Biennial Progress Report
Coal Combustion Residuals Unit Closures

Prepared for:

Dominion Energy
600 Canal Street
Richmond, VA 23219

Prepared by:

AECOM
4840 Cox Road
Glen Allen, VA 23060

aecom.com

September 2022

Executive Summary

In accordance with Virginia Code § 10.1-1402.03(G)(1), this Biennial Progress Report documents Dominion Energy Virginia's (Dominion Energy) progress to date closing the Coal Combustion Residuals (CCR) units subject to the 2019 legislation (SB 1355). This report documents the closure plan, closure progress to date, accounting of CCR disposal and beneficial use amounts, description of transportation planning, and a discussion of groundwater and surface water monitoring results, for each applicable CCR unit at Dominion Energy's Chesterfield Power Station, Bremo Power Station, Possum Point Power Station, and Chesapeake Energy Center. The CCR unit closure progress to date is summarized below with details provided for each station in the following sections of this report.

Chesterfield Power Station

- Closure plan includes excavation and removal of CCR from the Upper Ash Pond (11.3 million cubic yards (Mcy)) and the Lower Ash Pond (3.6 Mcy) and disposal of approximately 9 Mcy in the existing on-site CCR landfill and transporting an estimated 6 Mcy off-site by rail for beneficial use.
- Design, permitting and procurement phases have been substantially completed. A solid waste permit (SWP) for the pond closures and associated groundwater and surface water monitoring is in process with Virginia DEQ.
- Significant infrastructure construction has been completed including the ongoing sequential build-out of the existing on-site CCR landfill, construction and operation of a water treatment system, construction and operation of a rail loading facility and associated track upgrades, and additional infrastructure improvements to support the project.
- Upper Ash Pond – As of June 30, 2022, approximately 44,700 cy of CCR has been transported to the on-site rail loading facility for off-site beneficial use and 92,700 cy of CCR has been transported to the on-site CCR landfill for disposal.
- Lower Ash Pond - To support construction of the truck wash, approximately 2,100 cy has been excavated and transported to the on-site landfill.

Bremo Power Station

- Closure plan includes excavation and removal of approximately 6.2 Mcy of CCR from the North Ash Pond and placement in a new on-site CCR landfill to be constructed adjacent to the existing North Ash Pond.
- Received Special Use Permit from Fluvanna County for new landfill.
- Design and permitting phases are in process, with a Solid Waste Permit (SWP) Part A application, VPDES permit renewal, and a Wetlands Joint Permit Application under final regulatory review.
- A contract for construction and operation of a water treatment system has been finalized and construction activities have been initiated.
- SWP Part B application is expected to be submitted by the end of 2022.

Possum Point Power Station

- Closure plan includes excavation and removal of approximately 4 Mcy of CCR from Pond D and placement in a new on-site CCR landfill to be constructed adjacent to the existing Pond D.
- Received zoning determination from Prince William County for new landfill.
- Design and permitting phases are in process, with the Solid Waste Permit (SWP) Part A application and a Wetlands Joint Permit Application to be submitted by the end of 2022. A VPDES permit renewal application is also pending before DEQ.

Chesapeake Energy Center

- Closure plan includes excavation and removal of 2.2 Mcy of CCR from the site, including the landfill, bottom ash pond, and historical pond; and off-site transportation by rail, truck, or barge for beneficial use and/or disposal.
- Preliminary design work is completed, and a Conditional Use Permit (CUP) application is being reviewed by the City of Chesapeake.
- Final design, permitting, and procurement activities will proceed accordingly after CUP issuance, which is expected in late 2022 or early 2023.

Summary of CCR quantities for closure activities as of June 30, 2022 (cubic yards).

