

2025 Annual Dam and Dike Inspection Report

Cabin Creek Ash Pond

**Cabin Creek Power Plant
Appalachian Power Company
Chelyan, WV**

September 2025

Prepared for: Appalachian Power Company – Cabin Creek Power Plant

Prepared by: American Electric Power Service Corporation
1 Riverside Plaza
Columbus, OH 43215



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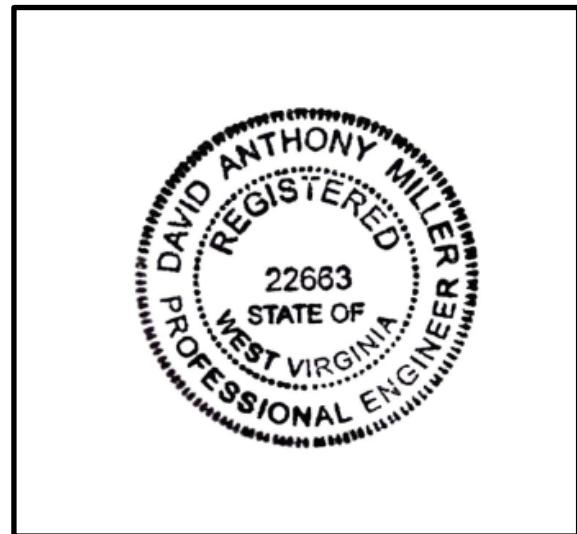
Cabin Creek Power Plant

Ash Pond

PREPARED BY Daniel S Murphy DATE 10/9/2025
Dan Murphy, P.E.

REVIEWED BY Blake Arthur DATE 10/09/25
Blake Arthur, P.E.

APPROVED BY David Anthony Miller DATE 12.01.2025
David A. Miller, P.E.
Director – Ash Management Services



I certify to the best of my knowledge, information and belief the information contained in this report meets the requirements of 40 CFR § 257.83(b).

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Attachments

- Attachment A –Inspection Location Map
- Attachment B – Inspection Photographs

1.0 INTRODUCTION

This report was prepared by AEP- Ash Management Services, in part, to fulfill requirements of 40 CFR 257.83 for the legacy CCR surface impoundments inspections and to provide Appalachian Power Company an evaluation of the Ash Pond at the former Cabin Creek Power Plant.

The inspection was performed on September 4, 2025. The inspection party consisted of Mr. Dan Murphy, P.E., Mr. Micah Bates. The facility contact was Mr. Bruce Adkins. Weather conditions during the inspection were light rain showers, and the temperature was near 75°F. The ground conditions were damp.

2.0 DESCRIPTION OF IMPOUNDMENTS

The Cabin Creek Plant began operating in 1914 and was retired in 1981. The Cabin Creek Ash Pond was constructed around 1956. The Cabin Creek Ash Pond is surrounded by an earthen berm with a downstream toe elevation of approximately 590 ft msl and a crest elevation of 620 feet msl based on topographic data presented in Figure 2. The western most 650-foot-long section of the dike has timber piling along the toe/river edge. The Ash Pond is approximately 19 acres and is located adjacent to the Kanawha River in Kanawha County, West Virginia. While the ash pond was operating, the water elevation was controlled with an outfall structure that was located on the western end. Remnants of a former splitter dike are visible within the impoundment. During an overflow condition, decant from the pond was discharged into the Kanawha River.

3.0 REVIEW OF AVAILABLE INFORMATION (257.83(b)(1)(i))

In addition to the current visual inspection, a review of available information regarding the status and condition of the Ash Pond, including files available in the operating record, was conducted. Available information consists of design and construction information, if readily available. Based on the findings of the current visual inspection and the review of the available data, it is concluded that the facility is performing as intended in the design documents and there were no signs of actual or potential structural weakness or adverse conditions.

4.0 INSPECTION (257.83(b)(1)(ii))

4.1 CHANGES IN GEOMETRY SINCE LAST INSPECTION (257.83(b)(2)(i))

No changes in geometry since last inspection were found.

4.2 INSTRUMENTATION (257.83(b)(2)(ii))

There is no instrumentation at the Cabin Creek Ash Pond.

4.3 IMPOUNDMENT CHARACTERISTICS (257.83(b)(2)(iii, iv, v))

Table 1 is a summary of the minimum, maximum, and present depth and elevation of the impounded water & CCR since the previous annual inspection; the storage capacity of the impounding structure at the time of the inspection; and the approximate volume of the impounded water and CCR at the time of the inspection.

The information in this table is based on visual observations made during the inspection.

