



**GENON WESTLAND ASH STORAGE SITE
DICKERSON, MARYLAND
2022 ANNUAL CCR LANDFILL INSPECTION REPORT**

To: Jay Spence, GenOn MD Ash Management LLC (GenOn)
From: Tom White, P.E., AECOM Technical Services, Inc. (AECOM)
Date: December 30, 2022
RE: Annual Coal Combustion Residuals (CCR) Landfill Inspection Report
Westland Ash Storage Site Operating Cell B

1.0 Introduction

As of October 19, 2015, the Westland Ash Storage Site (Westland Site) has been regulated by the Code of Federal Regulations (CFR) under 40 CFR §257 Subpart D – Standards for Disposal of Coal Combustion Residuals (CCR) in Landfills and Surface Impoundments. Section §257.84 of this regulation requires operators of existing CCR units to conduct an annual inspection by a qualified professional engineer to ensure the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering practices.

The initial Annual CCR Inspection Report for the Westland Cell B site was completed and placed in the Westland Operating Record on January 18, 2016, as required by Section §257.84.b(3). The regulations require that subsequent to completion of the initial Annual CCR Inspection Report, the owner/operator conduct inspections on an annual basis, with the completion date of the Annual Inspection Report being based on the completion date of the previous Annual Inspection Report.

The annual inspection for the Cell B operational area for the Westland Site was conducted on December 13, 2022 and will be placed in the Westland operating record by January 18, 2023.

2.0 Site Background

The Westland Site is located on Martinsburg Road in Dickerson, Maryland. The facility and access road connecting the facility to the Dickerson Generating Station were initially designed by D'Appolonia for Potomac Electric Power Co. in 1977. The facility design received regulatory authorization and construction began in 1979. The site is comprised of three disposal cells, Cells A, B and C, with Cell B being the only operating cell at the site. These three cells are described below.

- **Cell B** is the current operational cell at the site. It encompasses approximately 64.4 acres, which includes:
 - Approximately 24.0 acres of Cell B along the northern, western, and southern perimeter slopes are currently complete and closed with an engineered geosynthetic closure cap that was completed in October 2017. Maryland Department of Environment (MDE) conducted a final walkthrough of the completed closure cap on April 11, 2018, and issued a letter to GenOn on June 21, 2019 approving the closure cap.
 - Approximately 13.6 acres of Cell B in the central section of the disposal area is inactive (i.e. no active ash disposal or mining) with existing soil cover and vegetative stabilization over the completed ash placement.

- Cell B1-A in the southeast portion of Cell B is approximately 6.6 acres and is the active ash disposal area, although there has been no ash disposal in 2022 to date. Cell B1-A has an engineered geosynthetic base liner system and is used to collect storm water runoff associated with Cell B beneficial use activities.
- Cell B1-B in the southeast portion of Cell B is approximately 6.8 acres. Its engineered geosynthetic base liner system has been constructed, but there has been no ash placement in Cell B1-B, so runoff from this area is managed by the site's stormwater management system.
- Approximately 6.8 acres of the northeast section of Cell B has been mined of ash for offsite beneficial use under Phase 1 of the Cell B deconstruction (mining) plan. Surface water and leachate from this inactive mining area is directed to the existing leachate collection system.
- Approximately 6.6 acres of the former plateau above the existing cap is being mined of ash for offsite beneficial use under Phases 2-5 of the Cell B deconstruction plan. Surface water and leachate from this active mining area is directed to the existing leachate collection system.
- **Cell C** encompasses approximately 18.5 acres, and is located at the northwest corner of the site, separated from Cell B by a 250-foot wide transmission line right-of-way which runs along the eastern boundary of Cell C. Cell C has been closed for many years, and was closure capped with a MDE-approved engineered geosynthetic closure capping system in 2016. MDE conducted a final walkthrough on the Cell C closure cap on April 11, 2018, and issued a letter to GenOn on June 21, 2019 approving the closure cap.
- **Cell A** is the largest planned area at the Westland Site (approximately 96.6 acres). It is situated directly east of Cell B and is divided from Cell B by an approximately 400-foot wide strip of land denoted as "Preservation Area D". There are no current plans to develop Cell A.

