



## Ash Pond Initial Dam and Dike Inspection Report

Former Poston Power Plant, Athens County, Ohio

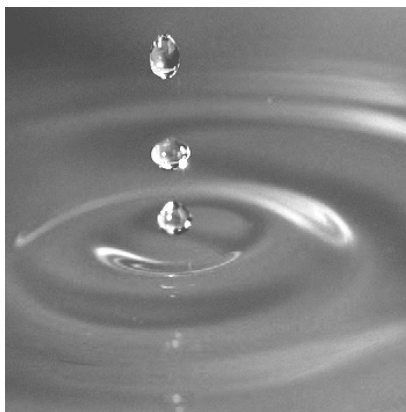
**Submitted to:**

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

**Submitted by:**

GEI Consultants, Inc.  
3159 Voyager Drive  
Green Bay, Wisconsin 54311  
920.455.8200

January 2025  
Project 2407654



---

Pedro Amaya, PE  
Senior Consultant

---

Jeff Piaskowski, PE  
Senior Engineer

# 2024 Annual Inspection Report



## Ash Pond Former Poston Power Plant

*Pedro J. Amaya*

Signature

Pedro Amaya, PE  
Senior Consultant  
GEI Consultants, Inc.

**January 31, 2025**

Date



I certify, to the best of my knowledge, that the information provided in this report satisfies the requirements of 40 CFR 257.83(b).

# Table of Contents

---

<b>1.</b>	<b>Introduction</b>	<b>1</b>
<b>2.</b>	<b>Description of Impoundments</b>	<b>2</b>
<b>3.</b>	<b>Review of Available Information (257.83(b)(1)(i))</b>	<b>3</b>
<b>4.</b>	<b>Inspection (257.83(b)(1)(ii))</b>	<b>4</b>
4.1	Changes in Geometry Since Last Inspection (257.83(b)(2)(i))	4
4.2	Instrumentation (257.83(b)(2)(ii))	4
4.3	Impoundment Characteristics (257.83(b)(2)(iii, iv, v))	4
4.4	Definitions of Visual Observations and Deficiencies	5
4.5	Visual Inspection (257.83(b)(2)(i))	6
4.6	Changes that Effect Stability or Operation (257.83(b)(2)(vii))	7
<b>5.</b>	<b>Summary of Findings</b>	<b>8</b>
5.1	General Observations	8
5.2	Maintenance Items	8
5.3	Items to be Monitored	8
5.4	Items to be Addressed	8
<b>6.</b>	<b>Deficiencies (257.83(b)(2)(vi))</b>	<b>9</b>

## Figures

Figure 1 – Site Location Map

Figure 2 – Facility Plan

Figure 3 – Site Plan

Figure 4 – Items to be Addressed

## Appendices

Appendix A – Photolog

JRP

B:\Working\AEP\2407654 AEP Legacy CCR SI Inspection\05\_GIS\Final\Poston Ash Pond\DRAFT\_2024 Poston Ash Pond.docx

# 1. Introduction

---

GEI Consultants, Inc. was retained by AEP to implement the initial annual inspection of the Legacy CCR Surface Impoundments at various AEP facilities. The initial annual inspection is required by February 10, 2025 as a result of the EPA's provision to 40 CFR 257.50(e) in response to the August 21, 2018 USWAG decision. The provision indicates that Legacy CCR Surface Impoundments are subject to 40 CFR 257 (CCR Rule), where applicable, with an effective date of November 8, 2024.

As a result, GEI's Chris Keenan performed the initial annual inspection of the Ash Pond at the former Poston Power Generating Plant to fulfill requirements of 40 CFR 257.83. Mr. Justin R. Jent was the AEP contact who assisted with the initial annual inspection and provided history of Legacy CCR Surface Impoundment. This report was prepared under the supervision of Pedro Amaya, PE and Jeff Piaskowski, PE of GEI and serves as a summary of the inspection and an assessment of the general conditions of the Ash Pond at the former Poston Power Generating Plant.

