



# Post-Closure Care Plan

A world of  
capabilities  
delivered locally

## POST-CLOSURE CARE PLAN

Chesterfield Power Station FFCP Management  
Facility – Permit #609



**Dominion  
Energy**<sup>SM</sup>

**Submitted To:** Dominion Energy – Chesterfield Power Station  
5000 Dominion Boulevard  
Glen Allen, VA 23060

**Submitted By:** Golder Associates Inc.  
2108 W. Laburnum Avenue  
Suite 200  
Richmond, VA 23227

September 2017

152-0610



## Table of Contents

1.0	PLAN CERTIFICATION .....	1
2.0	PURPOSE.....	2
2.1	Post-Closure Period .....	2
2.2	Post-Closure Contact .....	2
3.0	INSPECTION, MONITORING, AND MAINTENANCE PLAN .....	3
3.1	Security Control Devices.....	3
3.2	Final Cover Integrity .....	3
3.3	Run-on and Run-off Controls .....	3
3.4	Repair of Erosion Damage Areas .....	3
3.5	Leachate Collection System.....	4
3.6	Groundwater Monitoring System.....	4
3.7	Landfill Gas Monitoring System .....	4
3.8	Inspections .....	4
4.0	POST-CLOSURE USES .....	5
5.0	POST-CLOSURE COST ESTIMATE.....	6
6.0	POST-CLOSURE CARE TERMINATION.....	7
6.1	Notification.....	7

## Attachments

1. Inspection Checklist

## 1.0 PLAN CERTIFICATION

I certify that the information contained within this Post-Closure Care Plan was prepared by me or under my direct supervision, and meets the requirements of Section §257.104 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  
Print Name

Associate and Senior Consultant  
Title

Daniel McGrath  
Signature

8/7/17  
Date



## **2.0 PURPOSE**

This Post-Closure Care Plan (Plan) is for the Chesterfield Power Station Fossil Fuel Combustion Products (FFCP) Management Facility (Facility) at the Chesterfield Power Station (Station), Chesterfield County, Virginia. This Facility is a captive industrial landfill and at final capacity, will contain approximately 9,360,000 cubic yards of Fossil Fuel Combustion Products (FFCP), including CCR.

### **2.1 Post-Closure Period**

The required post-closure care period for this landfill is 30 years.

### **2.2 Post-Closure Contact**

The post-closure contact for this Facility will be:

Jason E. Williams  
Manager, Environmental Services and Sustainability  
Dominion Energy  
5000 Dominion Boulevard  
Glen Allen, VA 23060  
(804) 273-2646  
jason.e.williams@dominionenergy.com

### **3.0 INSPECTION, MONITORING, AND MAINTENANCE PLAN**

#### **3.1 Security Control Devices**

The perimeter of the landfill and access points into the landfill will be inspected at least once per calendar month to verify the proper functioning of gates, fencing, and other perimeter security measures. If repairs are found to be needed, the maintenance request will be routed through the Station.

#### **3.2 Final Cover Integrity**

The final cover of the landfill will be inspected at least once per calendar month or after severe storms to assess the condition of the cover and identify maintenance needs. Inspection items will include:

- Erosion damage to cover, stormwater channels, or stormwater basins;
- Settlement, subsidence, or displacement of the final cover;
- Evidence of animal intrusion or burrowing;
- Bare or dead vegetative cover;
- Woody vegetation growing on final cover areas; and,
- Evidence of seeps or saturated areas.

The landfill will be mowed at least once per growing season or as necessary to facilitate growth of grasses on the cover, enable inspection, and preclude the establishment of woody vegetation. Application of fertilizer and/or reseeding will take place as needed to maintain a healthy stand of vegetative cover.

#### **3.3 Run-on and Run-off Controls**

As part of the monthly or post-storm inspection, the stormwater run-off control system will be inspected. Stormwater conveyances will be observed for erosion damage, accumulated sediment, unusual settlement, and excessive or insufficient vegetative growth. Culverts will be inspected for blockage due to accumulated debris or sediment. Drop inlets will be inspected for debris accumulation.

Small amounts of sediment or debris will be removed from areas if possible, and the removal will be noted on the inspection record. Areas requiring repairs or debris removal that are beyond the inspector's capacity will be identified to the Station's maintenance personnel for correction.

#### **3.4 Repair of Erosion Damage Areas**

Areas of the cover system that have been eroded will be backfilled. The areas will be seeded, then mulched or protected with erosion control matting to deter new erosion. Other areas that have been eroded will be graded to allow positive drainage, seeded, and mulched or protected with erosion control matting to deter new erosion.

