FUGITIVE DUST CONTROL PLAN

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FUGITIVE DUST CONTROL PLAN

Yorktown Power Station – Coal Combustion Residual Management

Dominion

Submitted To: Yorktown Power Station
1600 Waterview Road
Yorktown, VA 23692

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Golder Associates

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Appendices

1.0 PURPOSE

This Fugitive Dust Control Plan (Plan) was developed for the Yorktown Power Station ash landfill operations in accordance with the Virginia Solid Waste Management Regulations (VSWMR) and 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).

Facility Information

The Yorktown Power Station (Station) is located on Waterview Road in Yorktown, Virginia. The Station operates a CCR landfill under the regulatory authority of Solid Waste Permit #457, issued by the Virginia Department of Environmental Quality (DEQ). The Conditional Use Permit (CUP), issued by York County (UP-739-08), also contains operational and dust control requirements. The landfill is located approximately 2 miles south of the station via a privately-owned, paved haul road.

CCR Unit

The active landfill facility has an overall footprint of approximately 48 acres. Approximately 36 acres of the landfill are covered with intermediate cover soil and vegetation, 6.5 acres are covered with a geomembrane rain cover (Phase 1), and the remaining 5.5 acres (+/-) is available for active disposal in Cell 12. The landfill is anticipated to remain in service until the station ceases coal burning operations.

CCR Hauling

Fly ash generated at the Station is deposited into a dry silo adjacent to the generation building. During loading, the fly ash is moisture conditioned and placed into haul trucks in the enclosed truck loading area. A spray curtain of water mist at the loading area minimizes the generation and migration of fugitive dust. Bottom ash is handled wet as it is sluiced from the station into a 'hydrobin' for decanting and storage at the silo area. It is then loaded and transported in a moisture-conditioned state.

After loading, the haul trucks are washed prior to leaving the silo area. The CCR is hauled along the approximately 2-mile paved haul road to the landfill.

Plan Implementation

This Plan was developed for the operational activities associated with the hauling and disposal of CCR into the landfill. This Plan will be in effect throughout the landfill's active service life. Post-closure fugitive dust operations will be incorporated into future post-closure documentation. 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).

Fugitive dust generation during CCR hauling and disposal activities is expected to occur primarily from haul truck loading and unloading, vehicular traffic, and the temporary exposure of CCR areas in the landfill. The control measures identified in this plan are designed to limit the creation and travel distance of airborne dust.

Station and Haul Road

While at the Station, prior to transport to the Ash Landfill, fugitive dust will be generated principally by vehicle traffic and loading / hauling CCR through the Station. The Station's main fugitive dust control is through limiting material exposure to the environment. Trucks drive into the enclosed drive-thru loading bays directly beneath the dry ash silos. The silos are enclosed and are only open to the environment during truck loading. CCR is wetted prior to being loaded into the trucks. In addition, the enclosed loading bays are equipped with water spray curtains and a garage door. After loading, the haul trucks are washed prior to leaving the silo area. Also, 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 CCR or sediment will be cleaned up promptly to minimize the risk of dust generation.

Paved roads and speed limits are established and enforced to reduce the likelihood of disturbing dust particles and minimize dust during transport between the Station and Ash Landfill. The haul road and loading area paved surfaces will be kept moist using a water truck to minimize dust generation as needed. Truck tarps may be used when needed to further prevent and minimize dust. 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, will be implemented to remove the material as soon as possible.

Rationale for Selected Control Measures

Silos and enclosed loading areas are an industry accepted method of capturing CCR fugitive dust generation. The enclosed hoppers and piping used to collect and transfer the CCRs from the boilers to

the ash silos virtually eliminate potential for CCR fugitive dust emissions during transfer from the boilers to the ash silos. Wet conditioning CCRs prior to loading into trucks from the silos is an industry accepted practice for controlling fugitive CCR emissions. The sweeping and watering of haul roads are industry accepted methods of controlling fugitive CCR emissions. They are also among the various dust control options listed in the Facility's Operations Manual.

Ash Landfill

Watering

Periodic watering is considered one of the most effective means of controlling dust generation, and is practiced on the active surface of the landfill as needed for dust control and material compaction. The use of water trucks is recommended; however, sprinklers or other methods may be adopted as needed. Soil and CCR is 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.