Table 1: Impoundment Characteristics

Approximate Minimum depth (elevation) of impounded water since last annual inspection	No water visible
Approximate Maximum depth (elevation) of impounded water since last annual inspection	No water visible
Approximate Present depth of impounded water at the time of the inspection	No water visible
Approximate Minimum depth (elevation) of CCR since last annual inspection	The site no longer receives CCR.
Approximate Maximum depth (elevation) of CCR since last annual inspection	The site no longer receives CCR.
Approximate Present depth (elevation) of CCR at the time of the inspection	The top surface of the CCR is approximately 620 ft-msl and is approximately 30 feet thick.
Storage Capacity of impounding structure at the time of the inspection [crest el]	Approximately 800,000 CY
Approximate volume of impounded water at the time of the inspection	Ponded water is not visible
Approximate volume of CCR at the time of the inspection	Approximately 800,000 CY of CCR

4.4 DEFINITIONS OF VISUAL OBSERVATIONS AND DEFICIENCIES

This summary of the visual observations uses terms to describe the general appearance or condition of an observed item, activity or structure. The meaning of these terms is as follows:

Good:	A condition or activity that is generally better or slightly better than what is minimally expected or anticipated from a design or maintenance point of view.
Fair/Satisfactory:	A condition or activity that generally meets what is minimally expected or anticipated from a design or maintenance point of view.
Poor:	A condition or activity that is generally below what is minimally expected or anticipated from a design or maintenance point of view.
Minor:	A reference to an observed item (e.g., erosion, seepage, vegetation, etc.) where the current maintenance condition is below what is normal or desired, but which is not currently causing concern from a structure safety or stability point of view.
Significant:	A reference to an observed item (e.g. erosion, seepage, vegetation, etc.) where the current maintenance program has neglected to improve the condition. Usually conditions that have been identified in the previous inspections, but have not been corrected.
Excessive:	A reference to an observed item (e.g., erosion, seepage, vegetation, etc.) where the current maintenance condition is above or worse than what it is normal or desired, or which may have affected the ability of the observer to properly evaluate the structure or particular area of interest or which may be a concern from a structure's safety or stability point of view.

This document also uses the definition of a “deficiency” as referenced in the CCR rule section §257.83(b)(5) Inspection Requirements for CCR Surface Impoundments. This definition has been assembled using the CCR rule preamble as well as guidance from MSHA, “Qualifications for Impoundment Inspection” CI-31, 2004. These guidance documents further elaborate on the definition of deficiency. Items not identified as a deficiency are considered routine maintenance activities or items to be monitored.

A “deficiency” is some evidence that a dam has developed a condition that could impact the structural integrity of the dam. There are four general categories of deficiencies. These four categories are described below:

1. Uncontrolled Seepage

Uncontrolled seepage is seepage that is not behaving as the design engineer has intended. An example of uncontrolled seepage is seepage that comes through or around the embankment and is not collected and safely carried off by a drain. Seepage that is collected by a drain can still be uncontrolled if it is not safely transported. Seepage that is not clear and is turbid would also be considered as uncontrolled. Seepage that is unable to be measured and/or observe it is considered uncontrolled seepage. [Wet or soft areas are not considered as uncontrolled seepage but can lead to this type of deficiency. These areas should be monitored more frequently.]

2. Displacement of the Embankment

Displacement of the embankment is a large scale movement of part of the dam. Common signs of displacement are cracks, scarps, settlement, bulges, depressions, sinkholes and slides.

3. Blockage of Water Control Appurtenances

Blockage of water Control Appurtenances is the restriction of flow at spillways, decant or pipe spillways, or drains.

4. Erosion

Erosion is the gradual movement of surface material by water, wind or ice. Erosion is considered a deficiency when it is more than a minor routine maintenance item.

4.5 VISUAL INSPECTION (257.83(b)(2)(i))

A visual inspection of the Cabin Creek Ash Pond was conducted to identify signs of distress or malfunction of the impoundment and appurtenant structures which includes its hydraulic structures. Specific items inspected included structural elements of the dam such as upstream and downstream slopes, crest, and toe; as well as appurtenances such as the outlet/spillway structure. Photographs taken during the inspection are provided in Attachment B - Photolog.