### 3.5 Leachate Collection System

The leachate collection system will be inspected as part of the monthly site inspection. Each leachate headworks area (8 in all) will be inspected for proper operation. Pump run-time meters will be observed for change since the last inspection to identify nonworking or overworking pumps. Observe the area around the headworks for leaks. The leachate flowmeter and collection manhole / pump station will be inspected for proper operation. Identified maintenance needs will be directed to the Station maintenance personnel.

The perimeter of the landfill will be observed for presence of wet or saturated areas that appear out of place during dry weather, as this may be indicative of a leachate seep. If a leachate seep is identified, the Station maintenance personnel will be notified to repair the seep and complete the following actions:

- Take all immediate steps necessary to protect public health and safety including those required by the contingency plan (included in the landfill operations manual);
- Take immediate action to minimize, control, or eliminate the seep, and to contain and properly manage the leachate at the source of the seep; and,
- Where practicable, properly collect and dispose of landfill leachate released outside the lined area.

Following the immediate response to the seep, an evaluation will be made to consider if further remedial action is required to prevent further seeps or collect and contain leachate before it can seep uncontrolled from the Facility.

### 3.6 Groundwater Monitoring System

Groundwater monitoring throughout the post-closure period shall be performed semi-annually and comply with requirements outlined in 40 CFR §§257.90-98 and in the Facility's *Groundwater Monitoring Plan*. Identified maintenance needs will be coordinated through the Station's environmental representative as needed.

### 3.7 Landfill Gas Monitoring System

CCRs by their nature are non-putrescible, and do not decompose or produce landfill gas. Gas migration and odor is not anticipated to be a concern post-closure. Therefore, no post-closure landfill gas monitoring is proposed for this Facility.

### 3.8 Inspections

Inspections will be performed by a Dominion Energy employee or independent licensed engineer or other qualified person. The Closed Unit Inspection Form, or equivalent, provided in Attachment 1 will be used to document inspections. The closed unit will be inspected at a frequency appropriate to maintain environmental and structural integrity of the final cover system.

#### **4.0 POST-CLOSURE USES**

Post-closure use will be in accordance with the provisions of the Virginia Solid Waste Management Regulations. Access to the site will be restricted. Possible future uses of the closed Facility include a wildlife management area. At the time of closure, Dominion may explore other safe uses for the Facility under the regulations in place at that time. Post-closure activities will be designed and conducted so as to not disturb the integrity of the final cover, the components of any containment system, or the function of the Facility's monitoring systems. Any post-closure uses not specifically addressed in this Post-Closure Care Plan must have prior approval from the DEQ.

## **5.0 POST-CLOSURE COST ESTIMATE**

The estimated cost for post-closure care of the 66-acre landfill is \$5,250,000.



## **6.0 POST-CLOSURE CARE TERMINATION**

At the end of the 30-year post-closure care period, Dominion Energy will submit a request to terminate post-closure care in accordance with the Virginia Solid Waste Management Regulations.

### **6.1 Notification**

Within 60 days of completion of post-closure care, a certification statement, signed by a licensed professional engineer, will be placed in the facility's operating record, posted on Dominion Energy's publicly accessible internet site, and submitted to the DEQ in accordance with the Final CCR Rule.

**Attachment 1  
Post-Closure Inspection Schedule  
Chesterfield FFCP Management Facility – Permit #609**

<b>Item</b>	<b>Inspection Items</b>	<b>Frequency of Inspection</b>
Facility Area	Gate and Fence	Monthly
	Erosion of closure cover	Monthly or after severe storms
	Settlement & Subsidence	Monthly
	Deterioration of vegetative cover	Monthly or after severe storms
	Trash, litter	Monthly
	Stormwater control system	Monthly or after severe storms
Leachate Collection System	Leachate levels, pump operation hours / flows, manholes	Monthly
Groundwater Monitoring System	See Groundwater Monitoring Plan	See Groundwater Monitoring Plan

**Table 1**  
**Post-Closure Inspection Schedule**  
**Chesterfield FFCP Management Facility – Permit #609**

<b>Item</b>	<b>Inspection Items</b>	<b>Frequency of Inspection</b>
Facility Area	Gate and Fence	Monthly
	Erosion of closure cover	Monthly or after severe storms
	Settlement & Subsidence	Monthly
	Deterioration of vegetative cover	Monthly or after severe storms
	Trash, litter	Monthly
	Stormwater control system	Monthly or after severe storms
Leachate Collection System	Leachate levels, pump operation hours, cleanouts and manholes	Monthly
Groundwater Monitoring System	See Groundwater Monitoring Plan	See Groundwater Monitoring Plan