The inspection was performed on October 15, 2024, in general accordance with the Mining Safety and Health Administration (MSHA) Dam Inspection Guidelines. Weather conditions were sunny with mild temperatures between 40- and 50-degrees Fahrenheit. Less than 0.1-inches of precipitation was recorded at the regional airport in Columbus, Ohio in the 7 days prior to the inspection.

The former Poston Power Generating Plant is located near Athens, Ohio as shown on Figure 1 – Site Location Map. The facility arrangement is provided on Figure 2 – Facility Plan. The Ash Pond and its appurtenances are shown on Figure 3 – Site Plan. Locations of items to be monitored and items to be addressed are provided on Figure 4 and Figure 5, respectively.

## 2. 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. Review of Available Information (257.83(b)(1)(i))**

---

GEI understands that AEP is currently gathering pertinent information related to the Poston Ash Pond. This information was not available for review prior to preparing this report. This section will be updated in subsequent annual inspection reports.

## 4. Inspection (257.83(b)(1)(ii))

---

### 4.1 Changes in Geometry Since Last Inspection (257.83(b)(2)(i))

This section is not applicable, as this is the Poston Ash Pond's initial annual inspection.

### 4.2 Instrumentation (257.83(b)(2)(ii))

This section is not applicable, as the Poston Ash Pond Dam does not have any instrumentation.

### 4.3 Impoundment Characteristics (257.83(b)(2)(iii, iv, v))

Below is a summary of the Poston Ash Pond characteristics.

IMPOUNDMENT CHARACTERISTICS	
Water Surface Elevation at time of the inspection	Approximately 759 ft-msl
Approximate <b>Minimum, Maximum, and Present</b> depth/elevation of impounded water since last annual inspection	This is the initial inspection and the water was at approximately elevation 759 ft-msl.
Approximate <b>Minimum Maximum and Present</b> depth/elevation of CCR since last annual inspection	This is the initial inspection and the CCR elevation is approximately 764 ft-msl
Storage Capacity of impounding structure at the time of the inspection	Approximately 765 acre-feet
Approximate volume of impounded water at the time of the inspection	Approximately 260 ac-ft
Approximate volume of CCR at the time of the inspection	Approximately 380 ac-ft

Notes:

1. na

## 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, cracks, concrete surface 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, cracks, concrete surface etc.) where the current maintenance program has neglected to improve the condition. Usually, conditions that have been identified in previous inspections, but have not been corrected.
- Excessive:** A reference to an observed item (e.g. erosion, seepage, vegetation, cracks, concrete surface etc.) where the current maintenance condition is below or worse than what is normal or desired, and which may have affected the ability of the observer to properly evaluate the structure or area being observed or which may be a concern from a structure safety or stability point of view.

This document also uses the definition of a “deficiency” as referenced in the CCR rule section §257.84(b)(5) Inspection Requirements for CCR Landfills. 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 defined by deficiency are considered maintenance or items to be monitored.



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

1. Uncontrolled Seepage

Uncontrolled seepage is an uncontrolled release from the unit.

2. Displacement of the Embankment

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

3. Blockage of Control Features

Blockage of Control Features 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 was conducted to identify signs of distress or malfunction of the impoundment 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 A - Photolog.

The following summarizes the visual inspection of the Poston Ash Pond:

The downstream slope of the dam is in fair condition as it is overgrown with woody vegetation that should to be maintained to 12-inches or less as shown in Photograph No. 1, 2, 3, and 4.

The upstream slope and crest of the dam is in fair condition as it is overgrown with woody vegetation that should to be maintained to 12-inches or less as shown in Photograph No. 5.

The spillway was in fair condition. Minor vegetation and debris should be addressed/removed to allow the structure to function as it was designed as shown in Photograph Nos. 6, 7, 8, and 9. Major erosion in the spillway should also be addressed as shown in Photograph No. 10.

The interior of the Ash Pond is in fair condition. Its vegetation is overgrown as shown on Photograph No. 12, 13, and 14.

#### **4.6 Changes that Effect Stability or Operation (257.83(b)(2)(vii))**

This section is not applicable, as this is the initial annual inspection report for the Poston Ash Pond.