3.0 Cell B Operational Areas Inspection Results

On December 13, 2022, Tom White, a Maryland Registered Professional Engineer employed by AECOM Technical Services, Inc. (AECOM), accompanied by Jay Spence, GenOn site superintendent for the Westland Site, conducted an inspection of the operating portion of Cell B on behalf of GenOn. The results of the inspection are presented in the subsections below. The inspection form that was prepared during the inspection is attached to this report. GenOn's current onsite contractors are Bowling Brothers, Inc. for operations and maintenance (O&M) and Hetzer, Inc. for mining operations. Hetzer, Inc. is a subcontractor to MERG/PBCo, which has a contract with GenOn for mining of the ash.

3.1 Access Roads and Security

Incoming empty CCR mining trucks enter the site at the Dickerson Generating Station main entrance at 21200 Martinsburg Road and proceed on the internal plant roads through two (2) manual gates to the Westland Site main entrance, which is further west along Martinsburg Road. The two (2) internal manual gates are operated by Bowling Brothers, GenOn's O&M contractor for the Westland Site. At the Westland Site entrance, drivers pass through a gate on the north side of Martinsburg Road and then through the main gate for the Westland Site on the south side of Martinsburg Road. Both of the gates are opened by a key fob or mobile app that each driver possesses. Outgoing loaded CCR mining trucks use the same route on their exit from the site. No trucks are driven on the section of Martinsburg Road between the Westland Site entrance and the Dickerson Generating Station main entrance at 21200 Martinsburg Road. Incoming loaded CCR disposal trucks and outgoing empty CCR disposal trucks, of which there were none to date in 2022, would use the same travel routes as the CCR mining trucks. All visitors must contact GenOn or Bowling Brothers site personnel to gain access to the Westland Site from the main

gate. The security measures to gain access into the Westland Site appeared to be appropriate.

The access road from the Westland Site entrance to the Cell B operating area / office site trailer area is asphalt-paved along the northern boundary of Cell B and has a crushed-aggregate surface along the eastern boundary of Cell B. Both surfaces are in acceptable condition. Roadside stormwater drainage features are well kept and in acceptable condition. The interior access roads have a speed limit of 15 miles per hour and have the proper signage.

3.2 Cell B Operating Areas

The Westland Site has historically received and stored CCR material produced at GenOn's Dickerson Generating Station, which was decommissioned on June 1, 2020. CCR transferred to the Westland Site has been offloaded and stored in the currently operational area of Cell B. During the period from December 1, 2021 to December 1, 2022, no CCR material was disposed at the site. Since June 2019, GenOn has begun the "deconstruction phase" where the existing CCRs in the active and uncapped portion of Cell B are being excavated, loaded, and hauled from the Westland Site to a cement plant for recycling / beneficial reuse of the material. All of the deconstruction work at the Westland Site and hauling of the CCRs to the offsite cement plant is being undertaken by a third-party vendor to GenOn. Phase 1 of the Cell B Deconstruction Plan was approved by MDE and Montgomery County Department of Permitting Services (DPS) in 2019, and Phases 2 through 5 of the Cell B Deconstruction Plan were approved by MDE and DPS in 2021. On December 6, 2022, MDE approved the revised Deconstruction Plan for Phases 6 through 8. GenOn, MERG and PBCo are currently seeking DPS approval for the revised Deconstruction Plan for Phases 6 through 8, which will include stripping of the existing geosynthetic cap and mining of the CCR material below the cap from the top down.

- CCR Disposal: During the period from December 1, 2021 to December 1, 2022, there was no ash disposal in Cell B.
- CCR Beneficial Reuse: During the period from December 1, 2021 to December 1, 2022, 188,407 tons of CCR material were mined from Cell B and transported to a cement plant for beneficial reuse.
- Cell B Geometry: The mining of CCR in the northeast section of Cell B (Phase 1) has lowered the grades to clay base grades, including to perimeter road level along the northern Cell B boundary. The mining of CCR on the former plateau of Cell B above the geosynthetic cap (Phases 2 through 5) has lowered the ash elevation by approximately 30 feet. Cell B is currently in Phase 4 of the deconstruction plan. The cover soil stripped from the former plateau in 2021 is being stockpiled in the northeast section of Cell B where ash has been completely removed to clay base grades. The geometry of the remainder of the site has remained unchanged.
- Estimated In-place CCR Volume: The 2020 inspection report estimated the in-place volume of CCR in Cell B as approximately 3.99 million cubic yards (MCY). The in-place volume has further been reduced by the mining of 480,334 tons of CCR material from June 2019 (start of mining) through November 2022.
- Exterior Side Slopes: The exterior slopes of Cell B are well stabilized with cover soil and vegetation, with no signs of erosion.
- Interior Side Slopes: The inactive (i.e. no active ash disposal or mining) interior slopes of Cell B are well stabilized with cover soil and vegetation, with no signs of erosion. The western interior slope of the Phase 1 mining area is an exposed ash surface. No major erosion or sloughing of this slope was observed. A diversion berm is in place at the toe of this slope to direct contact water to the Cell B leachate collection system.
- Cell B1-A Floor: No ash disposal occurred in Cell B1-A during the report period. Per discussion with GenOn personnel, Bowling Brothers completes re-grading and compaction of the ash surface to remove erosion rills on a periodic basis. Minor rills were observed by AECOM near the contact water pipes discharge from the plateau mining area

into Cell B1-A during the inspection; however, the majority of the cell showed no erosion rills.

