FUGITIVE DUST CONTROL PLAN

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FUGITIVE DUST CONTROL PLAN

Bremo Power Station – Ash Pond Closure

Dominion

Submitted To: Bremo Power Station
1038 Bremo Bluff Road
Bremo Bluff, VA 23022

Submitted By: Golder Associates Inc.
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Richmond, VA 23227

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15-20347

Golder Associates

Table of Contents

Appendices

PLAN CERTIFICATION

I certify that the information contained within this Fugitive Dust Control Plan was prepared by me or under my direct supervision, and meets the requirements of Section §257.80 of the Federal Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals (CCR) from Electric Utilities; Final Rule (40 CFR 257; the CCR rule) and the Virginia Solid Waste Management Regulations.

For purposes of this document, "certify" and "certification" shall be interpreted and construed to be a "statement of professional opinion." The certification is understood and intended to be an expression of my professional opinion as a Virginia Licensed Professional Engineer, based upon knowledge, information, and belief. The statement(s) of professional opinion are not and shall not be interpreted or construed to be a guarantee or a warranty of the closure activities.

J. Ron DiFrancesco, Jr., P.E.
Print Name

Principal and Practice Leader
Title

Signature

April 29, 2016
Date

(Professional Engineer Seal)

1.0 PURPOSE

This Fugitive Dust Control Plan (Plan) was developed for the Bremo Power Station (Station) in accordance with the Federal Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals (CCR) from Electric Utilities; Final Rule (40 CFR 257; the CCR rule) and the Virginia Solid Waste Management Regulations (VSWMR). The purpose of the Plan is to identify and adopt measures that will effectively minimize CCR from becoming airborne at the Station.

1.1 Facility Information

The Bremo Power Station is located at 1038 Bremo Bluff Road in Fluvanna County, Virginia. The Station contains three CCR impoundments (the West, North, and East Ash Ponds) that are being closed pursuant to the CCR rule. The closed CCR surface impoundments will be regulated under the CCR rule and applicable provisions of the VSWMR. The North and East Ash Ponds will be closed in-place, and the West Ash Pond will be closed by removing the CCR and re-purposing the pond as a low-volume waste pond.

1.2 Plan Implementation

This Plan was developed in connection with the construction activities associated with the closure of the ash ponds. This Plan will be in effect throughout the closure activities, and may be adopted into the post-closure activities as required. This Plan may be amended as necessary to reflect changing site conditions or other considerations.

2.0 DUST CONTROL MEASURES

Dust is caused by the mechanical disturbance of particulates – when dust occurs in the atmosphere from open sources, it is referred to as "fugitive" dust. Fugitive dust generation is dependent on the particle size and the disturbance that causes the particles to become airborne. Common sources include unpaved roadways and heavy construction operations.

The U.S. Environmental Protection Agency (EPA) notes that the potential drift distance of particles is "governed by the initial injection height of the particle, the terminal settling velocity of the particle, and the degree of atmospheric turbulence" (EPA, 2009, AP-42, *Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources*, Section 13.2). The control methods described in this Plan are designed to limit the occurrence of CCR fugitive dust by controlling the disturbance and travel distance of the particles.

CCR fugitive dust generation during closure activities is expected to occur primarily from vehicular traffic, CCR movement and placement, and the temporary exposure of CCR areas. The control measures are designed to limit the creation and travel distance of airborne CCR dust from these potential sources at the Station during closure activities. Each potential source area and activity is addressed below, with appropriate CCR dust control measures selected for each based on the source type.

2.1 Station

CCR fugitive dust at the Station will be caused primarily by vehicle traffic and hauling CCR through the Station. Maintaining a clean Station through periodic sweeping, vacuuming, or other methods will reduce the amount of CCR fugitive dust generated in the Station. Spilled or tracked CCR should be cleaned up promptly to minimize the risk of CCR dust generation.

The primary CCR fugitive dust control in the Station will be limiting the speed of haul trucks and other vehicles. No vehicle will be allowed to travel faster than the posted speed limit to reduce the likelihood of disturbing CCR dust particles.

CCR dust can be controlled in excessively dry situations by watering the CCR prior to loading and/or hauling, and watering haul roads to minimize CCR dust generation. Chemical dust suppressants may also be effective in reducing CCR dust generation on haul roads. Tarps or other covers may be used on haul trucks to limit the generation of CCR fugitive dust during transportation.

To minimize unintentional vehicular transportation generation of CCR fugitive dust at Station exit points, control measure options include a wheel wash, rumble strips, paved interior roads leading to the exit, sweeping, watering, or a combination of these measures. If CCR material is deposited onto a paved surface or shoulder of a public road, appropriate clean-up methods, such as sweeping with a stiff bristle broom or street sweeper, should be implemented to remove the material as soon as possible.

2.2 East, North, and West Ash Ponds

During closure construction of the three ash impoundments, CCR fugitive dust sources include CCR handling (dewatering, excavating, grading, compacting, transporting) and vehicular traffic. Appropriate CCR dust control measures for these site conditions and activities are discussed below.

2.2.1 Watering

Periodic watering is considered one of the most effective means of controlling CCR dust generation, and will be practiced on all three ash ponds. The use of water trucks is recommended; however, sprinklers or other methods may be adopted as needed. The CCR should be watered until moist, but should not result in standing water or runoff.

