Prepared for

Dominion Energy Virginia
500 Coxendale Road
Chester, Virginia 23836

COAL COMBUSTION RESIDUAL FUGITIVE DUST CONTROL PLAN

Chesterfield Power Station

Prepared by

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Project Number MV1482
Revision 4
December 2019

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FIGURE

ATTACHMENTS

1 STATION INFORMATION

Chesterfield Power Station (Station) is a coal-fired generating station located in Chester, Virginia. Owned and operated by Virginia Electric and Power Company, d/b/a Dominion Energy Virginia, the Station produces fly ash, bottom ash, and flue gas desulfurization (FGD) materials that are sent off-site for beneficial reuse or are deposited in an on-site industrial landfill permitted by the Virginia Department of Environmental Quality (VADEQ).

Historically, the fly ash and bottom ash, produced as by-products of coal combustion, were transported hydraulically (sluiced) to the Lower Ash Pond. Fly ash slurry was initially deposited into a settling channel from which CCR (coal combustion residual) was dipped, stacked, and allowed to dewater. After dewatering, the fly ash was loaded into dump trucks and transported to the Upper Ash Pond, where it was placed and compacted. Bottom ash was sluiced to a separate area within the footprint of the Lower Ash Pond from which an independent contractor excavated the bottom ash, screened the material, and hauled the material off-site to an end market for beneficial reuse. Water is being pumped from the Lower Ash Pond to an on-site treatment facility before being discharged per a Virginia Pollution Discharge Elimination System (VPDES) Permit #VA0004146 issued by the VADEQ.

Flue gas desulfurization (FGD) sludge is generated via an air pollution control scrubber. The resultant FGD sludge, which is also known as synthetic gypsum, is stored in a drive-through building with a concrete floor prior to being loaded by conveyor onto a barge on the James River for transport offsite as beneficial reuse in the manufacture of drywall.

The Station's Fossil Fuel Combustion Products Management Facility (Landfill) began operation in November 2017. Fly ash generated at the Station is no longer sluiced to the Lower Ash Pond and is instead transported pneumatically to ash silos located on the western side of the Station. Trucks drive under the silos, are loaded with conditioned ash, tarped, driven across a scale, and across the bridge to the Landfill for disposal.

The construction of the bottom ash management area was put into operation in October 2017. It is located on the power block side of the Station. Bottom ash is no longer sluiced to the Lower Ash Pond and is instead dewatered in this area, loaded into trucks, and taken offsite for beneficial reuse or to the Landfill for disposal.

2 BACKGROUND

2.1 Coal Combustion Residuals

This Fugitive Dust Control Plan (FDCP) identifies control measures implemented at the Station to control fugitive dust emissions from CCR materials managed at various locations throughout the Station.

The purpose of the FDCP is to outline the procedures that must be completed in order to comply with the Air Criteria requirements specified in the *Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule*; specifically 40 CFR Part §257.80(b), pertaining to the preparation and implementation of a Fugitive Dust Control Plan. As required by the CCR rule, the Fugitive Dust Control Plan must address the items listed in §257.80(b)(1) through (b)(7) and satisfy Federal, State, and local regulations including the Virginia Solid Waste Management Regulations (VSWMR) and 9 VAC 5- 40-90 "Standard for Fugitive Dust/Emissions" for current sources of potential fugitive dust.

3 DUST CONTROL PROCEDURES

Dust control procedures are discussed for four CCR management areas where CCR are collected, processed, transported, or disposed and includes the Gypsum Storage Facility, the Bottom Ash Management Area, the Lower and Upper Ash Ponds, and the Landfill. The locations of the Gypsum Storage Facility, the Bottom Ash Management Area, the Lower and Upper Ash Ponds, and Landfill are shown in Figures 1 and 2. The following sections identify the fugitive dust emissions controls for the CCR management and disposal areas.

3.1 CCR Management Areas

The following CCR management activities have the potential to generate fugitive dust emissions:

1. CCR processing in the Bottom Ash Management Area
2. CCR transportation from the Gypsum Storage Facility
3. CCR storage and dewatering in the Upper and Lower Ash Ponds
4. CCR disposal at the FFCP Landfill

Control procedures for fugitive dust emissions in these CCR management areas are presented below.

3.2 Bottom Ash Management Area

The new bottom ash management area is located on the power block side of the facility. Bottom ash is dewatered in this area, loaded into trucks, and taken offsite for beneficial reuse or to the onsite landfill. The bottom ash remains conditioned prior to and during loading. Any residual material is routinely removed to prevent fugitive dust emissions.