The following summarizes the visual inspection of the Cabin Creek Ash Pond:

- The downstream slope of the dam is in fair to poor condition. The slope is overgrown with mature woody vegetation. Wooden pedestrian stairs were constructed in three locations for inspection. There were no signs of seepage, instability or erosion problems.
- The upstream slope of the Ash Pond is in fair condition. Trees and brush have been recently removed from the upstream slope of the Ash Pond. There was no signs of instability or erosion.
- There are two stormwater drain pipes that pass underneath the Ash Pond:
 - A stormwater drainpipe passes through the ash pond and outlets in the Kanawha River. There is a concrete manhole with a concrete lid located in the ash pond related to this storm drainpipe. The final outlet pipe is corrugated metal and approximately half filled with sediments however the flow does not appear completely obstructed.
 - The storm drainpipe located to the eastern edge of the pond was unable to be located due to dense trees and brush. The storm drain outlets into a wetland area in the floodplain of the Kanawha River.
- The crest of the dam is in fair condition and is used as an access road. There were minor ruts along sections around the pond.
- The spillway structure is in poor condition. The spillway is a pipe/riser with a notch for retaining stop logs. The riser structure appears to be significantly blocked by concrete rubble/debris. The outlet pipe on the edge of the Kanawha River is concrete material and is approximately 75% blocked by silt/sediment. The outlet pipe was difficult to inspect due to trees and brush.

4.6 CHANGES THAT EFFECT STABILITY OR OPERATION (257.83(b)(2)(vii))

There were no changes to the Cabin Creek Ash Pond since the last inspection that would affect the stability of the impounding structure.

5.0 SUMMARY OF FINDINGS

5.1 GENERAL OBSERVATIONS

The following general observations were identified during the visual inspection:

- The Cabin Creek Ash Pond is generally in fair condition. The Cabin Creek Ash Pond appears to be functioning as intended with no signs of structural weakness. The constructed embankment/berms appear in fair condition structurally. The vegetation on the downstream slopes of the perimeter berm is in fair to poor condition. Vegetation around the drainage features was observed in excess of 12-inches and should be maintained more frequently to maintain less than 12-inch height. The Cabin Creek Ash Pond spillway is in poor condition, the spillway is obstructed with rubble. There were no signs of depression, settlement, or sinkholes along the general inspected areas, including the stormwater drainpipe that passes through the ash pond. The Cabin Creek Ash Pond is graded to promote positive drainage.

5.2 MAINTENANCE ITEMS

- 1) Remove the debris and sediment blockage in the riser of the spillway.
- 2) Continue with the vegetation establishment and erosion/sediment control maintenance at the site. Remove the trees and brush near the spillway outlet. Remove the trees and brush around the storm drain located on the eastern edge of the property.
- 3) Develop plans to remove the trees from the exterior/downstream slope.
- 4) Remove the sediment accumulation inside the storm drain along the western edge of the property.

5.3 ITEMS TO MONITOR/INVESTIGATE

The following items were identified during the visual inspection as items to be monitored or investigated:

- 1) Monitor the inlets and outlets of drainage features for build-up of sediment until vegetation is reestablished.

5.4 DEFICIENCIES (257.83(b)(2)(vi))

At the Cabin Creek Ash Pond there were no signs of structural weakness or disruptive conditions that were observed at the time of the inspection that would require additional investigation or remedial action. There were no deficiencies noted during this inspection or during any of the periodic 7-day or 30-day inspections. A deficiency is defined as: 1) uncontrolled seepage, 2) displacement of the embankment, 3) blockage of control features, or 4) erosion, more than that requiring minor maintenance.

If any of these conditions occur before the next annual inspection please contact Dan Murphy at dsmurphy1@aep.com or David Miller at damiller@aep.com.

ATTACHMENT A
Inspection Map



Cabin Creek Ash Pond Site Map
By: Dan Murphy
Date: September 19, 2025



0 150 300
Feet

Note: 2-Foot-Contours as shown were determined from a topographic/bathymetric survey performed on August 6, 2025 by AGE Engineering Services. Aerial Photograph by AEP, April 30 2025.

ATTACHMENT B

Inspection Photos



Photograph 1:

View of access road along the southern crest of the dam.



Photograph 2:

Typical view across the ash pond.



Photograph 3:

View of the crest and interior slope of the dam near the northeast corner of the ash pond.



Photograph 4:

Typical view of the downstream slope of the dam along the Kanawha River.



Photograph 5:

Typical view of the downstream slope of the dam along the Kanawha River.



Photograph 6:

View of a concrete manhole for a storm drain passing underneath the ash pond.



Photograph 7:
View looking down the
spillway riser.



Photograph 8:
View of the spillway inlet
area.



Photograph 9:
View of the spillway
outlet area. The concrete
pipe is identified by the
red arrow.



Photograph 10:

View of the stormdrain outlet pipe on the western edge of Ash Pond.



Photograph 11:

View of timber pile remnants located along the shoreline.