

Closure Completion Notification for Closure by Removal

February 20, 2025

Closure Completion Notification

Mountaineer Plant

Bottom Ash Pond Complex

On February 20, 2025, the Mountaineer Power Plant's Bottom Ash Pond Complex transitioned to closed status in accordance with 40 CFR 257.102(c)(2). This notice of completion of closure is being placed in the operating record in accordance with 40 CFR 257.102(h).

Effective with the Closure Completion Notification, the former ash storage site is no longer a CCR unit. The following relevant operating record documents are no longer required going forward:

- Hazard Potential Classification
- Emergency Action Plan
- Face to Face Meeting Documentation for EAP
- History of Construction and Revisions for Surface Impoundments
- Structural Stability Assessments
- Safety Factor Assessments
- Fugitive Dust Plan
- Run on and Run off Plan
- Inflow Design Flood System Control Plan

CLOSURE CERTIFICATION BY QUALIFIED PROFESSIONAL ENGINEER

I certify that the Mountaineer Bottom Ash Pond Complex has been closed in accordance with the most recent written closure plan specified by paragraphs §257.102(c)(2)(iv) and the requirements of section §257.102.

David Anthony Miller

Printed Name of Licensed Professional Engineer

David Anthony Miller

Signature



22663

License Number

West Virginia

Licensing State

02.20.2025


Date

VERDANTAS CERTIFICATION

Based on the construction observations performed by Verdantas representatives and confirmation laboratory analyses conducted, I hereby certify that the Bottom Ash Pond East Basin at the Mountaineer Plant in New Haven, West Virginia, as shown on the record drawing located in Appendix D, has achieved removal of all CCR material and soil with constituent concentrations above relevant background standards (i.e. closed by removal) in substantial compliance with the Mountaineer BAP Written Closure Plan (November 30, 2020), Construction Quality Assurance Plan for Pond Closure and Repurposing, Construction Drawings for the CCR/ELG closure by removal project, Bottom Ash Pond Closure and Repurposing Contract as provided by Worley (December 3, 2021), as per 40 CFR 257.102(c), and as clarified herein. The groundwater monitoring and compliance aspect of CCR Unit closure by removal criteria, as required by 40 CFR 257.102(c), will be certified under a separate report. The Contractor (R.B. Jergens) obtained the survey data used to develop the record drawing. R.B. Jergens verified that the elevations met the closure requirements, and Verdantas also reviewed the survey data.



Trent S. Hathaway, PE
Quality Assurance Officer/CQA Manager



Daniel P. Duffy, PE
Certifying Engineer
25332



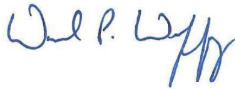
12/6/2022

VERDANTAS CERTIFICATION

Based on the construction observations performed by Verdantas representatives and confirmation laboratory analyses conducted, I hereby certify that the Bottom Ash Pond West Basin at the Mountaineer Plant in New Haven, West Virginia, as shown on the record drawing located in Appendix D, has achieved removal of all CCR material and at least an additional one foot of underlying non-CCR material. Soil testing of the underlying non-CCR soil validate that the residual soil concentrations are below relevant de minimis remedial standards presented in the West Virginia Department of Environmental Protection's Voluntary Remediation and Redevelopment Rule (60CSR9, effective 12/2/2021) (i.e. closed by removal) in substantial compliance with the Mountaineer Bottom Ash Pond Written Closure Plan (August 31, 2023), Construction Quality Assurance Plan for Pond Closure and Repurposing, Construction Drawings for the CCR/ELG closure by removal project, Bottom Ash Pond Closure and Repurposing Contract as provided by Worley (December 3, 2021), as per 40 CFR 257.102(c), and as clarified herein. The groundwater monitoring and compliance aspect of CCR Unit closure by removal criteria, as required by 40 CFR 257.102(c), will be certified under a separate report. The Contractor (R.B. Jergens) obtained the survey data used to develop the record drawing. R.B. Jergens verified that the elevations met the closure requirements, and Verdantas also reviewed the survey data and relies upon R.B. Jergens' verification for the data's validity.