Fugitive dust emissions are generally low in the bottom ash areas due to the granular nature of bottom ash; however, weather and management activities can impact the potential for fugitive dust emissions. Control of fugitive dust emissions in the Bottom Ash Management Area is accomplished through the application of water on dry ash surfaces observed that may generate dust emissions. These surfaces will include stockpiles, access roads, and haul roads. During normal operating hours, water is sprayed onto the bottom ash to minimize the generation of fugitive dust. Haul trucks shall be tarped prior to leaving the Bottom Ash Management Areas. In addition, the haul road from the loading area to Coxendale Road shall be swept and/or sprayed with water as needed to prevent

fugitive dust emissions.

3.2.1 Rationale for Selected Control Measures

The use of partial enclosures and tarps and the conditioning of CCRs are industry accepted methods of controlling CCR fugitive dust emissions at loading areas.

3.3 Gypsum Storage Facility

FGD or gypsum is typically transported via conveyor from the Gypsum Storage Building to the barge loading area along the James River. The gypsum is typically moist and does not require additional management to limit the potential generation of fugitive dusts. If the gypsum cannot be beneficially reused, it will be loaded into dump trucks and transported to the Landfill.

Gypsum transported from the Gypsum Storage Area to the Landfill will be loaded from the partially enclosed storage building where it is moisture conditioned, and a tarp will be placed over the trucks to prevent fugitive dust migration. Truck tarps will be left in place until the gypsum is placed in the Landfill.

3.3.1 Rationale for Selected Control Measures

The use of partial enclosures and tarps and the conditioning of CCRs are industry accepted methods of controlling CCR fugitive dust emissions at loading areas.

3.4 CCR Surface Impoundments

This section addresses controls for potential fugitive dust emissions from the Lower Ash Pond and the Upper Ash Pond. Neither pond is actively receiving material and is covered with an intermediate soil cover awaiting future regulatory disposition.

3.4.1 Lower Ash Pond

The interim activities at the Lower Ash Pond include grading and compacting existing material, including CCR and soil, to provide positive drainage in a general east to west direction. After grading activities are complete, a welded rain cover is placed over the material to eliminate dusting and contact stormwater creation. During interim activities, water is applied to the materials. Other dust suppression materials such as geosynthetics, crusting agents, drying agents, erosion control blankets, or wetted ash surfaces that are

compacted may be used as needed.

3.4.2 Rationale for Selected Control Measures

Moisture conditioning CCRs and soil cover of inactive areas is an industry-accepted method of proper CCR disposal and fugitive dust prevention.

3.4.3 Upper Ash Pond

The compacted CCR placed in the Upper Ash Pond has been covered with soil and vegetated. Water is sprayed on the access roads along the Upper Ash Pond as needed to minimize fugitive dust emissions. Maintaining adequate vegetation at the Upper Ash Pond minimizes fugitive dust emissions. Speed limits around access roads are posted.

3.4.4 Rationale for Selected Control Measures

The use of wetting the roads for dust suppression and the enforcement of speed limits are industry accepted methods of controlling CCR fugitive dust emissions on haul roads.

3.5 Haul Roads

Haul roads will be swept and/or sprayed routinely for dust suppression. A water truck is maintained onsite by the contracted operator. Any spills of materials during transport will be fully cleaned up and disposed of properly. Speed limits enforced on the premises further reduce potential for CCR fugitive dust emissions.

3.5.1 Rationale for Selected Control Measures

The use of wetting the roads for dust suppression and the enforcement of speed limits are industry accepted methods of controlling CCR fugitive dust emissions on access roads.

3.6 Fossil Fuel Combustion Products Management Facility (Landfill)

The Landfill was issued a Certificate to Operate in June 2017 and began receiving CCR in November 2017. The Landfill includes sources with the potential to generate fugitive dust. These sources are shown on Figure 2 and include the following:

- Fly Ash Silos
- Haul roads (see Section 3.5 for controls), and
- Active disposal area.

Dominion will employ appropriate techniques to manage potential dust generation as follows:

- Regularly sweep and/or spray water on haul roads;
- Avoid tracking material from the Landfill by utilizing a wheel wash or rumble strips for haul trucks upon exiting the Landfill, as needed;
- Moisture condition the ash exiting the silos prior to being loaded into trucks for transport to the Landfill;
- Spray water on the surface of ash disposed in the Landfill, as needed, and
- Apply soil cover or other dust suppression materials such as geosynthetics, crusting agents, or erosion control blankets, or wet and re-compact the ash surface on a periodic basis, and maintain no greater than 10 acres of working area at any one time. For landfill areas open less than 30 days, these procedures shall be applied on an as-needed basis. No area will be exposed without dust suppression procedures for longer than 30 days.