- Cell B1-B Floor: As discussed above, Cell B1-B was constructed with a geosynthetic liner system and a leachate collection aggregate layer, but no ash has been placed in Cell B1-B to date. Therefore, runoff from Cell B1-B is managed as stormwater. Stormwater runoff from Cell B1-B is collected at the southern low end of the cell and discharges through a high-density polyethylene (HDPE) pipe to the perimeter stormwater channel. No signs of erosion of the leachate collection aggregate or Cell B1-B interior or exterior slopes were observed.
- Chimney Drains: There are six (6) active chimney drains in Cell B. Chimney Drains 1 and 2 in the Cell B mining area still appear to be functional, but it is recommended that they be evaluated during storm conditions to ensure they are properly functioning. Chimney Drain 2 is slightly higher in elevation than the bottom clay base grades that Phase 1 floor was mined to. Chimney Drains 3A, 3B, and 3C are in Cell B1-A and appear to be functioning properly. Chimney Drain 4 is in the low area of Cell B1-B and appears to be functioning properly as a stormwater drain for Cell B1-B connected to the HDPE discharge pipe that discharges to the perimeter stormwater channel.
- Gabion Diversion Structures: Gabion Diversions A, B and C are in place and appear to be in good condition. Diversion A increased the berm height and stormwater capacity of Cell B1-B. Diversion B increased the berm height and contact water capacity of Cell B1-A. Diversion C was constructed for Chimney Drain 2 at the northern upgradient boundary of Cell B1-A. Gabion Diversion D, which was installed for Chimney Drain 1, appears to have been removed for the Phase 1 ash mining operation in the northeast section of Cell B.
- Leachate Piping: Visible HDPE leachate piping downstream of the Cell B1-A and B1-B sumps that cross the perimeter drainage ditch appears to be in good condition. During 2018, these pipes were labeled "Contact Water" (pipe from Cell B1-A) and "Non-Contact Water" (pipe from Cell B1-B). The existing gate valves on the Cell B1-B leachate piping are in good condition and oriented properly. A gate valve was previously installed in the HDPE leachate pipe from the Cell B1-A leachate sump at the point where it crosses the perimeter drainage ditch. Closing this valve allows leachate to be detained in Cell B1-A to allow the leachate treatment plant to process excessive amounts of leachate from the site.
- Pond 3: Leachate from Cell B is conveyed by an HDPE gravity pipe to a tank adjacent to Pond 3. Leachate is pumped from the tank to the leachate treatment plant, and after treatment, the treated effluent is discharged to Pond 3. The treated effluent is periodically discharged from Pond 3 to the receiving stream by GenOn's O&M contractor in accordance with the site's industrial NPDES permit. Pond 3 appears to be in good condition with no signs of erosion or distress observed.
- Stockpiles: The cover soil on the Cell B plateau above the existing geosynthetic cap was stripped in advance of the Phases 2-5 of Cell B deconstruction. The cover soil is being stockpiled in the northeast section of Cell B where ash has been completely removed to clay base grades. The stockpile has been stabilized with vegetation, and silt fence has been installed downgradient of the stockpile along the northern and eastern side of Cell B prior to the perimeter stormwater channel.
- Cell B Plateau: The former Cell B plateau above the existing geosynthetic cap has been lowered approximately 30 feet as the site has advance into Phase 4 of the Cell B deconstruction plan. Contact water is directed to down slope pipe drains in the southeast corner of the plateau work area and discharge to the upper end of the Cell B1-A floor.

3.3 Erosion and Sediment and Control Measures

- Satisfactory erosion and sediment control measures are being employed in the operating areas of Cell B, including:
 - Stabilized asphalt and crushed-aggregate road surfaces.
 - Use of the mobile water truck to minimize dust generation.
 - Use of the onsite wheel wash.
 - Stabilization of inactive areas of Cell B with cover soil and dense vegetation.
 - Installation of diversion berms and down slope pipe drains to divert stormwater runoff away from the active mining and disposal areas.
 - Installation of silt fence downgradient of disturbed areas for the mining operation and soil stockpiling.
 - Stabilized bench channels, interior channels, and perimeter channels are in place to convey stormwater runoff off the landfill.

