

2025 Annual Dam and Dike Inspection Report

Ash Pond

**Former Poston Power Plant
Franklin Realty Company
Athens County, OH**

November 2025

Prepared for: Franklin Realty Company

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2025 Annual Dam and Dike Inspection Report

Former Poston Power Plant

Ash Pond

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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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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 Franklin Realty Company an evaluation of the Ash Pond at the Former Poston Power Plant.

The inspection was performed on November 4, 2025. The inspection party consisted of Mr. Dan Murphy, P.E., Mr. Blake Arthur, P.E., and Mr. Wesley Prince. Weather conditions during the inspection were partly cloudy, and the temperature was near 50°F. There was about 0.9 inches of rainfall recorded over the seven days prior to the inspection, with no rain the day prior to the inspection.

2.0 DESCRIPTION OF IMPOUNDMENTS

The E.M. Poston Plant began operation in 1949 and was retired in 1987. The Poston Ash Pond Dam was designed by Burgess and Niple, Ltd and constructed by H.R. Holderman, Inc. in 1957. A soil cap was placed on the Poston Ash Pond in 1988 after the Poston Plant was retired.

The Poston Ash Pond Dam is a zoned earth fill embankment approximately 950 feet long and 100 feet in maximum height. The Poston Ash Pond is also impounded by a saddle dike that is approximately 900 feet long and 15 feet in maximum height. The zoned earth fill embankment is located on the east side of the pond and the saddle dike is located on the south side of the pond.

The zoned earth fill embankment has an upstream slope of 3 horizontal on 1 Vertical (3H:1V) and a downstream slope of 2.5H:1V. The zoned earthfill embankment has a 2 foot thick sand blanket drain, a cutoff trench and a grout curtain the extends into the abutment contacts. The crest of the dam is 20 feet wide at an elevation of 766 ft-msl.

The saddle dike has an upstream slope of 3H:1V and a downstream slope of 2.5H:1V. The crest of the saddle dike is 20 feet wide at an elevation of 766 ft-msl.

The spillway is a 30-foot-wide rectangular concrete chute and stilling basin located on the north side of the pond. The control section of the spillway has a concrete wall with two rectangular notches to allow for the installation of stoplogs. The control section is at elevation 760 ft-msl. The stilling basin of the concrete chute includes a catch basin and an 18" corrugated metal pipe for discharging low flows. The concrete chute discharges into an excavated unlined earth channel on natural soils and the 18" corrugated metal pipe outlet has a headwall with a stilling basin in the valley bottom.

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, as well as instrumentation readings. 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 are four piezometers located in the embankment dam as shown in Attachment 3 – Instrumentation. Table 1 below are the maximum instrument readings since installation in August of 2025.

Table 1: Piezometer Instrumentation Data – Water Elevation				
	PZ-B-01	PZ-B-02	PZ-B-03	PZ-B-04
<i>Maximum Reading</i>	727.5	746.1	679.1	678.9

AEP installed deformation monuments on the crest and downstream slope of the Poston Ash Pond Dam in the period 1983-1984. These monuments were installed to measure movement in the dam to monitor stability. Seven deformation monuments and three control points were installed, as shown in Attachment 3 - Instrumentation.

Two sets of readings were obtained initially in May 1984 and May 1985. Horizontal and vertical deformations were measured to be 0.02 ft (0.24 in), indicating either very small movement or simply float in the survey instrumentation. Field notes could not be obtained to clarify survey methods and accuracy.

AEP does not have records of the monuments being surveyed again until April 2025, when they were discovered as part of historical research for compliance with CFR Title 40: Chapter I Part 257 Subpart D 257.83 (the CCR Rule).

40 CFR 257.83(a)(1)(iii) requires all CCR unit instrumentation to be monitored every 30 days, and 40 CFR 257.83(b)(2)(ii) requires an annual professional engineering report to address the location and type of existing instrumentation and maximum readings since the last annual inspection.

The deformation monuments at Poston consist of rebar set into the ground and surrounded by a concrete cap. The resolution of the measurements is dependent on the survey instrumentation used. Measurement of the deformation monuments began in April with GPS units. Based on the measurements of the control points, 1 inch of horizontal accuracy is expected on average. Vertical accuracy for GPS traditionally has twice the error, or 2 inches for these measurements.

Three control points were installed, and seven deformation monuments. Figures 3, 4, and 5 show the deformation measurements for Northing, Easting, and Elevation respectively. Expected movement direction is shown in the figure, generally in the Northeast direction, and downward.

