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CCR Bottom Ash Storage Pond

2025 Annual Dam and Dike Inspection Report

Welsh Power Plant, Cason, Texas

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

Submitted by:
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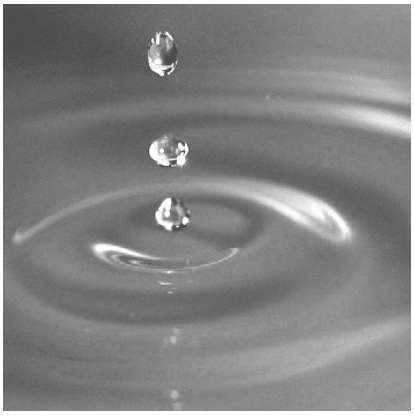
August 14, 2025
Project 2501323
AEP Document ID: GEVR-25-015



William Walton, PE (TX)
Senior Vice President

Megan Jehring, PE
Senior Engineer

2025 Annual Inspection Report

Bottom Ash Storage Pond
Welsh Power Plant
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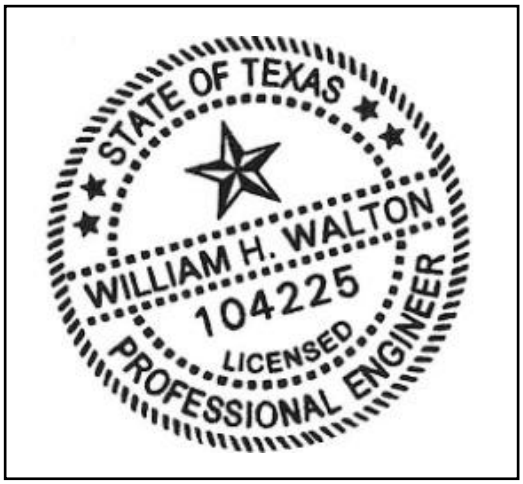
Signature

William Walton, PE
Senior Vice President
GEI Consultants, Inc.

August 14, 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).

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JRP
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1. Introduction

GEI Consultants, Inc. (GEI) was retained by AEP to implement the 2025 Dam and Dike Inspection and Maintenance Program (DIMP) at AEP facilities. As part of the DIMP, GEI's Pedro Amaya, PE and Megan Jehring, PE performed the 2025 inspection for the Bottom Ash Storage Pond at the Welsh Power Plant. Mr. W. Greg Carter, PE of AEP's Regional Engineering, participated in the inspection and shared background context. This report was prepared by Megan Jehring, PE of GEI and serves as a summary of the inspection and an assessment of the general conditions of the facility.

The inspection was performed on May 13, 2024, in general accordance with the Mining Safety and Health Administration (MSHA) Dam Inspection Guidelines. Weather conditions were sunny with high temperatures approaching 90 degrees Fahrenheit. According to a regional weather station, the surrounding area received approximately 0.7-inches of rain in the seven days prior to the inspection, and no precipitation the day of this inspection.

The AEP J. Robert Welsh Plant is in southern Titus County, approximately 8 miles northeast of Pittsburg, Texas, and approximately two miles northwest of Cason, Texas as shown on Figure 1 – Site Location Map. The facility arrangement is provided on Figure 2 – Facility Plan. This report contains the inspection findings, observations, photographic descriptions, conclusions, and maintenance recommendations. Details of the visual inspection are presented below. Each photograph that was captured during the inspection was tagged as either a general site observation, item to be monitored, or as an item to be addressed. The general site observations, items to be monitored, and items to be addressed are presented on Figure 3 – Site Plan, Figure 4 – Items to be Monitored, and Figure 5 – Items to be Addressed, respectively.

CCR was removed from the Bottom Ash Storage Pond in 2024. The pond closure is currently contingent on groundwater sampling results.

