



POST-CLOSURE PLAN

POST-CLOSURE PLAN

Chesapeake Energy Center CCR Surface
Impoundment: Bottom Ash Pond



Submitted To: Chesapeake Energy Center
2701 Veeco Street
Chesapeake, VA 23323

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

April 2018

Project No. 13-00193

A world of
capabilities
delivered locally





Table of Contents

| | | |
|-----|---|---|
| 1.0 | PLAN CERTIFICATION | 1 |
| 2.0 | INSPECTION, MONITORING AND MAINTENANCE ACTIVITIES | 2 |
| 2.1 | Groundwater Monitoring..... | 2 |
| 2.2 | Maintenance..... | 2 |
| 2.3 | Routine Inspections..... | 2 |
| 3.0 | POST-CLOSURE CONTACT | 2 |
| 4.0 | POST-CLOSURE USES | 3 |

Appendices

Appendix A Inspection Checklist

1.0 PLAN CERTIFICATION

This Post-Closure Plan for the Chesapeake Energy Center's Bottom Ash Pond was prepared by Golder Associates Inc. (Golder). The document and Certification/Statement of Professional Opinion are based on and limited to information that Golder has relied on from Dominion and others, but not independently verified, as well as work products produced by Golder.

On the basis of and subject to the foregoing, it is my professional opinion as a Professional Engineer licensed in the Commonwealth of Virginia that this document has been prepared in accordance with good and accepted engineering practices as exercised by other engineers practicing in the same discipline(s), under similar circumstances, at the same time, and in the same locale. It is my professional opinion that the document was prepared consistent with the requirements in §257.104(d) of the United States Environmental Protection Agency's "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments," published in the Federal Register on April 17, 2015, with an effective date of October 19, 2015 [40 CFR §257.73(c)], as well as with the requirements in §257.100 resulting from the EPA's "Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities; Extension of Compliance Deadlines for Certain Inactive Surface Impoundments; Response to Partial Vacatur" published in the Federal Register on August 5, 2016 with an effective date of October 4, 2016 (40 CFR §257.100).

The use of the word "certification" and/or "certify" in this document shall be interpreted and construed as a Statement of Professional Opinion, and is not and shall not be interpreted or construed as a guarantee, warranty, or legal opinion.

Daniel McGrath
Print Name

Associate and Senior Consultant
Title

Daniel McGrath
Signature

4/12/18
Date



2.0 INSPECTION, MONITORING AND MAINTENANCE ACTIVITIES

The Chesapeake Energy Center (CEC) Bottom Ash Pond (BAP) will be closed by removal and then backfilled and covered in conjunction and consistent with closure of the adjacent CEC landfill. Monitoring and maintenance activities are limited to groundwater monitoring, maintenance of grassy areas, and routine inspections.

2.1 Groundwater Monitoring

The certified CCR rule groundwater monitoring network will be monitored and maintained in accordance with the Groundwater Monitoring Plan for the CCR landfill, Permit #440.

2.2 Maintenance

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

2.3 Routine Inspections

The perimeter and access points of the BAP will be inspected at least once per calendar month to verify the proper functioning of gates, fencing, and other perimeter security measures. Maintenance to the security devices shall be performed as soon as practicable.

3.0 POST-CLOSURE CONTACT

The post-closure contact for this Station will be:

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

4.0 POST-CLOSURE USES

No post-closure use of the BAP area is planned. Access to the site will be restricted. After closure, Dominion may explore alternate safe uses for the landfill and BAP under the regulations that will exist at that time. Post-closure activities will be designed and conducted not to disturb the integrity of the final cover systems, the components of any containment systems, or the function of the monitoring systems. Any post-closure uses or changes to the closure area not specifically addressed in this Post-Closure Plan must have prior approval from the Virginia Department of Environmental Quality (DEQ).