6 measurements have all been within expected error given the survey instrument limitations. With data charted in this manner, a concern would be multiple measurements occurring in a trend north, east, or downward significantly beyond instrument error (i.e. 6 inches or more).

Based on a review of instrumentation readings, the Poston Ash Pond Dam appears to be functioning as designed.

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: Ash Pond Characteristics	
Approximate Minimum depth (elevation) of impounded water since last annual inspection	Approximately 759 ft-msl
Approximate Maximum depth (elevation) of impounded water since last annual inspection	Approximately 760 ft-msl
Approximate Present depth of impounded water at the time of the inspection	Approximately 760 ft-msl
Approximate Minimum, Maximum, and Present depth (elevation) of CCR since last annual inspection	Approximately 759 ft-msl (Facility no longer receives CCR)
Storage Capacity of impounding structure at the time of the inspection [crest el]	Approximately 759 acre-feet
Approximate volume of impounded water at the time of the inspection	Approximately 0.1 acre-feet
Approximate volume of CCR at the time of the inspection	Approximately 590 acre-feet

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 Poston Ash Pond Dam 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 Ash Pond:

1. The downstream slope of the dam is in fair condition. Overgrown vegetation has been removed, and seed and mulch have been applied to restore vegetative growth. Vegetation is spotty in areas and should be monitored for future growth and potential erosion. Midslope erosion control socks have irregular dips not following the level contour. These areas should be monitored to ensure erosion does not form.
2. The upstream slope and crest of the dam is in fair condition. A gravel road has been installed along the crest of the dam for access. Most of the overgrown vegetation in the ash pond has been removed and has seed and mulch applied. Vegetation is still overgrown in the ditch behind the dam due to delineated wetlands and should be cut and/or cleared to prevent root growth into the dam embankment and allow inspection.
3. The concrete spillway is in poor condition. The spillway has been cleared of vegetation. The concrete is heavily spalled in approximately half of the floor area, exposing some of the reinforcement. Concrete should be repaired to prevent further damage. The wall on the upstream right side is leaning in approximately 2.5 inches and should be monitored for future movement. The low flow catch basin in the spillway is missing its grate to prevent larger debris from clogging the pipe and should be replaced.
4. The receiving channel below the concrete spillway is eroded and should be stabilized to prevent further erosion from forming.
5. The concrete stilling basin at the outfall of the low flow pipe is in good condition. No maintenance is needed.
6. There is an area of seepage and erosion along the toe where the right abutment meets the dam. This was noted in prior reports as far back as the 1980s. This area should be monitored and may need maintenance to stabilize the erosion.
7. The headwall at the toe of the dam which serves as the discharge point of the sand filter and toe drains is covered over and blocked. The headwall could not be inspected to determine the extent of the blockage of the drainpipes. The material covering the headwall should be removed as part of the dam maintenance to allow inspection of the drains.

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

There were no changes to the Poston Ash Pond Dam recently 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 Poston Ash Pond is generally in fair and appears to be functioning as intended with no signs of structural weakness. The constructed embankment/berms appear in fair condition structurally. There were no signs of depression, settlement, or sinkholes along the general inspected areas. The vegetation on the downstream slope of the main dam should be monitored to ensure permanent cover is established. The vegetation in the upslope ditch behind the main dam was observed in excess of 12-inches and should be cut and/or cleared to maintain less than 12-inch height. The vegetation on the smaller saddle dam is in excess of 12-inches and should be cut and/or cleared to maintain less than 12-inch height. The concrete spillway and receiving channel is in poor condition and needs maintenance. The area where the right abutment meets the dam should be monitored and maintained to prevent further erosion. The toe drain headwall needs maintenance to uncover the drains for inspection.

5.2 MAINTENANCE ITEMS

- 1) Develop plans to remove overgrown vegetation. This includes the upstream slope vegetation on the main dam and the downstream slope of the saddle dam. Work in this area may require environmental permitting.
- 2) Develop plans to address the deteriorated concrete in the spillway. Develop plans to repair the erosion in the downstream channel.
- 3) Develop plans to locate and daylight the toe drain headwall. Performing this work may require environmental permitting.
- 4) Install a grate on the low flow outlet.
- 5) Repair the erosion in the right downstream groin contact between the main dam and the right abutment.

5.3 ITEMS TO MONITOR/INVESTIGATE

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

- 1) Monitor downslope vegetation to ensure it gets established. Monitor midslope silt sock to ensure erosion is not forming.
- 2) Monitor the right abutment toe area ensure the seepage conditions do not change or become uncontrolled.
- 3) Monitor the horizontal offset at the joint in the training wall.