2. Description of Impoundment

2.1 Bottom Ash Storage Pond

When the Bottom Ash Storage Pond was in operation, The Bottom Ash Storage Pond was approximately 22 acres in size. Its berms were 20 feet in height and were constructed of compacted clay on a 3H:1V slope (3 feet horizontal, 1 foot vertical). The elevation at the base of the embankment was approximately 340 feet above msl, and the elevation at the top of the embankment around the perimeter of the Bottom Ash Storage Pond was approximately 360 feet above msl.

The unit's emergency spillway was an 8-foot-wide weir with a rock rip-rap discharge chute located along the southern embankment at an elevation of 358 feet above msl. When in operation, the storage capacity of the Bottom Ash Storage Pond at elevation 358 feet above msl was approximately 344 acre-ft.

3. Review of Available Information (257.83(b)(1)(i))

A review of available information regarding the status and condition of the CCR Pond, which include files available in the CCR operating record, such as design and construction information, periodic structural stability assessments, previous 7-day inspection reports, 30-day instrumentation data, and previous annual inspections has been conducted. Based on the review of the data there were no signs of actual or potential structural weakness or observed adverse conditions.

4. Changes in Geometry Since Last Information (257.83(b)(2)(i))

The Bottom Ash Storage Pond perimeter berm was removed as part of the pond closure, and the pond is no longer capable of impounding water. The former Bottom Ash Storage Pond area has been regraded and revegetated. Stormwater from the site is collected and controlled through a riprap-lined discharge channel.

5. Changes That Effect Stability or Operation (257.83(b)(2)(vii))

In April of 2021, the Bottom Ash Storage Pond ceased operations and no longer receives any CCR transport waters or CCR materials into the pond. The Bottom Ash Storage Pond also stopped receiving all storm water runoff from the landfill and surrounding areas. We do not anticipate these operational changes would affect the impounding structure's stability.

6. Impoundment Characteristics (257.83(b)(2)(iii,iv,v))

6.1 Bottom Ash Storage Pond

Table 1 is a summary of the minimum, maximum, and present depth and elevation of the impounded water and CCR material 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 at the time of the inspection.

Table 1: Summary of Relevant Storage Information for Bottom Ash Storage Pond

Statistics	Bottom Ash Storage Pond Depth (El. ft)
Approximate **Minimum** depth of impounded water since last annual inspection	0.0 ft (340.0 ft)
Approximate **Maximum** depth of impounded water since last annual inspection	0.0 ft (340.0 ft)
Approximate **Present** depth of impounded water at the time of the inspection	0.0 ft (340.0 ft)
Approximate **Minimum** depth of CCR since last annual inspection	0.0 ft (340.0 ft)
Approximate **Maximum** depth of CCR since last annual inspection	18.0 ft (358.0 ft)
Approximate **Present** depth of CCR at the time of the inspection	0.0 ft (340.0 ft)
Storage Capacity of impounding structure at the time of the inspection	*NA
Approximate volume of impounded water at the time of the inspection	0.0 Gallons
Approximate volume of CCR at the time of the inspection	0 acre-ft

*NA – Not Applicable. Pond is in the process of being closed by removal of CCR.

7. Inspection (257.83(b)(1)(ii))

7.1 General

The summary of the visual observations uses terms to describe the general appearance or condition of an observed item, activity or structure. Their meaning is understood 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 or 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 previously identified in the previous inspections but have not yet been corrected.

Excessive: A reference to an observed item (e.g., erosion, seepage, vegetation, 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 particular area being observed or which may be a concern from a structure safety or stability point of view.

In addition, a "deficiency" is some evidence that a dam has developed a problem that could impact the structural integrity of the dam. There are four general categories of deficiencies. These four categories are described below:

- 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 picked up and safely carried off by a drain. Seepage that is collected by a drain can still be uncontrolled if it is not safely collected and transported, such as seepage that is not clear. 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 frequently.]

- Displacement:
    - Displacement of the embankment is large scale movement of part of the dam/dike. Common signs of displacement are cracks, scarps, bulges, depressions, sinkholes, and slides.

- Blockage of Control Features:
    - Blockage of Control Features is the restriction of flow at spillways, decant or pipe spillways, or drains.

- 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.

