



Post-Closure Care Plan Solid Waste Permit Application (SWP 617)

Virginia Electric and Power Company
Possum Point Power Station
Coal Combustion Residuals Surface Impoundment Closures
Dumfries, Virginia

GAI Project Number: C150132.00

October 2016



DominionSM

Prepared by: GAI Consultants, Inc.
Richmond Office
4198 Cox Road, Suite 114
Glen Allen, Virginia 23060-3328

Prepared for: Virginia Electric and Power Company
5000 Dominion Boulevard
Glen Allen, Virginia 23060-3308

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1.0 Introduction

This Post-Closure Care Plan (Plan) was prepared on behalf of Virginia Electric and Power Company d/b/a Dominion Virginia Power (Dominion) by GAI Consultants, Inc. This Plan was prepared in conjunction with a Closure Plan for Coal Combustion Residuals (CCR) Impoundments A, B, C, D, and E located at the Possum Point Power Station (Station).

This Post-Closure Care Plan is for CCR Surface Impoundment D, which will be closed in place by constructing an engineered cover system over the CCR surface as described in the Closure Plan. Post closure care is not required for Impoundments A, B, C, or E, which are being closed by removal of CCR. The information provided in this Report follows the format guidelines for Solid Waste Disposal Facilities as described in Submission Instruction No. 6, provided by the Virginia (VA) Department of Environmental Quality (VDEQ) in 2012.

2.0 Post-Closure Activities

2.1 Post-Closure Period

The VA Solid Waste Management Regulations (VSWMR) and applicable parts of the Environmental Protection Agency (EPA) CCR regulations at 40 Code of Federal Regulations (CFR), Part 257 (CCR Rule) require post-closure care for a 30-year period after completion of closure of surface impoundments with a cover system. Post-closure care for Surface Impoundment D will commence after Surface Impoundment D closure is complete.

2.2 Post-Closure Contact

Paula A. Hamel of Dominion is designated as the contact person during the post-closure period of 30 years. The contact information is as follows:

Paula A. Hamel
Director, Generation Environmental Services -
5000 Dominion Boulevard -
Glen Allen, VA 23060 -
804-273-3024 -
Paula.a.hamel@dom.com -

2.3 Security

The surface impoundments are located on Dominion property adjacent to the Station. The impoundments are not fenced, but they are screened by wooded areas and the access roads are secured with locked gates. Numerous private property and no trespassing signs are located around the surface impoundments. Surface Impoundment D is also screened by natural topography and the Impoundment D earthen embankment that limits the visibility from Possum Point Road and Cockpit Road.

All groundwater monitoring wells will have locked steel protective casings to control access to the wells.

2.4 Inspection Plan

Inspections will be performed by a Dominion employee or independent registered engineer or other qualified person. The CCR Surface Impoundment Inspection Checklist, or equivalent, provided in **Attachment A**, will be used to document inspections. The closed CCR impoundment D will be visually inspected quarterly or more frequently, as appropriate, to maintain environmental and structural integrity of the cover system. An annual inspection will be performed by a professional engineer

licensed in the Commonwealth of VA in accordance with the VA Department of Conservation and Recreation Dam Safety requirements.

2.5 Maintenance Plan

During the post-closure care period, Impoundment D will receive routine maintenance to meet post-closure care requirements. Maintenance will be performed to maintain the effectiveness of the final cover system, including making repairs to the final cover as necessary to correct the effects of settlement, subsidence, erosion, or other events and preventing run-on and run-off from eroding or otherwise damaging the final cover. The following items will receive maintenance as needed:

2.5.1 Erosion Damaged Areas

Areas of the cover system that have been eroded will be backfilled according to the approved cover system design. 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.

2.5.2 Correction of Settlement, Subsidence, and Displacement

Any minor settlement, subsidence, or displacement will be corrected by grading to promote positive surface drainage. Suspected geomembrane damage will be inspected and repairs made as needed. Major settlement, subsidence, or displacement may require an engineering evaluation of the cause; the remedy for any major damage will be based on addressing the cause of the damage.

2.5.3 Run-On and Run-Off Control Structures

Eroded channels and pipe entrance/exits will be returned to design conditions as soon as possible. Clogs will be removed from pipes and basin riser structures to allow the free flow of water. If problems with underground pipes are suspected (e.g., joints coming apart, low spots in alignment, and crushed pipe), the pipes will be video surveyed, visually surveyed, or excavated to confirm damage and ascertain the best remedy.

2.5.4 Groundwater Wells

Repairs to groundwater wells will be made in accordance with the Groundwater Monitoring Plan (GMP) that is part of the Solid Waste Disposal Facility Part B Permit Application (SWP 617), submitted to VDEQ in October 2016.

2.5.5 Mowing

The cover system for Surface Impoundment D will be mowed a minimum of once per year or as necessary to deter the growth of woody vegetation, deter habitation by vectors, and to allow inspection and access to the landfill cap features and landfill related structures (e.g., wells and stormwater channels).

2.5.6 Seeding and Fertilization

Bare areas will be seeded and fertilized as needed to deter erosion.