## **5. Summary of Findings**

---

### **5.1 General Observations**

The Poston Ash Pond is generally in fair condition and appears to be functioning as intended with no signs of structural weakness. The constructed embankment/berms appear in fair condition, however, vegetation on the site has become overgrown and should be addressed/maintained to 12-inches or less within 25-feet of the embankment limits. AEP should consider identifying the unit boundary to establish limits where the vegetation should be maintained. AEP could consider following up with a logging company to determine if logging these areas is a cost-effective approach to addressing the vegetation. Alternatively, AEP could also consider retaining a company that specializes in forestry mulching for transmission and power line easements to address the woody vegetation that exceeds 12-inches in height.

### **5.2 Maintenance Items**

No items were identified as items to be maintained during the visual inspection.

### **5.3 Items to be Monitored**

No items were identified as items to be monitored during the visual inspection.

### **5.4 Items to be Addressed**

The following items were identified during the inspection as items that should be addressed.

- Address/maintain vegetation to 12-inches or less within 25-feet of the limits of the embankments. AEP should consider identifying the unit boundary to establish limits where the vegetation should be maintained. Applies to Item No. 1-5.
- Address minor spillway blockages. Applies to Item No. 6, 7, and 9.
- Address spillway erosion. Applies to Item No. 10 and 11.

## 6. Deficiencies (257.83(b)(2)(vi))

---

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 inspections. A deficiency is defined as either:

- uncontrolled seepage
- displacement of the embankment
- blockage of control features
- erosion, more than minor maintenance

If any of these conditions occur or if you have any questions with regard to this report, please contact Dan Murphy at 614-933-2467 / [dsmurphy1@aep.com](mailto:dsmurphy1@aep.com) or David Miller at 614-716-2281 / [damiller@aep.com](mailto:damiller@aep.com).

## **Figure 1 – Site Location Map**

---



2024 Ash Pond Inspection  
 Poston Plant Lands Power Plant  
 Athens, Ohio

American Electric Power Service Corporation  
 Columbus, OH 43215



SITE LOCATION MAP

Project 2407654

January 2025

Fig. 1

## **Figure 2 – Facility Plan**

---



**LEGEND:**

- 2021 Contours (2ft Intervals)
- 2021 Contours (10ft Intervals)

**NOTES:**

1. Aerial image obtained from USDA NAIP. Image captured summer of 2022.
2. Contours derived from 2021 LIDAR USGS - OCM Partners, 2025: 2020 - 2021 USGS Lidar: Ohio Statewide - Phase 2, <https://www.fisheries.noaa.gov/inport/item/70095>.
3. Site conditions may change over time, accuracy is not guaranteed.



2024 Ash Pond Inspection  
 Poston Plant Lands Power Plant  
 Athens, Ohio

American Electric Power Service Corporation  
 Columbus, OH 43215

**GEI**   
 Consultants

Project 2407654

FACILITY PLAN

January 2025

Fig. 2

Path: C:\Users\jhanzen\OneDrive - GEI Consultants, Inc\Documents\GIS\_Misc\MISCELLANEOUS\2024\2407654 ADP Legacy CCR SI Inspection\2407654 ADP Legacy CCR SI Inspection.aprx



## Figure 3 – Site Plan

---



**LEGEND:**

- General Observation
- 2021 Contours (10ft Intervals)
- 2021 Contours (2ft Intervals)

**NOTES:**

1. Aerial image obtained from USDA NAIP. Image captured fall of 2022.
2. Points shown represent site conditions during time of inspection. Conditions may change overtime, accuracy is not guaranteed. Map should not be used for measurement.



2024 Ash Pond Inspection  
 Poston Plant Lands Power Plant  
 Athens, Ohio

American Electric Power Service Corporation  
 Columbus, OH 43215

**GEI** Consultants

Project 2407654

SITE PLAN

January 2025

Fig. 3

Path: C:\Users\jhanes\OneDrive - GEI Consultants, Inc\Documents\GIS\_Max\MSE\ELLANECS\2024\2407654\_AEP\_Inspection\2407654\_AEP\_Inspection.aprx

## **Figure 4 – Items to be Addressed**

---

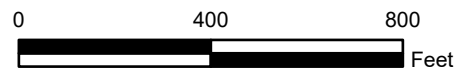


**LEGEND:**

- Repair
- 2021 Contours (10ft Intervals)
- 2021 Contours (2ft Intervals)

**NOTES:**

1. Aerial image obtained from USDA NAIP. Image captured fall of 2022.
2. Points shown represent site conditions during time of inspection. Conditions may change overtime, accuracy is not guaranteed. Map should not be used for measurement.



