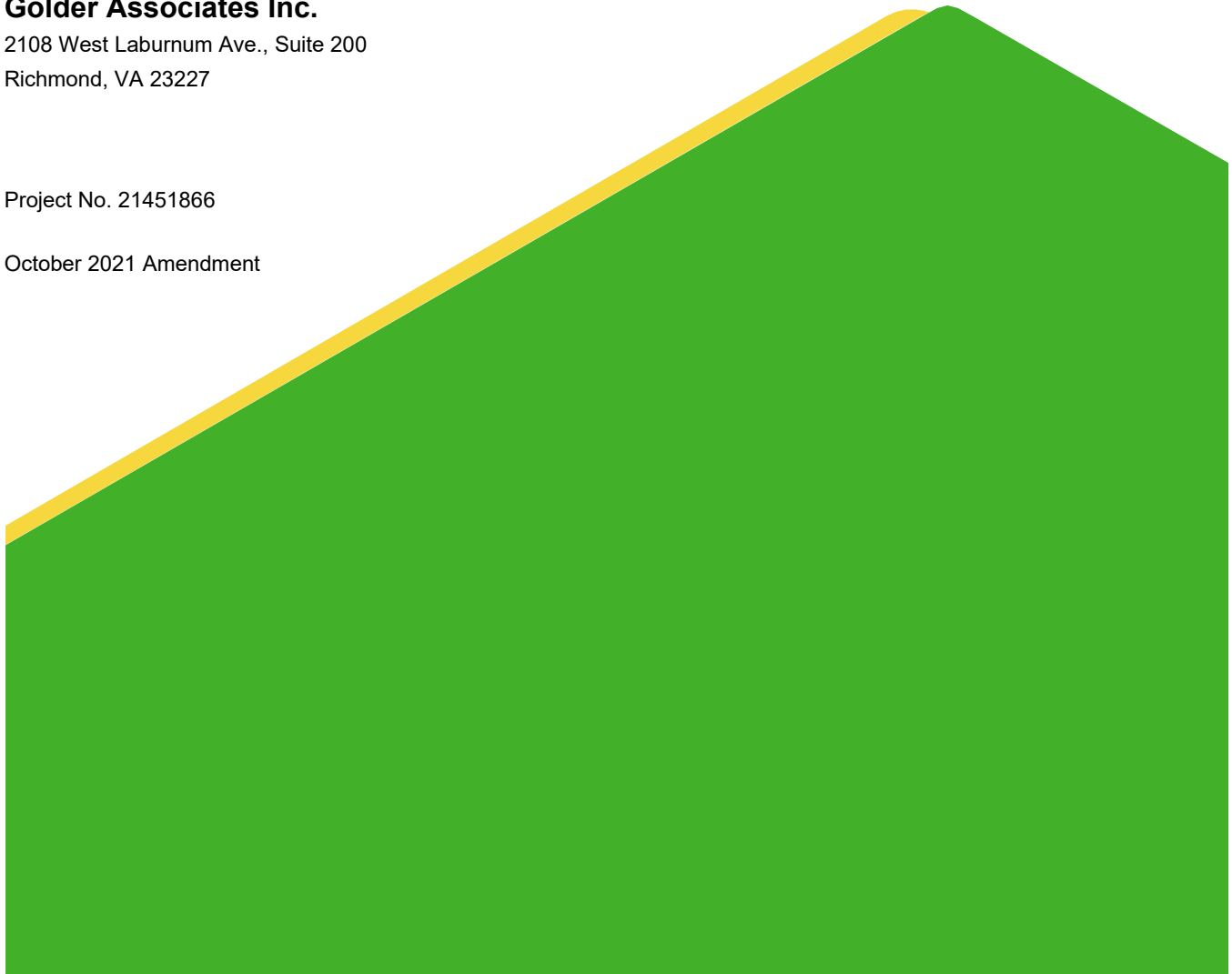
Submitted by:

### **Golder Associates Inc.**

2108 West Laburnum Ave., Suite 200  
Richmond, VA 23227

Project No. 21451866

October 2021 Amendment



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## 1.0 CERTIFICATION

This Closure Plan for the Bremo Power Station's North Ash Pond was prepared by Golder Associates Inc. (Golder). The document and Certification/Statement of Professional Opinion are based on and limited to information that Golder has relied on from Dominion and others, but not independently verified, as well as work products 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 40 CFR §257.102 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, and subsequent amendments.

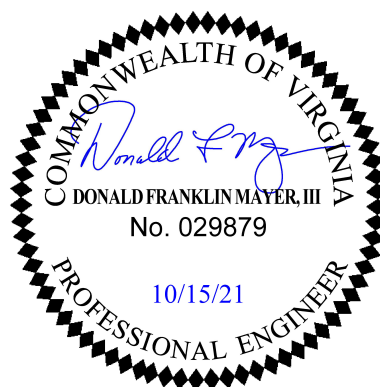
The use of the word "certification" and/or "certify" in this document shall be interpreted and construed as a Statement of Professional Opinion and is not and shall not be interpreted or construed as a guarantee, warranty, or legal opinion.