Station	CCR Unit or Area	CCR Quantity per Unit	Beneficial Use Expected	Beneficial Use Actual	Landfill Expected	Landfill Actual
Chesterfield Power Station	Upper Ash Pond	11,300,00	~6,000,000	44,700	~5,300,000	92,700
	Lower Ash Pond	3,600,000			3,600,000	2,100
Bremo Power Station	North Ash Pond	6,200,000	0		6,200,000	
Possum Point Power Station	Pond D	4,000,000	0		4,000,000	
Chesapeake Energy Center	Landfill, Bottom Ash Pond, Historical Pond	2,200,000	~800,000		~1,400,000	
Total		**27,300,000**	**~6,800,000 (minimum)**	**44,700**	**~20,500,000**	**94,800**

Table of Contents

Acronyms

ACM	Assessment of Corrective Measures
AECOM	AECOM Technical Services, Inc.
CCR	coal combustion residuals
CFR	Code of Federal Regulations
CPS	Chesterfield Power Station
cy	cubic yard
DEQ	(Virginia) Department of Environmental Quality
GPS	Groundwater protection standard
LAP	lower ash pond
Mcy	million cubic yards
MOU	Memorandum of Understanding
PM	particulate matter
RFP	request for proposal
SB	Senate Bill
SWP	Solid Waste Permit
UAP	upper ash pond
VA	Virginia
VPDES	Virginia Pollutant Discharge Elimination System
VSWMR	Virginia Solid Waste Management Regulations

1. Introduction

This Biennial Progress Report documents Dominion Energy's CCR Unit Closure progress in accordance with Virginia Code § 10.1-1402.03 (SB 1355). Subsection G of the law requires submission of this initial biennial report by October 1, 2022, and no less frequently than every two years thereafter until closure of all CCR units is complete. The report must include:

- Description of the closure plan for all CCR units.
- Closure progress to date.
- Detailed accounting of amount of CCR by unit and in total that have been and are expected to be beneficially used.
- Detailed accounting of amount of CCR by unit and in total that have been and are expected to be landfilled.
- Detailed accounting of the utilization of transportation options and a Transportation Plan.
- Discussion of groundwater and surface water monitoring results and measures taken to address such results as closure is being completed.

The following sections of this report provide the required information for each station.

.

2. Chesterfield Power Station

2.1 Background

Two on-site CCR surface impoundments - Lower Ash Pond (LAP) and Upper Ash Pond (UAP) - at the Chesterfield Power Station (CPS) are subject to the requirements of SB 1355 and the federal CCR Rule. The 101-acre LAP was constructed in 1964 and the 112-acre UAP in 1983. Both ponds are unlined. The UAP contains approximately 11.3 million cubic yards (Mcy) of CCR, and the LAP contains approximately 3.6 Mcy.

2.2 Closure Plans

Closure by removal of the UAP and LAP will comply with the federal CCR Rule Closure by Removal requirement (40 CFR § 257.102(c)), SB 1355, and the VSWMR. A Solid Waste Permit for the UAP and LAP closures is pending before DEQ and will cover all details of the final closure and restoration, as well as groundwater and surface water monitoring and corrective action.

The Closure Plan includes:

- Excavation of all CCR from the UAP and LAP for landfill disposal as well as any associated on-site screening, drying, and handling to meet applicable criteria for beneficial use.
- Transportation of approximately 9 Mcy to the on-site landfill for disposal.
- Transportation of approximately 6 Mcy to the on-site rail loading facility and subsequent off-site transportation by rail for beneficial use.
- Closure and restoration of the UAP and LAP.
- Long term groundwater monitoring, as required.

2.3 Closure Progress to Date

The following significant construction, operation, and CCR closure activities have been completed to date:

- Build-out and operation of Phase 1, the ongoing construction of Phase 2, and the future construction of Phases 3 and 4 of the existing on-site CCR landfill.
- Construction and operation of a water treatment system.
- Construction and operation of a rail loading facility and associated rail infrastructure.
- Construction and operation of a truck wash system, water lines, dewatering systems, roads, and material handling systems to support project operations.
- As of June 30, 2022, excavation of approximately 137,400 cy of CCR from the UAP, and approximately 2,100 cy from LAP.
- Transportation of excavated CCR to on-site CCR landfill and on-site rail loadout facility.
- Semi-annual groundwater monitoring and corrective action evaluations.