7.2 Visual Inspection (257.83(b)(2)(i))

A visual inspection of the Bottom Ash Storage Pond was conducted to identify any signs of distress or malfunction of the impoundment and appurtenant structures. Specific items inspected included all structural elements of the dam such as upstream and downstream slopes, crest, and toe.

7.2.1 Bottom Ash Storage Pond General Observations and Maintenance Considerations

The Bottom Ash Storage Pond CCR removal was completed in 2024 and the site was regraded to promote positive drainage. In general, the Bottom Ash Storage Pond Area appears to be in satisfactory condition with no observed settlement, misalignment, seeps, animal burrows or animal activity. Some erosion should be monitored and addressed and silt should be removed from the stormwater check dams.

1. The upstream slopes are in satisfactory condition with healthy vegetation establishment on most areas as shown on Photo No. 1, 3, 4, 8, 9, and 10. Some minor erosion was observed in isolated areas and should be monitored as shown in Photo No. 2. Isolated areas of major erosion should be graded and reseeded as shown in Photo No. 5, 6, and 7.

2. The drainage features were in satisfactory condition with no blockages observed that could restrict flow as shown in Photo No. 11. The upstream side of the check dams should be monitored and maintained more frequently when silt accumulates as shown in Photo No. 12, 13, and 15.

3. The riprap lined outfall structure experienced major erosion as shown in Photo No. 14. The major erosion should be addressed but it is recommended that the outfall design be re-evaluated or the hydraulic design and riprap sizing be confirmed to assure an appropriate repair is implemented.

8. Summary of Findings

Based on the visual observations and the inspection of the facilities, the Bottom Ash Storage Pond structures are generally in satisfactory condition. Specific conclusions related to this inspection are included as follows.

- There is no evidence of distress that would indicate the possibility of immediate sliding, slope instability, settlement, misalignment, or cracking of the bottom ash pond slopes.
- Vegetation management for the facilities is considered satisfactory. Much of the Bottom Ash Storage Pond Area has been revegetated. Some areas should be regraded and reseeded until vegetation has been re-established.
- The Bottom Ash Storage Pond outfall has significant erosion in its first year of service. Before addressing the erosion, we recommend that the design of the outfall be re-evaluated. AEP may elect to redesign the pond outlet works for a larger storm event that meets 100-year or 500-year storm event to limit future maintenance.

8.1 General Maintenance Considerations

The following maintenance items were identified during the visual inspection.

- Continue to maintain vegetation to 12-inches or less on the side slopes and within 25 feet of the toe of slope.
- Continue to monitor drainage features for blockages that could restrict flow.
- Monitor slopes for vegetation establishment and address erosion rills before they become significant.

8.2 Items to be Monitored

The following items were identified during the visual inspection as items to be monitored.

- Item 2 – Monitor the minor erosion on the upstream slope and address if it becomes significant.
- Item 12 – Monitor the sediment trap/check dam. Consider adding routine cleanup of the sediment traps and until vegetation is well established. Once the vegetation is well established onsite, consider revegetating the sediment traps.

- Item 13 – Monitor the sediment trap/check dam. Consider adding routine cleanup of the sediment traps and until vegetation is well established. Once the vegetation is well established onsite, consider revegetating the sediment traps.

8.3 Items to be Addressed

The following items were identified during the visual inspection as items to be addressed.

- Item 5 – Address major erosion on the upstream slope. Consider re-evaluating the area to limit concentrated flows.

- Item 6 – Address major erosion on the upstream slope. Consider re-evaluating the area to limit concentrated flows.

- Item 7 – Address major erosion on the upstream slope. Consider re-evaluating the area to limit concentrated flows.

- Item 14 – Address major erosion at the riprap outfall. Consider revisiting the hydraulic/ stormwater design of this structure to assure width and riprap size is appropriate before making the repair.

