Former Mad River Ash Pond
Initial Structural Stability Assessment Report

Ohio Edison Company
Former Mad River Power Station
Clark County, Ohio

May 2026

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Certification/Statement of Professional Opinion

The Initial Structural Stability Assessment Report (Report) for the former Mad River Ash Pond was prepared by GAI Consultants, Inc. (GAI). The Report was based on certain information that, other than for information GAI originally prepared, GAI has relied on, but not independently verified. Therefore, this Certification/Statement of Professional Opinion is limited to the information available to GAI at the time the Report was written. On the basis of and subject to the foregoing, it is my professional opinion as a Professional Engineer licensed in the State of Ohio, that the Report 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 time, and in the same locale. It is my professional opinion that the Report was prepared consistent with the requirements 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, and amended on May 8, 2024 with an effective date of November 8, 2024.

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

Arica L. DiTullio, P.E.
Engineering Director

1.0 Introduction

The former Mad River Ash Pond (Ash Pond) is a legacy coal combustion residuals (CCR) surface impoundment located in Springfield, Clark County, Ohio (OH) approximately 0.15 miles southeast of the former Mad River Power Station (Station). The Station is an inactive electric utility also located in Springfield, Clark County, OH. The former Ash Pond was used for the management, storage, and disposal of CCR when the former Station was operational. The former Station operated from approximately 1926 to 1982 and was demolished around 2010. In or around 1985, the former Ash Pond was partially graded, and vegetation was established.

The former Ash Pond is bordered by Mad River to the west, along with a public roadway beyond the waterbody. A railroad right-of-way and railroad track crosses east-to-west through the site, bordering the former Ash Pond to the north. The embankments and former Ash Pond area are covered with saplings and fully mature trees with some underbrush. No permanent pool presently exists in the former Ash Pond. Limited areas of standing water have been identified after storm events, primarily occupying puddles and tire ruts formed from all-terrain vehicle (ATV) trails throughout the former Ash Pond and on the embankments.

The embankments of the former Ash Pond are partially intact and stand approximately 24 feet high. The embankments that define the former Ash Pond stand at approximate elevation (El.) 906 feet. A portion of the former Ash Pond's embankments appear to have been lowered to El. 904 feet in the northwest portion. The available storage capacity of the former Ash Pond, assuming that the current topography represents an empty pond, is approximately 105 acre-feet (4,590,000 cubic feet).

2.0 Purpose

This Initial Structural Stability Assessment Report (Report) was prepared in accordance with the applicable requirements at § 257.73(d) and § 257.100(f)(2)(iv) of the United States (US) Environmental Protection Agency's (EPA's) 40 Code of Federal Regulations (CFR) Part 257, Subpart D, *Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments* (CCR Rule).

3.0 Information Review

GAI Consultants, Inc. (GAI) reviewed the documents listed under the References section, which include available historic drawings, property maps, topography, reports, and inspections.

3.1 Visual Inspection

A visual inspection of the former Ash Pond was performed on March 31, 2026, as part of the initial structural stability assessment. During the inspection, GAI personnel observed ATV trails throughout the former Ash Pond. ATV trails through the embankments breach the crest, effectively lowering the overall height of the embankment up to approximately three to four feet. Ponding water was observed in ruts likely caused by ATV activity between the former Ash Pond and Mad River. GAI personnel observed CCR material at the ground surface in the ATV trails. GAI did not identify other signs of distress or malfunction that would affect the structural condition of the former Ash Pond.

3.1 Stable Foundations

According to the OH Department of Natural Resources' OH Geology Interactive Map, the former Ash Pond is underlain by Silurian-aged bedrock of the Massie shale, Laurel dolomite, Osgood shale, Dayton limestone, and Brassfield limestone undivided.

According to the United States Department of Agriculture, Natural Resources Conservation Service's Web Soil Survey, the primary surficial soils at the former Ash Pond are Udorthents, loamy (Ud), and Eldean-Urban land complex, 6 to 12 percent slopes (EuC). The surficial soil at the interface between the former Ash Pond embankment and natural ground (abutment) is expected to be of these types.

GAI performed stability analyses in 2026 (Safety Factor Assessment Report, *Reference 2*) to evaluate if the former Ash Pond construction and operation satisfy the safety factors listed in § 257.73(e). Boring data from that investigation indicates that the material beneath and adjacent to the former Ash Pond consists of alluvial and glacial clays, silts, sands, and gravels. Boring data shows that bedrock was not encountered, and borings were terminated at approximate elevations ranging from El. 897 to 841 feet. The limited boring data also indicates that the embankment was constructed mostly of CCR.