2.4 Accounting of CCR Beneficially Used

Approximately 44,700 cy transported to the rail loading facility for subsequent off-site transportation by rail for beneficial use through June 30, 2022.

2.5 Accounting of CCR Landfilled

Approximately 94,800 cy (from both UAP and LAP) transported to the on-site landfill for disposal through June 30, 2022.

2.6 Transportation Options and Plans

SB 1355 requires Dominion Energy to remove all CCR currently stored in two ash ponds at Chesterfield Power Station within 15 years. The law also requires the development of a Transportation Plan to address various transportation-related concerns related to the removal of CCR offsite as part of closure of the CCR units. Dominion Energy has worked closely with Chesterfield County to develop a Transportation Plan to avoid, minimize, and mitigate traffic impacts from CCR removal activities.

In developing the Transportation Plan, and as outlined in the agreed upon Memorandum of Understanding (MOU) with Chesterfield County that addresses transportation and access impacts, Dominion Energy and the County focused their evaluation on safety, environmental protection, local road use and traffic needs, noise control, dust mitigation, and preserving access to the important historic and recreational areas nearby the Chesterfield Power Station. Among other things, under the Transportation Plan, Dominion Energy and the County will:

- Make public roadway improvements at the beginning of the project.
- Ensure roadways are maintained to Virginia Department of Transportation standards for the duration of the trucking operations.
- Follow all relevant federal, state, and local regulations on noise levels.
- Employ accepted practices to mitigate and control dust.

The Transportation Plan lays out planned trucking routes and identifies impacted roads and intersections and is available at https://www.dominionenergy.com/projects-and-facilities/electric-projects/coal-ash/chesterfield-power-station-coal-ash-project.

As part of the Transportation Plan and pursuant to a Memorandum of Understanding (MOU) with Dominion Energy, Chesterfield County plans to develop new recreational facility improvements to provide additional access to Henricus Historical Park and other local recreational resources. The County's preliminarily recreation improvement plans include new access roads, new roadway and pedestrian bridges, a parking lot, a walking path, and a new boat ramp.

The County MOU and Transportation Plan were both finalized in 2020. Dominion Energy has implemented community outreach and engagement following the finalization of these documents and will continue such outreach throughout the project.

2.7 Groundwater and Surface Water Monitoring

Semi-annual groundwater monitoring is conducted in accordance with the Assessment Monitoring Program in the CCR Rule (40 CFR § 257.95) and the CPS Groundwater Monitoring Plan. Annual Groundwater Monitoring and Corrective Action Reports are submitted to DEQ and posted on Dominion's publicly accessible CCR Rule Compliance Data & Information website: https://www.dominionenergy.com/projects-and-facilities/electric-projects/coal-ash/ccr-rule-compliance-data-and-information.

The most recent groundwater monitoring for the UAP and LAP identified exceedances of applicable Groundwater Protection Standards (GPS) for several constituents, generally consistent with previous results.

In accordance with 40 CFR § 257.97 and the VSWMR, Dominion has initiated an Assessment of Corrective Measures (ACM) to evaluate groundwater conditions, the nature and extent of GPS exceedances, and potential corrective measures.

The ACM concludes that constituents above their GPS are not expected to pose a risk to human health or the environment and clarifies that closure by removal (source removal) with long term monitoring of groundwater is the most appropriate remedial alternative for protection of human health and the environment. The ACM further notes that future studies may be necessary to validate the natural recovery mechanisms and timeframes.

The pending closure permit for the UAP and LAP will include updated groundwater monitoring requirements, and additional requirements for surface water monitoring. Long-term groundwater and surface water monitoring will continue in accordance with the CCR Rule and the forthcoming SWP.

.