Any soil stockpiled at the Landfill for use in Landfill operations will be sprayed with water, as needed, or covered. Stockpiles that are not used for longer than 30 days will be temporarily seeded or covered.

3.6.1 Rationale for Selected Control Measures

Conditioning CCRs before and throughout disposal, compacting CCRs after placement, and soil cover of inactive areas are all industry accepted methods of proper CCR

disposal.

4 INSPECTIONS AND EVALUATING THE PLAN

4.1 Inspections

- Inspections for fugitive dust emissions at the surface impoundments and the Landfill will occur at least once every seven days in accordance with the requirements of the federal CCR rule, the Station's Title V air permit, and the VSWMR and subsequent Solid Waste Permit #609.
- Inspections at the other CCR management areas will be conducted in accordance with the requirements of the applicable Station's Title V air permits and will satisfy the requirements in the CCR rule.

4.2 Evaluating the Effectiveness of the Plan

Once per year, Dominion will evaluate the effectiveness of this plan and make any required changes to ensure continued effectiveness of fugitive dust control measures. This evaluation will be based on the number and type of citizen complaints received (if any), observations made during construction activities, and observation of dust collecting in and around the Station, or along the haul roads as well as any fugitive dust issues observed and recorded during regular weekly general inspections of the CCR facilities. The Plan will be amended if necessary, based on the results of that evaluation.

5 RESPONDING TO CITIZEN COMPLAINTS

5.1 Responding to Citizen Complaints

Citizen inquires will be documented on the Fugitive Dust Complaint Form and investigated. A sample of the form is in Attachment 1. A copy of the updated form will also be included in the Station's Annual CCR Fugitive Dust Control Report.

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.

The Station's Environmental Representative (or designee) will address citizen complaints as needed. The form in Attachment 1 includes a section to document any corrective measures taken to address citizen complaints. A list of citizen complaints for the previous year will also be placed in the Station's Annual CCR Fugitive Dust Control Report.

5.2 Annual Reporting and Records Retention

The Facility will compile an Annual CCR Fugitive Dust Control Report as required by the CCR rule. This report will include a description of methods taken to control fugitive CCR dust, as well as a record of all citizen complaints and any corrective measures taken to address the complaint(s). The VADEQ will 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.

5.3 FDCP Assessment and Updates

Dominion may amend this FDCP at any time and the revised plan will be placed in the Station's operating record and posted on Dominion's website as required by the CCR rule. Dominion will amend the written plan when there is a change in conditions that would substantially affect the written plan in effect, such as the construction and operation of a new CCR unit. Plan amendments (i.e., revision history) will be outlined in Attachment 2 of this plan. The revised FDCP will be re-certified by a professional engineer in accordance with the CCR rule.