Trent S. Hathaway, PE
Quality Assurance Officer/CQA Manager



Daniel P. Duffy, PE
Certifying Engineer
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1/3/2024

STRUCTURAL STABILITY ASSESSMENT PERIODIC 5-YR REVIEW

CFR 257.73(d)

Bottom Ash Ponds

Mountaineer Plant

New Have, West Virginia

October, 2021

Prepared for: Appalachian Power Company – Mountaineer Plant

New Haven, West Virginia

Prepared by: American Electric Power Service Corporation

1 Riverside Plaza

Columbus, OH 43215



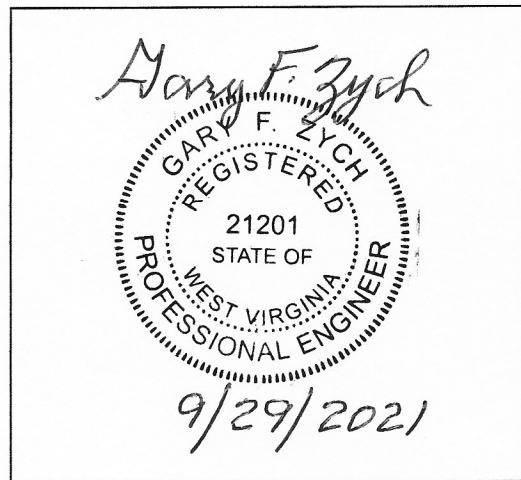
Document ID: GERS-21-032

Structural Stability Assessment
Periodic 5-Yr Review
CFR 257.73(d)
MOUNTAINEER PLANT
BOTTOM ASH COMPLEX

PREPARED BY Brett A. Dreger DATE 9/16/2021
Brett A. Dreger, P.E.

REVIEWED BY [Signature] DATE 09-17-2021
Shahriyar S. Baig, P.E.

APPROVED BY Gary F. Zych DATE 9/29/2021
Gary F. Zych, P.E.
Section Manager – AEP Geotechnical Engineering



I certify to the best of my knowledge, information and belief that the information contained in this structural stability assessment meets the requirements of 40 CFR 257.73(d)

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1.0 OBJECTIVE 257.73(d)

This report was prepared by AEP- Geotechnical Engineering Services (GES) section to fulfill requirements of CFR 257.73(d) and document whether the design, construction, operations, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering practices. This is the first periodic 5-year review of the initial assessment as per the Rule.

Note: There has not been any change to the diking structures, discharge weir structures or the discharge pipes through the dike system since the initial assessment.

2.0 NAME AND DESCRIPTION OF CCR SURFACE IMPOUNDMENT

The Mountaineer Power Plant is located near the City of New Haven, Mason County, West Virginia. It is owned and operated by Appalachian Power Company (APCo). The facility operates one surface impoundment for storing CCR called the Bottom Ash Complex.

The Bottom Ash Complex is comprised of diked embankments on the north, east, and west sides. The south side of the Bottom Ash Complex is incised. There are six main ponds within the Bottom Ash Complex as listed below. The Bottom Ash Ponds and Wastewater Ponds were designed in tandem; one Bottom Ash Pond and one Wastewater Pond are in service at a given time.

List of Main Ponds within the Bottom Ash Complex

East Bottom Ash Pond
West Bottom Ash Pond
East Wastewater Pond
West Wastewater Pond
Reclaim Pond
Clearwater Pond

3.0 STABLE FOUNDATION AND ABUTMENTS 257.73(d)(1)(i)

[Was the facility designed for and constructed on stable foundations and abutments? Describe any foundation improvements required as part of construction.]

Based on the design drawings, the foundation was stripped and the subgrade was prepared prior to construction of the embankment. The dikes were constructed using soils excavated from within the pond area. Soil borings taken prior to construction indicate that most of the soils used for the dikes range from silty and clayey fine sand to fine medium sand. Based on recent subsurface investigations, the foundation materials of the Bottom Ash Pond Complex consist of Silty Sand / Sandy Silt – Very Loose to Loose (SM) materials overlaying Poorly Graded Sand/Gravel – Dense to Very Dense (SP or GP). The findings of the subsurface investigations the foundations materials are suitable for this CCR unit.

In 2006, the north and west embankments were modified to accommodate a gypsum conveyor system. There is no documentation of any foundation improvements due to this construction. Stability analysis of the perimeter dikes along the gypsum conveyors demonstrates the stability of the downstream slope of the dike has met West Virginia dam safety criteria prior to installation.