Vehicle Traffic

Traffic in construction areas and haul roads will be limited to 15 miles per hour or slower to reduce dust generation. Water trucks and/or chemical dust suppressants will be used when conditions warrant to reduce traffic-generated dust on interior haul roads and other trafficked areas.

Bare CCR and Soil

Bare CCR in the landfill are to be limited to reduce the probability of fugitive dust migration. The maximum extent of bare CCR is restricted to 10 acres by the facility's solid waste permit. If at any time an active area of the landfill is expected to be exposed for more than 30 days, temporary soil cover will be applied to that area as outlined in the Operations Manual and the Virginia Solid Waste Management Regulations. If CCR placement operations occur during a prolonged period of low CCR generation (such as an outage), placement of additional intermediate cover may be considered to reduce the extents of bare CCR. At a minimum, the active CCR surface will be watered and rolled/compacted regularly to maintain a dust-free surface. Disturbed earthen areas on the perimeter of the landfill that will be inactive for more than 7 days should be seeded and watered to promote vegetation growth and reduce dust generation.

Weather Conditions

Earth moving and CCR grading will 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, which may require additional water trucks. Watering during freezing weather will be performed as necessary to reduce fugitive dust generation.

Rationale for Selected Control Measures

Conditioning CCRs before disposal, compacting CCRs after placement, limiting active landfill surface at any time, applying temporary soil cover to CCRs, and the use of a speed limits are all industry accepted methods of proper CCR disposal. Several of these methods are described in detail in the landfill's Operating Manual, which also provides for use of a temporary cover or watering the exposed faces within the landfill, should it be deemed beneficial.

3.0 EVALUATING EFFECTIVENESS OF THE PLAN

The effectiveness of this Plan will be evident from observations made during placement and construction activities. Dust observed in the air, collecting in and around the Station, or along the haul road 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.

Fugitive dust control measures may be changed, removed, or additional measures taken to help ensure adequate dust controls.

4.0 PROCEDURE FOR RESPONDING TO CITIZEN INQUIRIES

Complaints from the public relating to dust are taken seriously and managed with care. Citizen complaints are also an informative tool to assist in dust-related data gathering and evaluation. 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 will 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 matters as needed.

5.0 PLAN MODIFICATION

If, during the course of Station and landfill operations, 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 Revision History form provided in Appendix B. Landfill operations personnel will be made aware of the Plan modifications.

6.0 REPORTING, RECORDKEEPING AND NOTIFICATION

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 plan 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 placed on Dominion's publicly accessible website in accordance with the CCR rule.

PLAN CERTIFICATION

I certify that the information contained within this plan was prepared by me or under my direct supervision and meets the requirements of 40 CFR Section 257.80, *Air Criteria.*

Daniel McGrath
Print Name

Associate and Senior Consultant
Title

Daniel McGrath
Signature

9/6/16
Date

(Professional Engineer Seal)

FUGITIVE DUST INQUIRY FORM
Yorktown Power Station

Date: _____ Complaint Response? Y / N

Time: _____ Reference: _____

Surveyor: _____

Weather Conditions: _____

_____

Approximate Location / Distribution of Dust:_____

_____

_____

Dust Description: _____

_____

_____

Suspected Source: _____

_____

Actions Taken: _____

_____

_____

Additional Comments: _____

_____

_____

_____

_____

FUGITIVE DUST INQUIRY FORM
Yorktown Power Station

Date/Time: _____

Contact Information

Name: _____ Telephone: _____

Address: _____ email: _____

_____

_____

Maintain this form in the operating record for 1 year from date of survey.

Plan Revision History

Federal Requirements
In accordance with *40 CFR §257.80.(b).6*, the owner or operator must amend the written plan if there is a change in conditions, facility design, construction, operation, or maintenance, which substantially affects the written plan in effect. Non-technical changes (such as to names or telephone numbers) do not have to be certified by a Professional Engineer (P.E.).

Update and Revision Log

Date	Summary of Update/Revision	Recertification Required (Y/N)
10/16/15	Initial Issue	
9/6/16	Clarified ash loading and truck washing procedures	N

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