2024 Ash Pond Inspection  
 Poston Plant Lands Power Plant  
 Athens, Ohio

American Electric Power Service Corporation  
 Columbus, OH 43215



ITEMS TO BE ADDRESSED

Project 2407654

January 2025

Fig. 4

## **Appendix A - Photolog**


---

# Photographic Log



**Project:** Poston Ash Pond Inspection Report  
**Client:** American Electric Power

**GEI Project:** 2407654



<b>PHOTOGRAPH NO: 1</b>	<b>DATE:</b> October 15, 2024 1:20 PM	<b>LATITUDE:</b> 39.38532089	<b>LONGITUDE:</b> -82.17398209
<b>DIRECTION:</b> 138°		<b>SITE LOCATION:</b> ATHENS, OHIO	
<b>DESCRIPTION:</b>  Ash Pond, Downstream Slope.  Address/maintain vegetation to 12-inches or less within 25-feet of the toe of slope.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			
<b>PHOTOGRAPH NO: 2</b>	<b>DATE:</b> October 15, 2024 1:23 PM	<b>LATITUDE:</b> 39.38815498	<b>LONGITUDE:</b> -82.17572009
<b>DIRECTION:</b> 117°		<b>SITE LOCATION:</b> ATHENS, OHIO	
<b>DESCRIPTION:</b>  Ash Pond, Downstream Slope.  Address/maintain vegetation to 12-inches or less within 25-feet of the toe of slope.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			

# Photographic Log



**Project:** Poston Ash Pond Inspection Report  
**Client:** American Electric Power

**GEI Project:** 2407654


<b>PHOTOGRAPH NO: 3</b>	<b>DATE:</b> October 15, 2024 1:31 PM	<b>LATITUDE:</b> 39.38745851	<b>LONGITUDE:</b> -82.17674642
<b>DIRECTION:</b> 242°	<b>SITE LOCATION:</b> ATHENS, OHIO		
<b>DESCRIPTION:</b>  Ash Pond, Downstream Slope.  Address/maintain vegetation to 12-inches or less within 25-feet of the toe of slope.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			
<b>PHOTOGRAPH NO: 4</b>	<b>DATE:</b> October 15, 2024 1:37 PM	<b>LATITUDE:</b> 39.38758506	<b>LONGITUDE:</b> -82.17718132
<b>DIRECTION:</b> 285°	<b>SITE LOCATION:</b> ATHENS, OHIO		
<b>DESCRIPTION:</b>  Ash Pond, Downstream Slope.  Address/maintain vegetation to 12-inches or less within 25-feet of the toe of slope.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			

# Photographic Log



**Project:** Poston Ash Pond Inspection Report  
**Client:** American Electric Power

**GEI Project:** 2407654

<b>PHOTOGRAPH NO: 5</b>	<b>DATE:</b> October 15, 2024 1:39 PM	<b>LATITUDE:</b> 39.38780383	<b>LONGITUDE:</b> -82.17751841
<b>DIRECTION: 70°</b>	<b>SITE LOCATION: ATHENS, OHIO</b>		
<b>DESCRIPTION:</b>  Ash Pond, Crest.  Address/maintain vegetation to 12-inches or less.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			
<b>PHOTOGRAPH NO: 6</b>	<b>DATE:</b> October 15, 2024 1:49 PM	<b>LATITUDE:</b> 39.38883639	<b>LONGITUDE:</b> -82.17762031
<b>DIRECTION: 138°</b>	<b>SITE LOCATION: ATHENS, OHIO</b>		
<b>DESCRIPTION:</b>  Ash Pond, Spillway.  Address minor blockage to allow spillway to function as it was designed.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			