6 ENGINEERING CERTIFICATION

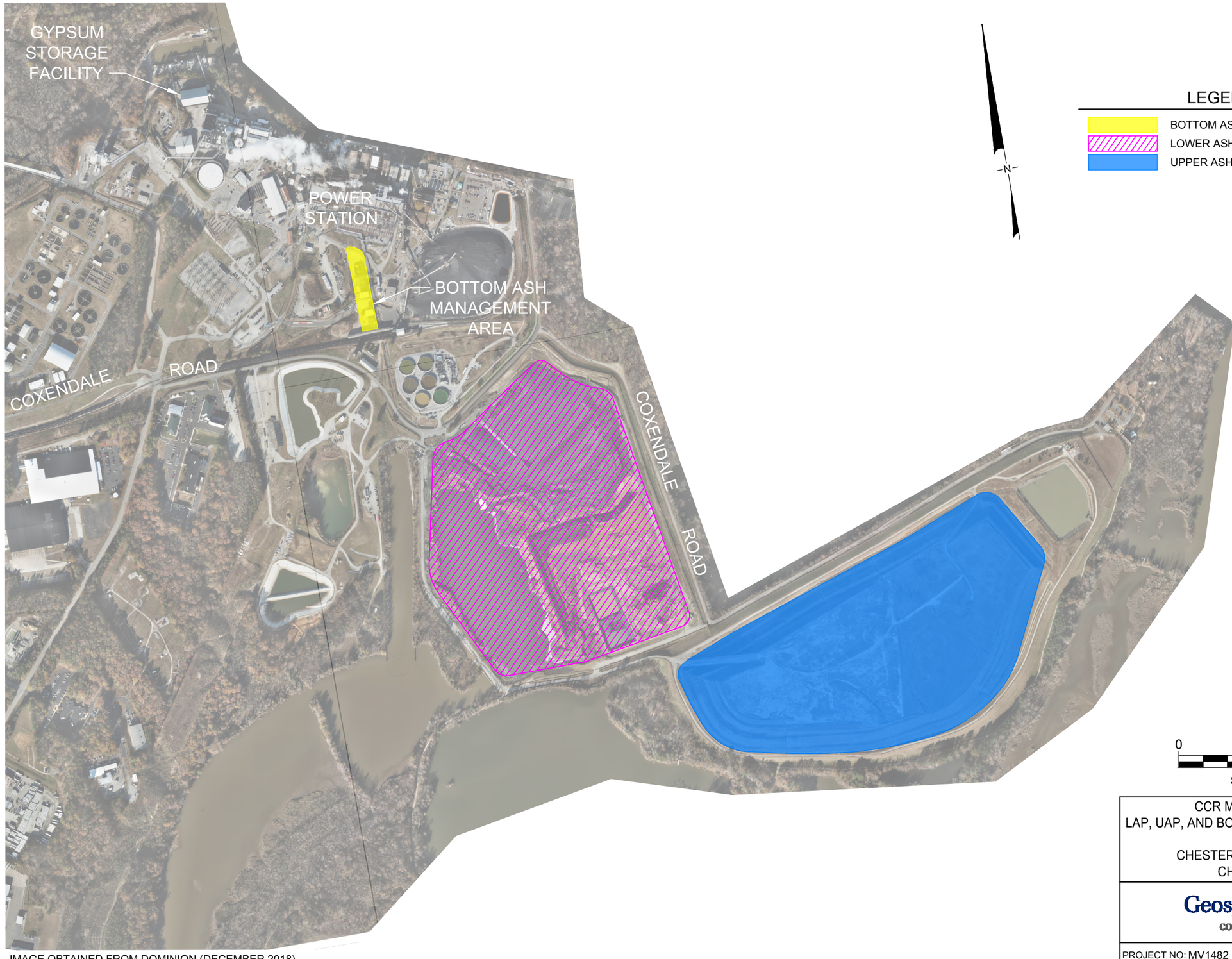
I hereby certify that I am familiar with the requirements of 40 CFR 257.80, that the Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and that the Plan meets the requirements of 40 CFR 257.80. This certification does not relieve the owner or operator of the Facility from preparing and fully implementing this Plan in accordance with the requirements 40 CRF 257.80.

Scott Sheridan
Name of Professional Engineer

045360
Professional Engineer No.

12/26/2019
Date Signed and Sealed

FIGURE



LEGEND

- BOTTOM ASH MANAGEMENT AREA
- LOWER ASH POND (LAP)
- UPPER ASH POND (UAP)

IMAGE OBTAINED FROM DOMINION (DECEMBER 2018)

0 800' 1600'