3. Bremo Power Station

3.1 Background

One one-site CCR surface impoundment (North Ash Pond, or NAP) at the Bremo Power Station (Bremo) is subject to the requirements of SB 1355 and the federal CCR Rule. The NAP was constructed as an unlined pond in 1983. The Bremo generating units stopped using coal as a fuel source in 2014. CCR from the former West and East Ash Ponds was subsequently excavated and consolidated in the NAP, and a temporary geomembrane rain cover was installed in 2019 to prevent stormwater contact. The NAP contains an estimated 6.2 Mcy of CCR.

3.2 Closure Plan

Closure by removal of the NAP will comply with the federal CCR Rule Closure by Removal requirement (40 CFR § 257.102(c)), SB 1355, and the VSWMR. A new on-site landfill is proposed to receive all CCR from the NAP for proper disposal.

The Closure Plan includes:

- Construction of a new on-site CCR landfill located immediately east of the NAP.
- Excavation and onsite transportation of approximately 6.2 Mcy of CCR and placement in the on-site landfill for disposal.
- Closure and restoration of the NAP.
- Long term groundwater monitoring, as required.

3.3 Closure Progress to Date

Landfill design and permitting are in process with active regulatory agency coordination. The following significant CCR closure support activities have been completed to date:

- Received a Special Use Permit from Fluvanna County for new landfill.
- A Solid Waste Permit (SWP) Part A application and a Wetlands Joint Permit Application for the new on-site CCR landfill are under final regulatory review, with approvals expected by the end of 2022.
- SWP Part B application submittal for the new landfill and additional landfill design refinement are expected to be complete by the end of 2022.
- A contract for construction and operation of a water treatment system has been finalized and construction activities have been initiated.
- Semi-annual groundwater monitoring and corrective action evaluations.

3.4 Accounting of CCR Beneficially Used

Dominion Energy is planning to construct a landfill at this site. Therefore, none of the CCR material will be beneficially used.

3.5 Accounting of CCR Landfilled

CCR closure construction has not been initiated pending receipt of all permits and completion of procurement activities.

3.6 Transportation Options and Plans

SB 1355 requires Dominion Energy to remove all CCR currently stored in the NAP at Bremo Power Station within 15 years. The law also requires the development of a Transportation Plan to address various transportation-related concerns related to the removal of CCR offsite as part of closure of the CCR units. Since the current closure plan includes disposal of CCR in an on-site landfill, no off-site transportation of CCR is anticipated at the Bremo site.

Nonetheless, Dominion Energy intends to work closely with Fluvanna County to avoid, minimize, and mitigate potential traffic impacts associated with project construction such as importing fill materials, construction equipment, and supplies.

3.7 Groundwater and Surface Water Monitoring

Semi-annual groundwater monitoring is conducted in accordance with the Assessment Monitoring Program in the CCR Rule (40 CFR § 257.95) and the Bremo SWP and Groundwater Monitoring Plan. Annual Groundwater Monitoring and Corrective Action Reports are submitted to DEQ and posted on Dominion's publicly accessible CCR Rule Compliance Data & Information website: https://www.dominionenergy.com/projects-and-facilities/electric-projects/coal-ash/ccr-rule-compliance-data-and-information.

The most recent groundwater monitoring for the NAP identified exceedances of applicable Groundwater Protection Standards for several constituents, generally consistent with previous results.

In accordance with 40 CFR § 257.97 and the VSWMR, Dominion has initiated an Assessment of Corrective Measures (ACM) to evaluate groundwater conditions, the nature and extent of GPS exceedances, and potential corrective measures.

The ACM concludes that constituents above their GPS are not expected to pose a risk to human health or the environment and clarifies that closure by removal (source removal) with long term monitoring of groundwater is the most appropriate remedial alternative for protection of human health and the environment. The ACM further notes that future studies may be necessary to validate the natural recovery mechanisms and timeframes.

The Bremo SWP requires periodic surface water monitoring as a complement to groundwater monitoring. Results of surface water monitoring in the James River to date have not shown impacts from CCR.