# Photographic Log



**Project:** Poston Ash Pond Inspection Report  
**Client:** American Electric Power

**GEI Project:** 2407654



<b>PHOTOGRAPH NO: 7</b>	<b>DATE:</b> October 15, 2024 1:52 PM	<b>LATITUDE:</b> 39.38888922	<b>LONGITUDE:</b> -82.17768938
<b>DIRECTION:</b> 104°	<b>SITE LOCATION:</b> ATHENS, OHIO		
<b>DESCRIPTION:</b>  Ash Pond, Outfall Structure, Looking upstream.  Address/maintain vegetation to maintain clear drainage pathway.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			
<b>PHOTOGRAPH NO: 8</b>	<b>DATE:</b> October 15, 2024 1:53 PM	<b>LATITUDE:</b> 39.38891214	<b>LONGITUDE:</b> -82.17766035
<b>DIRECTION:</b> 358°	<b>SITE LOCATION:</b> ATHENS, OHIO		
<b>DESCRIPTION:</b>  General Photo, Typical Conditions.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			

# Photographic Log



**Project:** Poston Ash Pond Inspection Report  
**Client:** American Electric Power

**GEI Project:** 2407654



<b>PHOTOGRAPH NO: 9</b>	<b>DATE:</b> October 15, 2024 1:54 PM	<b>LATITUDE:</b> 39.38889134	<b>LONGITUDE:</b> -82.17762026
<b>DIRECTION:</b> 310°	<b>SITE LOCATION:</b> ATHENS, OHIO		
<b>DESCRIPTION:</b>  Ash Pond, Spillway.  Address minor blockage to allow spillway to function as it was designed.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			
<b>PHOTOGRAPH NO: 10</b>	<b>DATE:</b> October 15, 2024 1:59 PM	<b>LATITUDE:</b> 39.38907392	<b>LONGITUDE:</b> -82.17737892
<b>DIRECTION:</b> 291°	<b>SITE LOCATION:</b> ATHENS, OHIO		
<b>DESCRIPTION:</b>  Ash Pond, Spillway, looking upstream.  Address / Maintain Major Erosion.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			

# Photographic Log



**Project:** Poston Ash Pond Inspection Report  
**Client:** American Electric Power

**GEI Project:** 2407654



<b>PHOTOGRAPH No: 11</b>	<b>DATE:</b> October 15, 2024 2:00 PM	<b>LATITUDE:</b> 39.38906412	<b>LONGITUDE:</b> -82.17738074
<b>DIRECTION:</b> 41°	<b>SITE LOCATION:</b> ATHENS, OHIO		
<b>DESCRIPTION:</b>  Ash Pond, Spillway, looking downstream.  Address / Maintain Major Erosion.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			
<b>PHOTOGRAPH No: 12</b>	<b>DATE:</b> October 15, 2024 2:43 PM	<b>LATITUDE:</b> 39.3880584	<b>LONGITUDE:</b> -82.18167523
<b>DIRECTION:</b> 313°	<b>SITE LOCATION:</b> ATHENS, OHIO		
<b>DESCRIPTION:</b>  Finger on Upstream Side. General Photo, Typical Conditions.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			

# Photographic Log



**Project:** Poston Ash Pond Inspection Report  
**Client:** American Electric Power

**GEI Project:** 2407654

<b>PHOTOGRAPH No: 13</b>	<b>DATE:</b> October 15, 2024 2:44 PM	<b>LATITUDE:</b> 39.38827082	<b>LONGITUDE:</b> -82.18172876
<b>DIRECTION:</b> 311°	<b>SITE LOCATION:</b> ATHENS, OHIO		
<b>DESCRIPTION:</b>  Interior of Pond. Ground Cover, Typical Conditions.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			
<b>PHOTOGRAPH No: 14</b>	<b>DATE:</b> October 15, 2024 2:46 PM	<b>LATITUDE:</b> 39.38969992	<b>LONGITUDE:</b> -82.18207257
<b>DIRECTION:</b> 337°	<b>SITE LOCATION:</b> ATHENS, OHIO		
<b>DESCRIPTION:</b>  Interior. Ground Cover, Typical Conditions.			
<b>PHOTO BY:</b>  GEI CONSULTANTS, INC.			