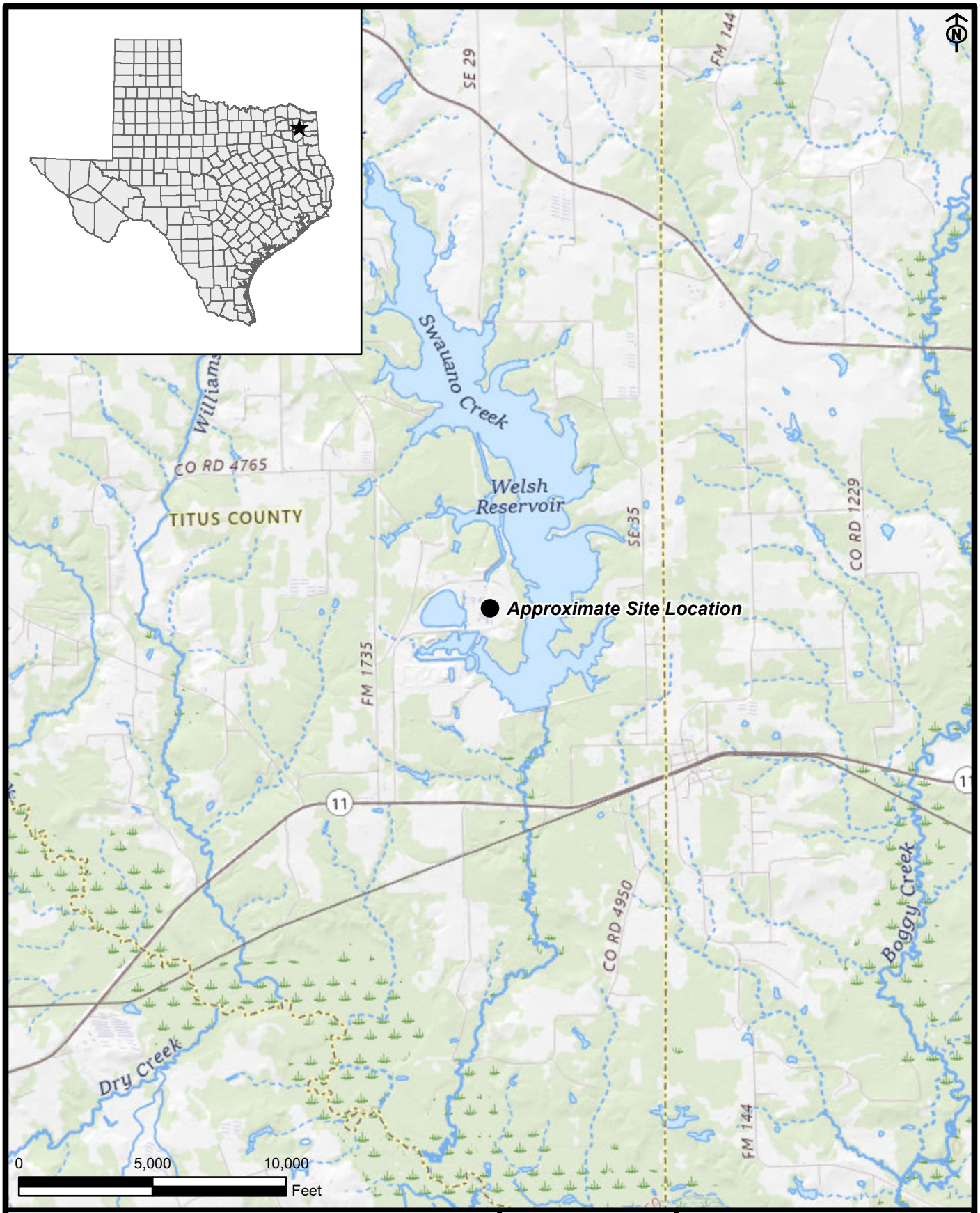
- Item 15 – Address major erosion/silt buildup at check dam. Once cleaned out to design grades – consider re-establishing vegetation.

8.4 Deficiencies (257.83(b)(2)(i))

There were no deficiencies or signs of structural integrity issues or disruptive conditions that were observed at the time of the inspection that would require additional investigation or remedial action.