4. Possum Point Power Station

4.1 Background

One on-site surface impoundment (Pond D) at the Possum Point Power Station (Possum Point) is subject to the requirements of SB 1355 and the federal CCR Rule. Pond D was constructed as an unlined pond in 1988. In 2003, Possum Point ceased coal-fired generation. CCR from former Ponds ABC and Pond E was subsequently excavated and consolidated in Pond D by 2019. Pond D contains an estimated 4 Mcy of CCR.

4.2 Closure Plan

Closure by removal of Pond D will comply with the federal CCR Rule Closure by Removal requirement (40 CFR § 257.102(c)), SB 1355, and the VSWMR. A new on-site landfill is proposed to receive all CCR from Pond D for proper disposal.

The Closure Plan includes:

- Construction of a new on-site CCR landfill located immediately west of Pond D.
- Excavation and onsite transportation of approximately 4 Mcy of CCR and placement in the on-site landfill for disposal.
- Closure and restoration of Pond D.
- Long term groundwater monitoring, as required.

4.3 Closure Progress to Date

Landfill design and permitting are in process with active regulatory agency coordination. The following significant CCR closure support activities have been completed to date:

- Received zoning determination from Prince William County for new landfill.
- A Solid Waste Permit (SWP) Part A application and a Wetlands Joint Permit Application for the new on-site CCR landfill are in final development and expected to be submitted to DEQ and USACE by the end of 2022.
- Active coordination with Prince William County and local community.
- A contract for construction and operation of a water treatment system is in the procurement phase.
- Semi-annual groundwater monitoring and corrective action evaluations.

4.4 Accounting of CCR Beneficially Used

Dominion Energy is planning to construct a landfill at this site. Therefore, none of the CCR material will be beneficially used.

4.5 Accounting of CCR Landfilled

CCR closure construction has not been initiated pending receipt of all permits and completion of procurement activities.

4.6 Transportation Options and Plans

SB 1355 requires Dominion Energy to remove all CCR currently stored in Pond D at Possum Point Power Station within 15 years. The law also requires the development of a Transportation Plan to address various transportation-related concerns related to the removal of CCR offsite as part of closure of the CCR units. Since the current closure plan includes disposal of CCR in an on-site landfill, no off-site transportation of CCR is anticipated at Possum Point.

Nonetheless, Dominion Energy intends to work closely with Prince William County and the local community to avoid, minimize, and mitigate potential traffic impacts associated with project construction such as importing fill materials, construction equipment, and supplies.

4.7 Groundwater and Surface Water Monitoring

Semi-annual groundwater monitoring is conducted in accordance with the Assessment Monitoring Program in the CCR Rule (40 CFR § 257.95) and the Possum Point SWP and Groundwater Monitoring Plan. Annual Groundwater Monitoring and Corrective Action Reports are submitted to DEQ and posted on Dominion's publicly accessible CCR Rule Compliance Data & Information website: https://www.dominionenergy.com/projects-and-facilities/electric-projects/coal-ash/ccr-rule-compliance-data-and-information.

The most recent groundwater monitoring for Pond D identified exceedances of applicable Groundwater Protection Standards (GPS) for several constituents, generally consistent with previous results.

In accordance with 40 CFR § 257.97 and the VSWMR, Dominion has conducted an Assessment of Corrective Measures (ACM) to evaluate groundwater conditions, the nature and extent of GPS exceedances, and potential corrective measures. The ACM concludes that constituents above their GPS are not expected to pose a risk to human health or the environment and clarifies that closure by removal (source removal) with long term monitoring of groundwater is the most appropriate remedial alternative for protection of human health and the environment. The ACM further notes that future studies may be necessary to validate the natural recovery mechanisms and timeframes.

The Possum Point SWP requires periodic surface water monitoring as a complement to groundwater monitoring. Results of surface water monitoring in Quantico Creek and the Potomac River to date have not shown impacts from CCR.