3.4 Storm Drainage Features

- Perimeter Drainage Channels: Drainage channels along the Cell B perimeter road are well stabilized with vegetation or hard armoring with no signs of erosion.
- Interior Drainage Channels: Interior drainage channels are well stabilized with vegetation or hard armoring with no signs of erosion.
- Bench Drainage Channels: Bench channels on the geosynthetic cap area are well stabilized with vegetation, with no signs of erosion or ponding along the drainage pathways.
- Run-on Control: GenOn has installed and maintained a number of features to prevent run-on into the Cell B operating areas to minimize leachate generation and divert stormwater away from the Cell B operating areas, including, perimeter, bench, and interior stormwater channels, diversion berms, down slope pipe drains, and perimeter berms to separate Cell B hydraulically from the surrounding topography.

3.5 Recordkeeping

- Daily operations and maintenance inspection reports and weekly CCR inspection reports are kept in a binder in the onsite GenOn MD Ash office trailer. These reports are organized and maintained by Bowling Brothers, GenOn's onsite O&M contractor.

4.0 Westland Cell B Operational Area Overview

During the period from December 1, 2021 to December 1, 2022 no CCR material was disposed at the Westland Site; however, 188,407 tons of CCR material were mined from Cell B and transported to a cement plant for beneficial reuse. The mining of CCR has lowered the grades in the northeast section of Cell B to clay base grades and has lowered the former plateau above the limit of the geosynthetic cap by approximately 30 feet. The geometry of the remainder of the site has remained unchanged.

The operating portion of Cell B is well maintained by GenOn's O&M and mining contractors, and drainage and erosion control features appear to be functioning properly. There did not appear to be any areas in Cell B that represent actual or potential areas of structural weakness of the CCR unit. There are no existing conditions that are disrupting or have the potential to disrupt the operation or safety of the CCR unit. The following recommendations are made:

- Evaluate Chimney Drains 1 and 2 during storm conditions to ensure they are properly functioning.
- Maintain the O&M procedure of periodically re-grading any erosion rills in the ash surface in Cell B1-A as necessary.

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Company: AECOM Technical Services, Inc.

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ANNUAL CCR STORAGE SITE INSPECTION CHECKLIST

Facility Name: Westland Ash Storage Site			
Address: 20831 Martinsburg Road, Dickerson, MD 20842			
Date: 12/13/2022	Time: 9:30 AM - 11:30 AM	Weather: Mostly sunny, 38° F	
Inspection Representatives			
GenOn: Jay Spence			
AECOM: Tom White		MD PE License #: 32921	
Other:			
Site Data			
Cell ID: Cell B	Acreage: 64.4 acres		
Operational Area of Cell: 40.4 acres		Closed Area of Cell: 24 acres	
Operational Criteria			
	Acceptable	Needs Improvement	Comments
1. Security/Entrance Gate	√		Appears to be in good condition.
2. Condition of Access Road	√		
3. Operating Cell	√		
3a. Condition of Exposed Ash	√		
3b. Condition of Periodic Cover Soils	√		
3c. Acceptable Dust Control Measures	√		
3d. General Integrity of Operating Cell/Signs of Distress	√		↓
3e. Condition of Chimney Drains	√		See recommendation below.
3f. Condition of Erosion Control Measures	√		Appears to be in good condition.
3g. Visual signs of Erosion or Washouts	√		None.
3h. General Condition of Leachate Piping, Cleanouts	√		Appears to be in good condition.
4. Stormwater Management	√		↓
4a. Condition of Ditches, Diversions, Letdowns	√		
4b. Condition of Run-Off Control System	√		
4c. Condition of Perimeter Areas (stable, unstable, erosion, etc.)	√		↓
Comments:			
<p>The operating portion of Cell B is well maintained with no areas of instability or potential weakness.</p> <p>There are no conditions at the present time that are disrupting or have the potential to disrupt the operation or safety of Cell B.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> - Evaluate Chimney Drains 1 and 2 during storm conditions to ensure they are properly functioning. - Maintain the O&M procedure of periodically re-grading any erosion rills in the ash surface in Cell B1-A as necessary. 			

Thomas White		12/30/2022
Print Name of Engineer Completing Form	Signature	Date