If you have any questions with regard to this report, please do not hesitate to contact Greg Carter at (903) 927-5896 / wgcarter@aep.com or Daniel Pizzino dwpizzino@aep.com.

Figure 1 – Site Location Map



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SITE LOCATION MAP

May 2025

Fig. 1

Path: B:\Working\AEP\2501323 AEP 2025 Dam & Landfill Inspections\05_GIS\07Welsh\Layouts

Figure 2 – Facility Plan

0 1,600 3,200 Feet

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FACILITY PLAN

Project 2501323

May 2025

Fig. 2

Path: B:\Working\AEP\2501323 AEP 2025 Dam & Landfill Inspections\05_GIS\07Welsh\Layouts

Figure 3 – Site Plan

LEGEND:

- General Observation

NOTES:

1. Aerial image obtained from USDA NAIP. Image captured spring of 2021.
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.

0 200 400 Feet

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SITE PLAN

Project 2501323 | May 2025 | Fig. 3

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Figure 4 – Items to be Monitored

LEGEND:

- Monitor

NOTES:

1. Aerial image obtained from USDA NAIP. Image captured spring of 2021.
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.

0 200 400 Feet

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ITEMS TO BE MONITORED

Project 2501323 | May 2025 | Fig. 4

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Figure 5 – Items to be Addressed

LEGEND:

Repair

NOTES:

1. Aerial image obtained from USDA NAIP. Image captured spring of 2021.

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.

0 200 400 Feet

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ITEMS TO BE ADDRESSED

Project 2501323 | May 2025 | Fig. 5

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Appendix A – Photolog

Photographic Log

Project: Welsh Power Plant, Bottom Ash Storage Pond Inspection
Client: American Electric Power **GEI Project:** 2501323

PHOTOGRAPH NO: 1	DATE: May 13, 2025 1:27 PM	LATITUDE: 33.04676743	LONGITUDE: -94.84270722
DIRECTION: 95°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Upstream Slope. General Photo, Typical Conditions.			
PHOTO BY: GEI CONSULTANTS, INC.			

PHOTOGRAPH NO: 2	DATE: May 13, 2025 1:30 PM	LATITUDE: 33.04705888	LONGITUDE: -94.84315055
DIRECTION: 111°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Upstream Slope. Minor Erosion. Monitor conditions, address if erosion becomes significant.			
PHOTO BY: GEI CONSULTANTS, INC.			

Photographic Log

Project: Welsh Power Plant, Bottom Ash Storage Pond Inspection
Client: American Electric Power **GEI Project:** 2501323

PHOTOGRAPH NO: 3	DATE: May 13, 2025 1:30 PM	LATITUDE: 33.0470671	LONGITUDE: -94.84314964
DIRECTION: 358°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Upstream slope. General Photo, Typical Conditions. Vegetation establishment is work in progress.			
PHOTO BY: GEI CONSULTANTS, INC.			

PHOTOGRAPH NO: 4	DATE: May 13, 2025 1:34 PM	LATITUDE: 33.04695031	LONGITUDE: -94.84604079
DIRECTION: 94°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Upstream Slope. General Photo, Typical Conditions. Vegetation establishment is work in progress.			
PHOTO BY: GEI CONSULTANTS, INC.			

Photographic Log

Project: Welsh Power Plant, Bottom Ash Storage Pond Inspection
Client: American Electric Power **GEI Project:** 2501323

PHOTOGRAPH NO: 5	DATE: May 13, 2025 1:37 PM	LATITUDE: 33.0462843	LONGITUDE: -94.84611522
DIRECTION: 189°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Upstream Slope. Major Erosion, Address line / grade and reseed. Some additional regrading may be necessary to limit preferential flow path. Depth is 2.7 ft, 37 ft long			
PHOTO BY: GEI CONSULTANTS, INC.			

PHOTOGRAPH NO: 6	DATE: May 13, 2025 1:44 PM	LATITUDE: 33.04566174	LONGITUDE: -94.84617575
DIRECTION: 188°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Upstream Slope. Major Erosion, Address line / grade and reseed. Some additional regrading may be necessary to limit preferential flow path. Depth 2.5 ft, 37 ft long.			
PHOTO BY: GEI CONSULTANTS, INC.			