Operation of the impoundment is performed so as to not adversely affect the foundation and abutments. As required by the CCR rules the Bottom Ash Pond Complex is inspected at least every 7 days by a qualified person. Also as a requirement of the CCR rules, the impoundment is also inspected

annually by a professional engineer. Maintenance items are addressed as they are discovered as a part of those inspections.

Based on the subsurface information obtained from the investigation, the relative density and description of the foundation materials are adequate for this CCR unit.

4.0 SLOPE PROTECTION 257.73(d)(1)(ii)

[Describe the slope protection measures on the upstream and downstream slopes.]

The Bottom Ash Pond Complex was designed and constructed with compacted sand fill that was assembled at a 2.5H to 1V slope. For protection of the clay lining against damage, mine spoil was placed on the inside slopes. The outside slopes were covered with mine spoil and then covered with topsoil and seeded, except for the bottom 2 ft to permit free drainage at the downstream toe. The current condition of the grassed slopes is adequate. Grassed slopes are mowed regularly. Any erosion or slips that may occur are repaired within a timely period.

5.0 EMBANKMENT CONSTRUCTION 257.73 (d)(1)(iii)

[Describe the specifications for compaction and/or recent boring to give a relative comparison of density.]

The construction specifications indicate that the embankment was constructed with sand fill placed in lifts not exceeding 6-inches. The clay liner was compacted in thin lifts at water contents within +/- 2% of standard optimum.

Soil borings through the embankment indicate that the material is dense to very dense and representative of a compacted material.

6.0 VEGETATION CONTROL 257.73 (d)(1)(iv)

[Describe the maintenance plan for vegetative cover.]

The vegetative areas are mowed to facilitate inspections and maintain the growth of the vegetative layer; and prevent the growth of woody vegetation.

7.0 SPILLWAY SYSTEM 257.73(d)(1)(v)

[Describe the spillway system and its capacity to pass the Inflow Design Flood as per its Hazard Classification.]

The Bottom Ash Pond Complex has been determined to be a Significant Hazard potential CCR impoundment. Based on this hazard classification, the design flood was determined by section 257.82(a)(3) to be the 1000-year storm which corresponds to 7 inches in 24hours for this site. An analysis was performed for the 1000-year storm event. Results of this analysis show that the Bottom Ash Pond Complex has adequate hydrologic and hydraulic capacity to collect and control peak discharge resulting from the 1000-year inflow design.

The outlet works for the Bottom Ash Pond cells consists of a reinforced concrete drop inlet structure with weir openings on three sides which include slide stop logs approximately 3-feet wide. A wooded surface skimming structure is constructed around the weir box. The outlet works of the Wastewater

Pond cells consist of a 250-foot long concrete weir. The weir discharges into a concrete chute which transitions into a box structure leading to a junction chamber. The chamber controls flows from the Wastewater Ponds into the Reclaim Pond and/or Clearwater Pond. The outlet works for the Clearwater pond consists of a 185-foot long concrete weir. The weir discharges into a concrete structure and into a discharge pipe to the Ohio River. Drainage is diverted around the Bottom Ash Pond Complex by natural drainage channels and grass lined ditches.

Maintenance of the spillways is performed as needed based on periodic 7-day and annual inspections.

The outlet works for the Bottom Ash Pond Complex show no signs of excessive corrosion, deterioration or changes in geometry since the initial assessment.

8.0 BURIED HYDRAULIC STRUCTURES 257.73 (d)(1)(vi)

[Describe the condition of the sections of any hydraulic structure that is buried beneath and/or in the embankment.]

There are no signs of settlement or sinkholes on the ground surface above the buried pipes. The discharge pipes have not shown signs of excessive corrosion or deterioration based on exterior visual inspections since the initial assessment.

9.0 SUDDEN DRAWDOWN 257.73 (d)(1)(vii)

[If the downstream slope is susceptible to inundation, discuss the stability due to a sudden drawdown.]

The downstream slope of the Bottom Ash Pond Complex is not expected to be inundated from any adjacent water bodies.

There have not been any changes to the downstream slope areas of the Bottom Ash Pond complex since the initial assessment.