2.6 Monitoring Plan

Monitoring will be conducted in accordance with the inspection plan described in this report and the GMP as discussed below.

2.6.1 Groundwater Monitoring

Groundwater monitoring throughout the post-closure period shall be performed semi-annually and shall comply with requirements outlined in 40 CFR 257.90-98 and in the Facility's GMP. A GMP was prepared and submitted to DEQ for approval. Please refer to the GMP for additional information on the site's groundwater monitoring.

2.6.2 Landfill Gas Monitoring System

A Landfill Gas Monitoring System is not required for the facility.

2.6.3 Leachate Collection System

Liquid wastes generated by stormwater run-on and dewatering of the surface impoundments will be managed in accordance with the Station's VPDES Permit No. VA0002071.

2.7 Post-Closure Uses

It is anticipated the area of closed Surface Impoundment D will be used as open space or managed turf.

A deed restriction will be placed on the property to ensure that there is no impact to the closed Surface Impoundment D. Post-closure use of the property is not expected to disturb the integrity of the final cover, liner system, or any other components of the closed CCR impoundment unless necessary to meet the requirements for post-closure care. The VDEQ may approve other disturbances if those disturbances will not increase the potential threat to human health or the environment.

2.8 Training

Personnel responsible for conducting maintenance, inspection, and monitoring tasks will be competent individuals trained to perform their assigned tasks. Updated training will be required as necessary.

2.9 Post-Closure Care Cost Estimate

The post-closure care cost estimate is provided in Attachment B of the Solid Waste Disposal Facility Part B Permit Application (SWP 617), submitted to VDEQ in October 2016. The estimated annual cost for post-closure care is \$387,000.

2.10 Post-Closure Care Termination

The VSWMR and CCR Rule requires a post-closure care period of at least 30 years. At the end of the 30-year period, Dominion may submit a request for termination of post-closure care activities. DEQ may extend the post-closure care associated with Surface Impoundment D in accordance with the provisions of the VSWMR. Upon approved termination of post-closure care activities, the proper notifications will be made in accordance with applicable parts of the VSWMR and CCR Rule.

3.0 Professional Engineer's Certification

I, the undersigned VA Professional Engineer, hereby certify that I am familiar with the technical requirements of the VSWMRs and 40 CFR §257.104. Based on my understanding of these technical requirements, it is my professional opinion that, to the best of my knowledge, information, and belief, this Post-Closure Care Plan for Surface Impoundment D has been prepared by GAI pursuant to its Scope of Services in accordance with current good and accepted engineering practice(s) and standard(s) appropriate to the nature of the project and the technical requirements of 40 CFR §257.104.

For purposes of this document, "certify" and "certification" shall be interpreted and construed to be a "statement of professional opinion". The certification is understood and intended to be an expression of my professional opinion as a VA Registered Professional Engineer, based upon knowledge, information and belief. The statement(s) of professional opinion are not and shall not be interpreted or construed to be a guarantee nor a warranty of the post-closure care activities.

John R. Klamut, P. E.
Printed Name of Professional Engineer

048859
Commonwealth of Virginia License Number


Signature of Professional Engineer

10/13/2016
Date



ATTACHMENT A

CCR Surface Impoundment Inspection Checklist



Dominion QUARTERLY CLOSED CCR SURFACE IMPOUNDMENT
INSPECTION CHECKLIST

FOR EXAMPLE ONLY

Site Name		Date of Inspection	
Inspected By		Rain in Last 72 Hours?	

Embankment Slope and Crest

Conditions Present	Comments	Monitor	Investigate	Repair	Escalate
Animal Burrows					
Bare Spots/Erosion					
Horizontal Alignment					
Sinkhole/Depression					
Seeps, Standing Water					
Slide, Slough, Bulges					
Vegetation Maintenance Required					
Vegetation – Stressed					

Inside of Impoundment/Outlet Structure

Conditions Present	Comments	Monitor	Investigate	Repair	Escalate
Erosion/Slough Slope					
Stop Logs Operational					
Outlet Not Obstructed					
Floating Solids Control					
Visual of Effluent					
Walkway Condition					



Dominion QUARTERLY CLOSED CCR SURFACE IMPOUNDMENT
INSPECTION CHECKLIST

FOR EXAMPLE ONLY

Vegetation Inside Impoundment					
Previous Conditions for Repair or Escalation have been mitigated and the condition has returned to monitor status? If no, provide date for completion in Comments box below.				Yes	No

Definitions -

Monitor	Observation indicates a safe condition protective of the environment.
Investigate	Observation indicates a condition that has changed from a monitor condition and requires investigation to determine whether condition is unsafe or not protective of the environment.
Repair	Observation indicates a condition that requires a near term repair to ensure that condition does not worsen and become a serious concern.
Escalate	Observation indicates a condition that must be addressed immediately to ensure the safety of the surface impoundment, facilities, or public or protection of the environment.

General Comments [Document any unusual events or conditions]: -

Note: An annual inspection will be performed by a professional engineer licensed in the State of VA utilizing the VA Department of Conservation and Recreation Dam Safety regulations.