5. Chesapeake Energy Center

5.1 Background

Chesapeake Energy Center includes a CCR landfill, a separate CCR surface impoundment (Bottom Ash Pond), and an underlying historical pond. All three areas are subject to closure under SB 1355, the VSWMR, and/or the CCR Rule. The current configuration of the CCR areas was developed in approximately 1985 when the landfill and adjacent Bottom Ash Pond were constructed on top of the historical pond area. CCR disposal ceased in 2015 following shutdown of the coal-fired units. The CCR areas collectively cover approximately 40 acres and contain an estimated 2.2 Mcy of CCR (approximately 1.2 mcy in the landfill; 50,000 cy in the bottom ash pond; and 950,000 cy in the historical pond).

5.2 Closure Plan

Closure by removal of the CCR areas will comply with the federal CCR Rule Closure by Removal requirement (40 CFR § 257.102(c)), SB 1355, and the VSWMR.

The Closure Plan includes:

- Excavation and removal of 2.2 Mcy of CCR from the landfill, bottom ash pond, and historical pond.
- On-site screening, drying, and handling to meet applicable criteria for beneficiation as necessary
- Off-site transportation by rail, truck, or barge for beneficial use and/or disposal.
- Closure and restoration of the CCR areas.
- Long term groundwater monitoring, as required.

5.3 Closure Progress to Date

The following significant CCR closure support activities have been completed to date:

- Site investigation work and preliminary closure design have been completed.
- Conditional Use Permit (CUP) application submitted in April 2022 is being reviewed by the City of Chesapeake with expected issuance by late 2022 or early 2023.
- Final design, permitting, and procurement activities will proceed after CUP issuance.
- Semi-annual groundwater monitoring and corrective measures evaluations.

5.4 Accounting of CCR Beneficially Used

CCR closure construction has not been initiated pending receipt of all permits and completion of procurement activities.

5.5 Accounting of CCR Landfilled

CCR closure construction has not been initiated pending receipt of all permits and completion of procurement activities.

5.6 Transportation Options and Plans

SB 1355 requires Dominion Energy to remove all CCR currently stored in the CCR areas at the Chesapeake Energy Center within 15 years. The law also requires the development of a Transportation Plan to address various transportation-related concerns related to the removal of CCR offsite as part of closure of the CCR areas.

Dominion Energy is working closely with the City of Chesapeake to address potential impacts from off-site trucking and intends to transport at least half the CCR off-site by rail or barge to alleviate potential trucking concerns. Dominion Energy will continue working with the City of Chesapeake to develop the Transportation Plan based on traffic studies and the proposed transportation methods for the final selected off-site disposal or beneficial use options.

5.7 Groundwater and Surface Water Monitoring

Semi-annual groundwater monitoring is conducted in accordance with the Assessment Monitoring Program in the CCR Rule (40 CFR § 257.95) and the Chesapeake Energy Center SWP and Groundwater Monitoring Plan. Annual Groundwater Monitoring and Corrective Action Reports are submitted to DEQ and posted on Dominion's publicly accessible CCR Rule Compliance Data & Information website: https://www.dominionenergy.com/projects-and-facilities/electric-projects/coal-ash/ccr-rule-compliance-data-and-information.

The most recent groundwater monitoring for the Chesapeake CCR areas identified exceedances of Groundwater Protection Standards (GPS) for several constituents, generally consistent with previous results.

In accordance with 40 CFR § 257.97 and the VSWMR, Dominion has initiated an Assessment of Corrective Measures (ACM) to evaluate groundwater conditions, the nature and extent of GPS exceedances, and potential corrective measures. The ACM concludes that constituents above their GPS are not expected to pose a risk to human health or the environment and clarifies that closure by removal (source removal) with long term monitoring of groundwater is the most appropriate remedial alternative for protection of human health and the environment. The ACM further notes that future studies may be necessary to validate the natural recovery mechanisms and timeframes.

The Chesapeake Energy Center SWP requires periodic surface water monitoring as a complement to groundwater monitoring. Results of surface water monitoring in Deep Creek and the Southern Branch Elizabeth River to date have not shown impacts from CCR.