Donald Mayer, P.E., LEED AP  
\_\_\_\_\_  
Print Name

Associate and Practice Leader  
\_\_\_\_\_  
Title

  
\_\_\_\_\_  
Signature

October 15, 2021  
\_\_\_\_\_  
Date



## 2.0 INTRODUCTION

This amended Closure Plan was prepared for the existing Coal Combustion Residuals (CCR) surface impoundment at the Bremo Power Station (Station), the North Ash Pond (NAP). This Closure Plan was prepared in accordance with 40 CFR Part 257, Subpart D and is consistent with the requirements of 40 CFR §257.102 for closure of CCR surface impoundments. The Closure Plan is being amended to update the closure method, timeframes listed in Section 4.0, and other relevant information.

The Station, owned and operated by Virginia Electric and Power Company d/b/a Dominion Energy Virginia (Dominion), is located at 1038 Bremo Bluff Road, Bremo Bluff, Virginia. The Station includes an existing CCR surface impoundment, the NAP, as defined by the Federal Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule (40 C.F.R. Part 257, Subpart D; “CCR Rule”). The NAP will complete closure by removal of CCR in accordance with §257.102(c) of the CCR rule, 9 VAC 20-81-800-820 of the Virginia Solid Waste Management Regulations, and §10.1-1402.03 of the Code of Virginia.

### 2.1 North Ash Pond Background Information

The NAP was constructed in approximately 1983 as a new ash pond. It is impounded by an earthen berm approximately 138 feet tall and has a contributing drainage area of approximately 106 acres. The majority of the impoundment is underlain by approximately 15 to 50 feet of native soils (predominantly clay and silt). Based on historical construction documents and ash handling records, the NAP currently contains approximately 5.0 million cubic yards (CY) of CCR.

The NAP received ash sluice from the Station as part of normal station operations. The ash solids dropped out by gravity, and the water decanted into the former principal spillway for eventual discharge through the Station’s Outfall 004, which was regulated under Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0004138. The former principal spillway has been abandoned in place by grouting and Outfall 004 has been decommissioned in accordance with the Station’s VPDES permit.

In 2014, the Station ceased coal-fired electric generating activities, and subsequently ceased placing new CCR in the pond. Beginning in 2016, CCR materials from other onsite surface impoundments (West Ash Pond and East Ash Pond) were dredged or excavated and then consolidated within the bounds of the NAP as part of closure of the other ponds. In 2019, the NAP was covered with a temporary geomembrane rain cover to prevent stormwater contact with CCR. The NAP continues to receive water from the pond’s direct contributing drainage area (approximately 106 acres), and the non-contact stormwater collected in the pond is pumped out for discharge to an approved outfall.

The NAP dam is regulated under Virginia Department of Conservation and Recreation (DCR) Operation and Maintenance Certificate, Inventory No. 065020.

## 3.0 CLOSURE IMPLEMENTATION AND APPROACH

### 3.1 Material Removal and Disposal

Dominion intends to complete closure of the NAP by removal of the CCR pursuant to State Code §10.1-1402.03, which will be performed by common earthwork equipment consisting of excavators, bulldozers, dump trucks, etc. Dewatering of the material, if required, will be accomplished by mechanical means (e.g., vacuum wells, sump pumps, or other in situ withdrawal methods) and/or passive methods (e.g., cutting drainage ditches or rim ditches into the CCR mass) until a suitable moisture content is reached. CCR removed from the NAP is expected to be taken to a planned onsite permitted solid waste disposal facility.

The NAP will be excavated until all CCR has been removed from the unit followed by an over-excavation of approximately six inches of soil. Certification of the removal will be provided by a Virginia-licensed Professional Engineer.

### 3.2 Groundwater

Groundwater monitoring for the NAP will continue to be conducted in accordance with the Station’s Groundwater Monitoring Plan, in addition to applicable requirements of the CCR Rule, Virginia Solid Waste Management Regulations, and existing and future solid waste permits.

### 3.3 Site Grading and Stabilization

After completing removal of the CCR from the NAP in accordance with §10.1-1402.03 of the Code of Virginia, final grading and stabilization will be performed. Specifications and requirements for final grades and stabilization will be addressed in the future solid waste permit application submittal.

## 4.0 CLOSURE TIMEFRAMES

The CCR Rule in 40 CFR §257.102(b)(1)(iv) requires a listing of major milestones for completing closure. At this time, as reflected in the timeline below, Dominion anticipates that closure of the NAP will extend beyond the 5-year closure timeframe established under the CCR Rule due to the complexity of planning for the removal of the approximately 5.0 million CY of CCR from the NAP and subsequent beneficial reuse or disposal of the CCR in a permitted landfill in accordance with §10.1-1402.03 of the Code of Virginia.

**Table 1: Closure Schedule**

Activity	Tentative Date
Engineering design and receipt of required permits	May 2024
Commence closure construction	December 2029
Closure construction complete	July 2031
Certification of construction completion	December 2031

Closure is considered complete when the elements of this Closure Plan specified above have been performed and certified by a Professional Engineer licensed in the Commonwealth of Virginia. This certification will be included as part of a final closure certification report required under 40 CFR §257.102(f)(3). In accordance with 40 CFR §257.102(h), Dominion will prepare a notification of closure of the CCR unit within 30 days of completion of closure and place the notification in the operating record.

## 5.0 INVENTORY REMOVAL AND DISPOSAL

The protocol for closure by removal will involve removing stored CCR within the NAP as well as approximately six inches of underlying soil. Visual inspection and subsequent certification of CCR removal from the NAP will be performed by a Virginia licensed Professional Engineer. Removed CCR and CCR-mixed soil will be transferred to a planned onsite permitted solid waste disposal facility.



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