SCALE IN FEET

CCR MANAGEMENT AREAS
LAP, UAP, AND BOTTOM ASH MANAGEMENT AREA

CHESTERFIELD POWER STATION
CHESTER VIRGINIA

Geosyntec consultants

FIGURE 1

PROJECT NO: MV1482 | JANUARY 2019

L:\D\DOMINION\CHESTERFIELD POWER STATION\LOWER ASH POND CLOSURE MV1482\FIGURES\DUST CONTROL\1482F211

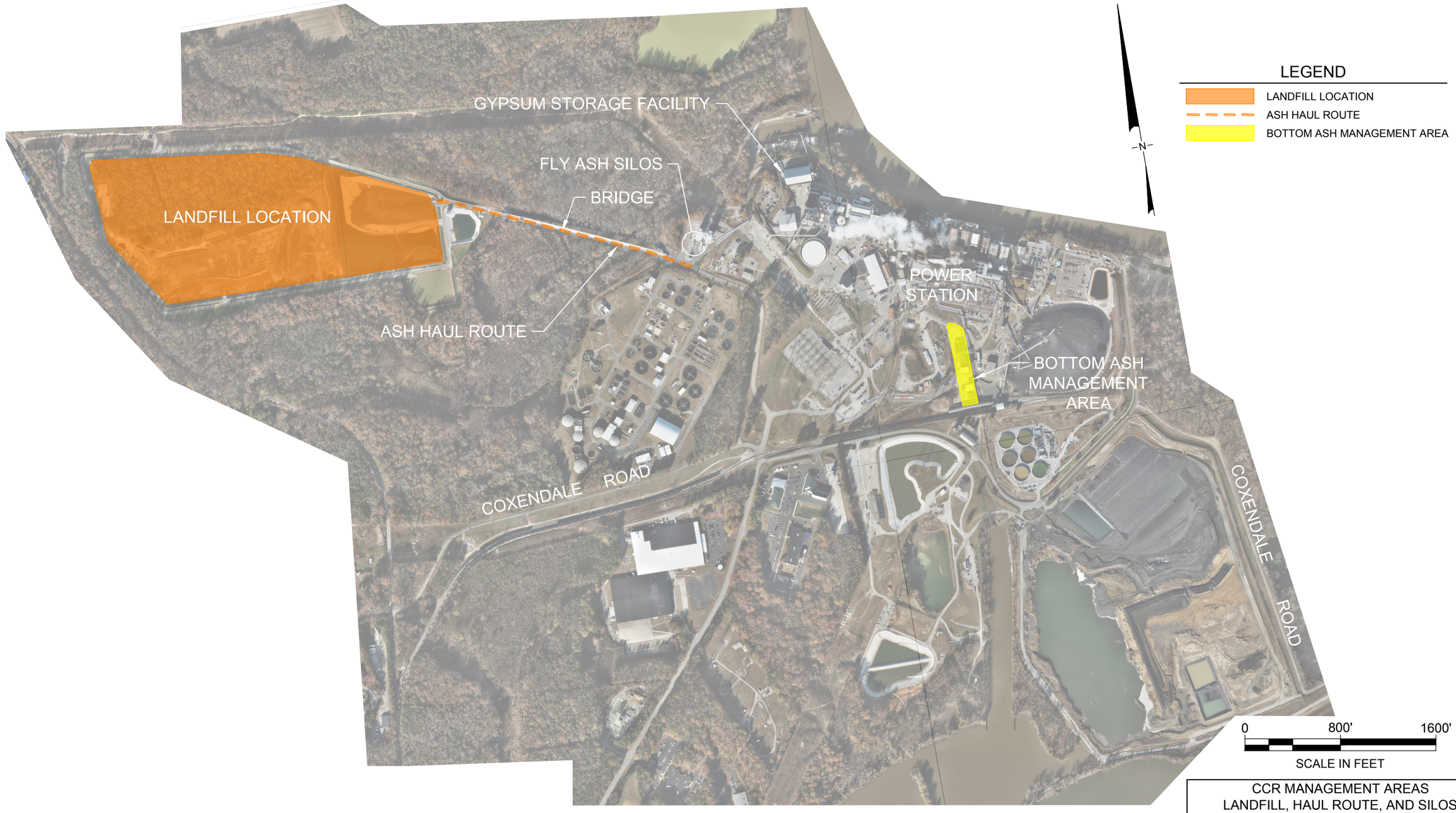


IMAGE OBTAINED FROM DOMINION (DECEMBER 2018)

CCR MANAGEMENT AREAS
LANDFILL, HAUL ROUTE, AND SILOS

CHESTERFIELD POWER STATION
CHESTER, VIRGINIA

Geosyntec consultants

FIGURE 2

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ATTACHMENTS

ATTACHMENT 1

FUGITIVE DUST COMPLAINT FORM

FUGITIVE DUST COMPLAINT FORM
Chesterfield 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
Chesterfield Power Station

Date/Time:_____

Contact Information

Name: _____ Telephone:_____

Address:_____ email:_____

_____

_____

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

ATTACHMENT 2

REVISION HISTORY

Attachment 2
CCR Rule Fugitive Dust Control Plan - Revision History

Revision No.	Date of Plan Review	Name of Person Performing Review	Reason for Review (Annual or Other)	Did Review Lead to a Plan Revision (YES/NO)	Comments (See [1]Note)
1	1/6/2016	Beverly Wood	Include landfill as future source	Yes	Section 3.4 was added for the future landfill source. Other minor edits were made to Sections 1 and 3.3.
2	9/29/2017	Beverly Wood	Add Landfill as a new source	Yes	Plan was modified throughout to note the addition of the landfill as a new source.
3	3/19/2019	Jannina Gahagan	Update status of CCR Management areas	Yes	Status of bottom ash management area, LAP, and silos updated to be current.
4	12/26/2019	Jannina Gahagan	Annual	Yes	Minor edits were made to Section 3.6

[1]NOTE: Specify reason for plan review and detail any changes that may have been made in the plan revisions, such as Section numbers, etc. Note: any review that leads to a plan amendment / revision requires that the plan be re-certified by a Professional Engineer. The revised plan must be posted to the facility operating record and posted to the public web-site. Only the most recent plan should be available on the public web-site. A plan review is required, at a minimum, on an annual calendar year basis.