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

At the 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

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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 contact AEP Ash Management Services immediately.

ATTACHMENT A

Location Map

Former Poston Power Plant Ash Pond



Legend

- AshPondFeatures
- demmos_ContourWithB
- AshPondFeatureAreas

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0 125 250 500 US Feet



ATTACHMENT B

Inspection Photos

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Photograph 1:

General View of Dam
looking North along
Crest



Photograph 2:

General View of Dam
looking South along
Crest. Note irregular
elevation of mid slope
sock.



Photograph 3:

Concrete Spillway

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Photograph 4:

Spillway low flow outlet.
Grate needs replaced to
prevent clogging.



Photograph 5:

Spillway downstream
receiving channel.



Photograph 6:

Concrete spalling. Spillway

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Photograph 7:

Spillway Outlet Pipe.

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Photograph 8:

Leaning Wall separation
at joint.



Photograph 9:

Concrete deterioration at
base of wall

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Photograph 10:

Erosion at right abutment



Photograph 11:

Erosion at right abutment.

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Photograph 12: Saturation at
right abutment toe



Photograph 13: General view
of dam showing spotty
vegetation

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Photograph 14: Stilling basin
from low flow outlet
pipe.



Photograph 15: General view
of access road on top of
saddle dam.

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ATTACHMENT C

Instrumentation

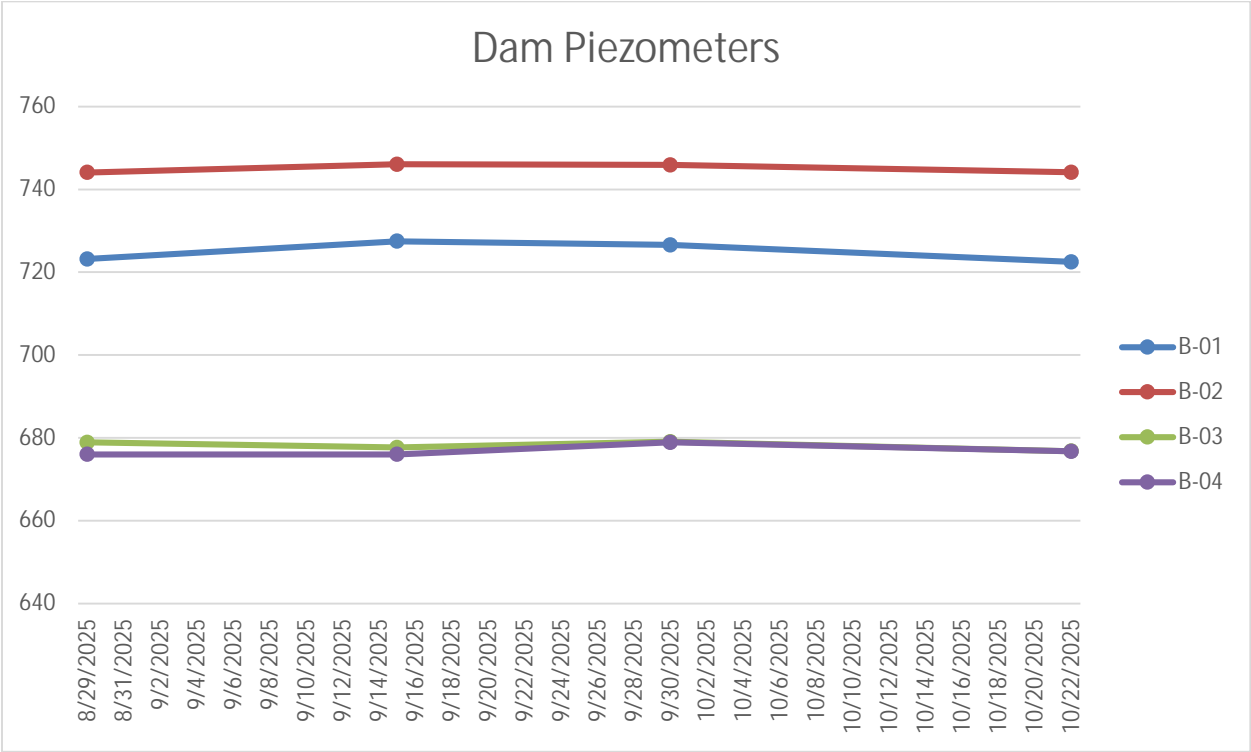
Poston Dam Instrumentation



0 0.01 0.03 0.06 Miles



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