AECOM

GENON WESTLAND ASH STORAGE SITE
DICKERSON, MARYLAND
2018 ANNUAL CCR INSPECTION REPORT

To: Walter Johnson, GenOn MD Ash Management LLC

From: Jeffrey Hutchins, P.E., AECOM

Date: January 3, 2019

RE: Annual Coal Combustion Residuals (CCR) Inspection Report
Westland Ash Storage Site Operating Cell B

1.0 Introduction

As of October 19, 2015, the Westland Ash Storage 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 Ash Site was conducted on December 11, 2018 and will be placed in the Westland operating record by January 18, 2019.

2.0 Site Background

The Westland Ash Storage 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; Cell B receives CCR from the nearby Dickerson Generating Station.

- Cell C, which encompasses approximately 18.5 acres, 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 edge of Cell C. This cell has been closed for many years, and was closure capped with an engineered geosynthetic closure capping system approved by the Maryland Department of the Environment (MDE) in 2016.

- Cell B, which is the current operational cell, encompasses approximately 64.4 acres over the center of the site. The access road from the Dickerson Generating Station enters the facility at the northwest corner of Cell B. Approximately 24 acres of Cell B along the northern, western, and southern perimeter slopes are currently complete and closed with a MDE-approved closure cap in 2017, leaving approximately 40.4 acres as the active, operating portion of the site. The operating portion of Cell B is divided into (1) the northern CCR fill area (23.4 acres) and (2) the southern portion consisting of Cell B-1A and Cell B-1B encompassing 17 acres. Cell B-1A was used for CCR storage in 2018 while the northern CCR fill area was vegetated and stabilized, and used for several soil stockpiles. Cell B-1B was constructed with a crushed aggregate subbase layer and does not currently receive any CCR.
- Cell A, the largest planned disposal cell (approximately 96.6 acres), is situated directly east of Cell B, and divided from Cell B by an approximately 400-foot wide strip of land denoted as "Preservation Area D." There are no current plans to construct Cell A.

3.0 Cell B Operational Areas Inspection Results

On December 11, 2018, a Maryland Registered Professional Engineer employed by AECOM, accompanied by a representative of Bowling Brothers, GenOn's onsite operations and maintenance contractor, 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 presented as Attachment A to this report.

3.1 Access Roads and Security

Any person, contractor, or vendor entering the Westland site must first pass through the GenOn plant's security guard station located at the main security gate into the generating plant. From there, an interior plant road must be followed to an automated security gate at Martinsburg Road (a County road) that is activated by a key card. Access to the Westland site, which is located on the opposite side of Martinsburg Road, is also controlled by an automated security gate activated by a key card. The security measures to gain access into the Westland site appeared to be appropriate and acceptable.

The access road into the Westland site through the security gate and to the office area is paved and is in acceptable condition. The access road around Cell B is a thick layer of crushed aggregate and is in acceptable condition. Roadside drainage features are well kept and in acceptable condition.

3.2 Cell B Operating Areas

- CCR Storage in 2018: GenOn's daily fly ash delivery records for the Westland site show that Cell B received 1,216 truck-loads of CCR material during 2018 from the Dickerson Generating Station, and to a minor extent, maintenance activities on the Cell B capped area. Based on the average 20-ton capacity of dump trucks used to haul fly ash to Cell B from the Dickerson plant (highway-approved transport vehicles that must cross Martinsburg County Road), Cell B received approximately 19,000 cubic yards of CCR during 2018. This is based on an average density of the CCR material as determined by density testing of the CCR material over several years.
- CCR delivered to the site during 2018 was stored in the Cell B-1A operational area. The exterior side slopes of Cell B remain fixed in location; consequently, there has been no change in the overall geometry of Cell B except for the small vertical rise in elevation of the operating Cell B-1A area.
- Estimated In-place CCR Volume: It can be estimated that the in-place volume of CCR in Cell B is approximately 3.98 million cubic yards (MCY). This volume is based on (1) the original 1979 design documents for the Westland site and the estimated CCR capacity of

Cell B of approximately 5.6 MCY, (2) the estimated in-place volume of CCR in Cell B based on aerial topography of the site and the estimated percent filled in various sub-areas of Cell B, and (3) the CCR delivery and placement during 2016, 2017, and 2018.

