Fugitive Dust Control Plan

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FUGITIVE DUST CONTROL PLAN

Chesapeake Energy Center Bottom Ash Pond
VPDES Permit #VA0004081

Dominion

Submitted To: Dominion – Chesapeake Energy Center
2701 Vepco Street
Chesapeake, Virginia 23323

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May 2016 **13-00193**

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.

Daniel McGrath	Associate and Senior Engineer
Print Name	Title
Daniel McGrath	5/9/16
Signature	Date

(Professional Engineer Seal)

1.0 PURPOSE

This Fugitive Dust Control Plan (Plan) was developed for the Chesapeake Energy Center (Station) Bottom Ash Pond 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 as adopted in 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 Station is located at 2701 Vepco Street in Chesapeake, Virginia. The Bottom Ash Pond is located on the southern portion of the Station property, south of the ash landfill and adjacent to the southern branch of the Elizabeth River.

1.2 Plan Implementation

This Plan was developed for the maintenance and construction activities associated with the Bottom Ash Pond closure. 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 fugitive dust by controlling the disturbance and travel distance of the particles.

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

2.1 Station

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

The primary 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 dust particles.

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

To minimize unintentional vehicular transportation of sediment 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 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 Bottom Ash Pond

During closure construction of the Bottom Ash Pond, fugitive dust sources include earth moving, CCR handling (dewatering, excavating, grading, compacting, transporting), and vehicular traffic. Appropriate 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 dust generation, and will be practiced during the Bottom Ash Pond closure. The use of water trucks is recommended; however, sprinklers or other methods may be adopted as needed. Soil and 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 compactibility 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 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 dust. Street sweepers and/or vacuum trucks may be employed when warranted to remove CCR and sediment from paved areas and roads.

2.2.3 Extents of Bare Soil/CCR

The extents of bare soil and CCR should be limited to reduce the probability of wind erosion that can result in fugitive dust and increase the travel distance of airborne particles. Disturbed earthen areas that will be inactive for more than 30 days should be seeded and watered to promote vegetation growth, which will reduce dust generation. Areas of temporarily bare CCR will be watered and/or treated with chemical dust suppressants, and/or compacted to reduce the generation of fugitive dust. Other methods for dust control on bare soil and CCR include erosion control matting, spray-on soil crusting agents or tackifiers, tarps, and temporary/permanent seeding.

2.2.4 Weather Conditions

Earth moving and CCR handling should be limited in dry, windy conditions as these conditions provide the highest probability of 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.

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. Dust collecting in and around the site is evidence of fugitive dust, and may call for additional or more frequent controls. Complaints from neighboring properties may also be evidence of the need to enhance dust control measures (see also Section 4.0). Lastly, facility inspections will be utilized to observe, record, and escalate any fugitive dust issues. Fugitive dust control measures may be changed, removed, or additional measures added to help ensure adequate dust controls.

4.0 PROCEDURE FOR RESPONDING TO CITIZEN COMPLAINTS

Citizen complaints will be documented on the Dust Complaint Log (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 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. Amended plans will be posted on Dominion's publicly available internet site and VA DEQ will be notified that an amended plan has been posted.

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 Director of the Virginia Department of Environmental Quality when these documents have been placed in the operating record and on the Station's publicly accessible internet site.

DUST COMPLAINT LOG

Chesapeake Energy Center Bottom Ash Pond

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

Chesapeake Energy Center Bottom Ash Pond

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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