MONTHLY CLOSED CCR POND INSPECTION CHECKLIST

| | | | | |
|--------------------|--|-----------------------------------|-----|----|
| Site Name | | Inspected By | | |
| Date of Inspection | | Rain in Last 2-3 days? Circle One | Yes | No |

| Conditions Present | No Action Required | Investigate | Request Repair | Prompt Action Required | Comments (Include information on corrective actions/routine maintenance procedures that will be implemented to address the condition and any status updates) |
|--|-----------------------|-------------|----------------|------------------------|--|
| | Place <u>X</u> in Box | | | | |
| Inactive/Closed Area | | | | | |
| Animal Burrows | | | | | |
| Areas of Erosion | | | | | |
| Erosion control features | | | | | |
| Drains and drain systems | | | | | |
| Slide, slough, bulges, seeps | | | | | |
| Vegetative cover damage | | | | | |
| Vegetative mowing needed | | | | | |
| Leachate and Stormwater Pond Area | | | | | |
| Animal Burrows | | | | | |
| Areas of Erosion | | | | | |
| Leachate System Operation | | | | | |
| Visible liner damage | | | | | |
| Outlet operation | | | | | |
| Vegetative mowing or removal needed | | | | | |



MONTHLY CLOSED CCR POND INSPECTION CHECKLIST

| Conditions Present | No Action Required | Investigate | Request Repair | Prompt Action Required | Comments (Include information on corrective actions/routine maintenance procedures that will be implemented to address the condition and any status updates) |
|--------------------|-----------------------|-------------|----------------|------------------------|--|
| | Place <u>X</u> in Box | | | | |
| Other Areas | | | | | |
| Groundwater wells | | | | | |
| Evidence of spills | | | | | |
| Security/Access | | | | | |
| Trash and Debris | | | | | |

| | | |
|--|-----|----|
| Previous Conditions for "Request Repair" or "Prompt Action Required" items have been addressed and the condition has returned to "No Action Required"? If no, provide date for completion in Comments box below. | Yes | No |
| | | |

Definitions

| | |
|-------------------------------|--|
| No Action Required | Observation indicates that landfill is operating in a normal safe condition protective of the environment. No further action is necessary. |
| Investigate | Observation indicates a condition that has changed from a "no action required" condition and requires investigation to determine whether condition is unsafe or not protective of the environment. Inspector will notify Operations, Engineering, or Environmental Services to investigate and/or evaluate condition further. |
| Request Repair | Observation indicates a condition that requires a near term repair to ensure that condition does not worsen and become a serious concern. Inspector will submit a repair ticket through their internal work order system or make contact with responsible party for repair. |
| Prompt Action Required | Observation indicates a condition that must be addressed immediately to ensure the safety of the surface impoundment, related facilities, or public or protection of the environment. Inspector will contact responsible site and/or corporate personnel to initiate an immediate evaluation and corrective measure, as necessary. |

General Comments [Document any unusual events or conditions]:

Note: Completed inspection forms must be saved into the facility operating record and Environmental Documentum.

Established in 1960, Golder Associates is a global, employee-owned organization that helps clients find sustainable solutions to the challenges of finite resources, energy and water supply and management, waste management, urbanization, and climate change. We provide a wide range of independent consulting, design, and construction services in our specialist areas of earth, environment, and energy. By building strong relationships and meeting the needs of clients, our people have created one of the most trusted professional services organizations in the world.

| | |
|---------------|-------------------|
| Africa | + 27 11 254 4800 |
| Asia | + 852 2562 3658 |
| Australasia | + 61 3 8862 3500 |
| Europe | + 356 21 42 30 20 |
| North America | + 1 800 275 3281 |
| South America | + 56 2 2616 2000 |

solutions@golder.com
www.golder.com

Golder Associates Inc.
2108 W. Laburnum Avenue, Suite 200
Richmond, VA 23227 USA
Tel: (804) 358-7900
Fax: (804) 358-2900



Engineering Earth's Development, Preserving Earth's Integrity

Golder, Golder Associates and the GA globe design are trademarks of Golder Associates Corporation