- Exterior Side Slopes: The operating cell exterior side slopes are heavily vegetated and stabilized in good condition; there are minimal signs of erosion on these slopes.
- Interior Side Slopes: The operating cell interior side slopes are vegetated and well stabilized with grass, mulch, and in many cases with erosion control matting; minimal signs of erosion were observed on these stabilized slopes.
- CCR Placement: Hauling and placement of CCR in Cell B-1A appears to have been accomplished in appropriate lift thicknesses, and the current lift appears to have been installed, compacted and graded in an acceptable manner. CCR side slopes have been covered with routine soil cover material and the operating floor has been properly compacted and graded to promote positive drainage into the interior drainage system.
- Cell B-1A Operating Cell Floor: New CCR deliveries in 2018 were deposited on the floor of Cell B-1A in appropriate lift thickness and were compacted and graded in an acceptable manner toward the chimney drains. The CCR surface of the Cell B-1A floor is in good condition with no eroded gullies or undercutting. The Cell B-1B floor is stone aggregate in good condition with no erosion gullies. No ash filling has occurred in Cell B-1B.
- Chimney Drains: The existing chimney drains appear to be constructed and functioning properly. GenOn maintenance staff raises the chimney drains as appropriate when the ash lifts approach the top of the drain pipe.
- Gabion Diversion Structures: The four gabion diversion structures appear to be constructed and functioning properly. Recent CCR storage activities have begun to tie the CCR lifts into the diversion structures as designed.
- Leachate Piping: Visible HDPE leachate piping downstream of the Cell B-1A and B-1B sumps that cross the perimeter drainage ditch appears to be in good condition. During 2018, these pipes were labeled “Contact Water” (pipe from Cell B-1A) and “Non-contact Water” (pipe from Cell B-1B). The existing gate valves on the Cell B-1B leachate piping are in good condition and oriented properly. A new gate valve was installed in the HDPE leachate pipe from the Cell B-1A leachate sump at the point where it crosses the perimeter drainage ditch.
- Stockpiles: All stockpiles located on the top of Cell B are stabilized with vegetation, mulch and/or temporary matting with no signs of erosion. The former PEPCO stockpile area is surrounded by super silt fence in an acceptable condition.

3.3 Sediment and Erosion Control Measures

- Proper sediment control measures are being employed as required in the operating portion of Cell B. Super silt fence, straw bale dikes, and erosion control matting are being properly employed at potential points of erosion. Rip rap aprons are in good condition and functioning properly.

3.4 Storm Drainage Features

- Roadside Drainage Channels: Drainage channels along the access roads are well vegetated and stabilized with no signs of erosion.
- Sediment Trap: Influent channels are stabilized with straw bale dikes, vegetation, matting; the pond berm is stabilized with vegetation; the outfall channel is stabilized with rip rap and vegetation with erosion control matting with minimal signs of erosion.

- Interior Drainage Channels: Interior drainage channels are stabilized with vegetation and erosion control matted with minimal signs of erosion.
- Run-on Control: The gabion diversion structures and chimney drains have been installed to mitigate stormwater run on from the historic operating areas of Cell B. The chimney drains and gabion diversion structures appear to be constructed and functioning properly.
- Pond 3 Treatment Area: Leachate from Cell B and Cell B-1A drains to the Pond 3 treatment area by way of an 8-inch HDPE leachate transmission pipe. At Pond 3, the leachate is collected and pumped to the waste water treatment system collection tank for management and discharge under the site's NPDES permit. GenOn's maintenance contractor provides routine maintenance and erosion control of the Pond 3 area.

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. The reports appear to be up to date.

4.0 Westland Cell B Operational Areas Overview

During 2018, the operating portion of Cell B received CCR material from the Dickerson Generating Station, and to a minor extent, maintenance activities associated with Cell B. The CCR hauled to the site has been installed in lifts in the operational portions of Cell B-1A. The geometry of the site has not changed during 2018 other than the small vertical rise of the CCR filling areas in Cell B-1A.

The operating portion of Cell B is well maintained by GenOn's maintenance contractor, and drainage and erosion control features appearing to 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.

Name: Jeffrey Hutchins Date: 1/03/19

Maryland PE #: 13186

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ANNUAL CCR STORAGE SITE INSPECTION CHECKLIST

Facility Name: Westland Ash Storage Facility		
Address: 20831 Martinsburg Road, Dickerson, Maryland 20842		
Date: 12/11/2018	Time: 10:05	Weather: Sunny, 29°
Inspection Representatives		
GenOn: Allen Asher (Bowling Brothers GenOn contractor)		
AECOM: Jeffrey Hutchins		PE License #: 13186
Other:		
Site Data		
Cell ID: Cell B	Acreage: 64.4 acres	
Operational Area of Cell: 49.4 acres	Closed Area of Cell: 24 acres	

Operational Criteria

	Acceptable	Needs Improvement	Comments
1. Security/Entrance Gate	√		Westland site gate repaired by GenOn security and operating properly.
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	√		
3f. Condition of Erosion Control Measures	√		
3g. Visual signs of Erosion or Washouts	√		
3h. General Condition of Leachate Piping, Cleanouts	√		
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:

The operating portion of Cell B is well maintained with no areas of instability or potential weakness.

There are no conditions at the present time that are disrupting or have the potential to disrupt the operation or safety of Cell B.

Jeffrey Hutchins		12/11/2018
Print Name of Engineer Completing Form	Signature	Date