No signs of embankment settlement were observed, and the foundation material appeared to be stable based on the visual inspection.

The stability analyses were conducted assuming the maximum volume of impounded water and CCR. The calculated static safety factor under the long-term, maximum storage pool and maximum surcharge pool loading conditions; and seismic conditions are reported in the Safety Factor Assessment Report (*Reference 2*) provided under a separate cover.

3.2 Slope Protection

The majority of the perimeter and interior embankment slopes of the former Ash Pond are partially vegetated to protect against erosion. Portions of the embankments have eroded or have been modified to allow for ATV access to the site; in these locations, some unvegetated areas exist. During the inspection, GAI personnel did not identify any signs of distress in the embankments of the former Ash Pond, however, exposed CCR material at the surface of the embankment is likely erodible and transported downslope during precipitation events.

3.3 Dike Compaction

Per the preamble to the 2015 CCR rule, “EPA recognizes that it would be highly difficult for owners or operators of older units to certify with any certainty that the unit’s construction meets the specific numeric compaction criteria found in the ASTM standards” (80 FR 21381). A subsurface investigation conducted by GAI in December 2025 included one boring through the existing embankment and indicated that the density of embankment material was generally greater than the CCR contained within the former Ash Pond. From this observation, 2026 visual inspection, and the results of the stability analyses, it is GAI’s opinion that the perimeter embankment is marginally stable.

3.4 Vegetated Slopes

As part of 2026 inspection, GAI also evaluated the vegetation on the slopes of the former Ash Pond embankment. The slopes of the embankment are partially vegetated with saplings, fully matured trees, and some underbrush. Areas of the embankment, including those with ATV activity, are unvegetated with CCR material exposed at the ground surface. GAI recommends trees be removed, vegetation be trimmed, and vegetation established in those areas that are currently unvegetated.

3.5 Spillway Capacity and Underlying Hydraulic Structures

The former Ash Pond is a significant hazard potential legacy CCR surface impoundment per Section 257.73(a)(2)(i) of the CCR Rule. Per Section 257.73(d)(1)(v)(B), a significant hazard potential legacy CCR surface impoundment must manage flow resulting from the 1,000 year storm event.

No evidence of discharge structures within the former Ash Pond has been found through a review of available historic documentation and field investigations. In the northwest corner of the former Ash Pond, the existing embankment lowers to El. 904 feet (two feet lower than the surrounding embankment at El. 906 feet) for a length of approximately 64 feet. It is not known when this section of the embankment was lowered. This lower section of the embankment will function as a spillway during a high water event within the former Ash Pond.

The Inflow Design Flood Control System Plan (*Reference 3*) contains calculations that demonstrate the ability of the former Ash Pond to contain the peak discharge from the 1,000-year flood without overtopping of the embankments at both El. 904 feet and 906 feet.

3.6 Adjacent Water Bodies

The western embankment of the former Ash Pond is adjacent to Mad River, and the site is bordered by Buck Creek to the north.

4.0 Corrective Measures

Based on a review of available material and the findings of the visual inspection of the former Ash Pond, no observable conditions requiring corrective measures were identified at the time of assessment. Nevertheless, the results of stability analyses evaluating applicable loading conditions are presented under separate cover in the Safety Factor Assessment Report (*Reference 2*) and should be considered to assess whether corrective measures are warranted based on analytical performance criteria. In addition, GAI recommends that trees be removed, vegetation be trimmed on the embankment slopes, and vegetation be established in those areas that are currently unvegetated.

5.0 Conclusion

GAI reviewed available historic documentation as a part of this Structural Stability Assessment. The former Ash Pond no longer receives CCR, and no active placement of CCR is proposed to occur in the future. Based on the visual inspection conducted in accordance with the conditions outlined in the CCR Rule, the former Ash Pond appears to be marginally stable. However, the results of stability analyses for various loading conditions are presented under separate cover in the Safety Factor Assessment Report (*Reference 2*). These results should be reviewed in conjunction with this assessment to determine whether any corrective actions or additional measures are necessary.

6.0 References

1. GAI Consultants, Inc. *History of Construction Report*. February 2026.
2. GAI Consultants, Inc. *Safety Factor Assessment Report*. May 2026.
3. GAI Consultants, Inc. *Initial Inflow Design Flood Control System Plan*. May 2026.