Placed CCR will be conditioned by watering to improve the compactability and reduce dust generation. CCR conditioning may also be accomplished through the use of an approved chemical dust suppressant.

2.2.2 Vehicle Traffic

Traffic in construction areas will be limited to 15 miles per hour or slower to reduce CCR dust generation. Generally, haul trucks and other traffic should stay on established roads. Water trucks and/or chemical dust suppressants will be used when conditions warrant to reduce traffic-generated CCR dust. Street sweepers and/or vacuum trucks may be employed when warranted to remove CCR from paved areas and roads.

2.2.3 Extents of Bare CCR

The extents of bare CCR should be limited to reduce the probability of wind erosion that can result in CCR fugitive dust and increase the travel distance of airborne particles. Areas of temporarily bare CCR will be watered and/or treated with chemical dust suppressants, and/or compacted to reduce the generation of CCR fugitive dust.

2.2.4 Weather Conditions

CCR handling should be limited in dry, windy conditions as these conditions provide the highest probability of CCR dust generation and increased drift distance. Additional watering may be required during drier/windier conditions.

Various methods may be employed to serve as windbreaks, if needed, such as placing inactive equipment on the windward side of construction activities. The Station is surrounded by vegetation, which will also serve as windbreaks.

2.2.5 Rationale for Selected Control Measures

Watering, limiting traffic to defined routes and establishing speed limits, limiting the extent of active exposed CCR areas, limiting work during inclement weather, and the use of windbreaks are all industry-accepted methods of proper CCR fugitive dust control.

3.0 EVALUATING EFFECTIVENESS OF THE PLAN

The effectiveness of this Plan will be evident from observations made during construction activities. CCR dust collecting in and around the Station, along haul roads, or in the air is evidence of CCR fugitive dust, and may call for additional or more frequent controls. Complaints from neighboring properties may also be evidence of the need to enhance CCR dust control measures (see also Section 4.0). CCR fugitive dust control measures may be changed, removed, or additional measures added to help ensure adequate CCR dust controls.

4.0 PROCEDURE FOR RESPONDING TO CITIZEN INQUIRIES

Citizen inquires will be documented on the Fugitive Dust Inquiry Form (Appendix A) and investigated. The name of the person making the inquiry, contact information, and the nature of the inquiry shall be recorded.

Station personnel will investigate the inquiry to determine and verify the nature of the concern, location, and contributing factors such as location relative to site operations, proximity, and weather conditions. Upon completing the investigation, Station personnel will address concerns as needed.

5.0 PLAN MODIFICATION

If, during the course of the CCR surface impoundment closure project, modifications to this Plan are needed (e.g., to address changes in site conditions, construction methods, hauling routes), the modifications will be documented in the Plan Amendment History form provided in Appendix B. Construction personnel will be made aware of the Plan Amendments. Each Plan Amendment will be certified by a qualified Professional Engineer that the Amendment meets the requirements of §257.80 of the CCR rule.

6.0 RECORD KEEPING AND REPORTING

6.1 Annual CCR Fugitive Dust Control Report

An annual CCR Fugitive Dust Control Report must be prepared that includes a description of the actions taken by the owner or operator to control CCR fugitive dust, a record of all citizen complaints, and a summary of any corrective measures taken. The requirement for completing the annual CCR Fugitive Dust Control Report is satisfied when the Report has been placed in the facility's operating record as required by §257.105(g)(2) of the CCR rule. The Virginia Department of Environmental Quality (DEQ) shall be notified about the completion of the annual CCR Fugitive Dust Control Report, and the final report shall be placed on Dominion's publicly accessible website in accordance with the CCR rule.

6.2 Record Keeping

The current Fugitive Dust Control Plan (or Plan Amendment) and annual CCR Fugitive Dust Control Report must be maintained in the Station's operating record. Dominion must notify the DEQ when these documents have been placed in the operating record and on the Station's publicly accessible internet site.

DUST COMPLAINT LOG

BREMO POWER STATION ASH POND CLOSURES

Complainant Name: _____ Date: _____

Time: _____

Complainant Address: _____

Complainant Telephone #: _____

Complainant's Email Address: _____

Location of dust detection (including direction and distance): _____

_____

Weather conditions at time of detection: _____

Wind direction and speed at time of detection: _____

What time was the dust initially detected? _____

Describe the characteristics of the dust: _____

_____

_____

_____

_____

How often have you seen the dust? _____

_____

Is the dust occurrence always the same, or does it differ in intensity and characteristics? _____

_____

How long does each dust incident typically last? _____

_____

Do you know where the dust is coming from? How do you know? _____

_____

Completed by: _____

Date: _____

Plan Amendment History

Federal Requirements
In accordance with *40 CFR §257.80(b)6*, the owner or operator must amend the written Fugitive Dust Control Plan if there is a change in conditions, facility design, construction, operation, or maintenance that substantially affects the written Plan in effect.

Update and Amendment Log

Date	Summary of Update/Revision	Recertification Date

Established in 1960, Golder Associates is a global, employee-owned organization that helps clients find sustainable solutions to the challenges of finite resources, energy and water supply and management, waste management, urbanization, and climate change. We provide a wide range of independent consulting, design, and construction services in our specialist areas of earth, environment, and energy. By building strong relationships and meeting the needs of clients, our people have created one of the most trusted professional services organizations in the world.

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