Photographic Log

Project: Welsh Power Plant, Bottom Ash Storage Pond Inspection
Client: American Electric Power **GEI Project:** 2501323

PHOTOGRAPH NO: 7	DATE: May 13, 2025 1:51 PM	LATITUDE: 33.04519321	LONGITUDE: -94.846202
DIRECTION: 208°	SITE LOCATION: CASON, TEXAS		

DESCRIPTION:

Upstream Slope. Major Erosion, Address line / grade and reseed. Some additional regrading may be necessary to limit preferential flow path.

Depth 2-3 ft, 37 ft long

PHOTO BY:

GEI CONSULTANTS, INC.

PHOTOGRAPH NO: 8	DATE: May 13, 2025 1:58 PM	LATITUDE: 33.0439579	LONGITUDE: -94.84615578
DIRECTION: 298°	SITE LOCATION: CASON, TEXAS		

DESCRIPTION:

Upstream Slope. General Photo, Typical Conditions.

PHOTO BY:

GEI CONSULTANTS, INC.

Photographic Log

Project: Welsh Power Plant, Bottom Ash Storage Pond Inspection
Client: American Electric Power **GEI Project:** 2501323

PHOTOGRAPH NO: 9	DATE: May 13, 2025 2:02 PM	LATITUDE: 33.04392495	LONGITUDE: -94.84402481
DIRECTION: 194°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Upstream Slope. General Photo, Typical Conditions. Note thick/healthy vegetative cover.			
PHOTO BY: GEI CONSULTANTS, INC.			

PHOTOGRAPH NO: 10	DATE: May 13, 2025 2:03 PM	LATITUDE: 33.04392709	LONGITUDE: -94.8440283
DIRECTION: 286°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Upstream Slope. General Photo, Typical Conditions. Thick/healthy vegetation			
PHOTO BY: GEI CONSULTANTS, INC.			

Photographic Log

Project: Welsh Power Plant, Bottom Ash Storage Pond Inspection
Client: American Electric Power **GEI Project:** 2501323

PHOTOGRAPH NO: 11	DATE: May 13, 2025 2:09 PM	LATITUDE: 33.04533677	LONGITUDE: -94.84381825
DIRECTION: 94°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Drainage Feature. General Photo, Typical Conditions.			
PHOTO BY: GEI CONSULTANTS, INC.			

PHOTOGRAPH NO: 12	DATE: May 13, 2025 2:10 PM	LATITUDE: 33.04534183	LONGITUDE: -94.84382231
DIRECTION: 324°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Drainage Feature. Monitor silt buildup in checkdam. Consider cleaning out the silt built up in the checkdam and re-establish vegetation.			
PHOTO BY: GEI CONSULTANTS, INC.			

Photographic Log

Project: Welsh Power Plant, Bottom Ash Storage Pond Inspection
Client: American Electric Power **GEI Project:** 2501323

PHOTOGRAPH NO: 13	DATE: May 13, 2025 2:11 PM	LATITUDE: 33.04536002	LONGITUDE: -94.84379958
DIRECTION: 30°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Drainage Feature. Monitor Conditions. Consider cleaning out the silt built up in the checkdam and re-establish vegetation.			
PHOTO BY: GEI CONSULTANTS, INC.			

PHOTOGRAPH NO: 14	DATE: May 13, 2025 2:12 PM	LATITUDE: 33.04513171	LONGITUDE: -94.84355908
DIRECTION: 7°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Drainage Feature. Address major erosion at the downstream end of the spillway. Consider revisiting the hydraulics, stormwater design, riprap and thickness before making a repair.			
PHOTO BY: GEI CONSULTANTS, INC.			

Photographic Log

Project: Welsh Power Plant, Bottom Ash Storage Pond Inspection
Client: American Electric Power **GEI Project:** 2501323

PHOTOGRAPH NO: 15	DATE: May 13, 2025 2:13 PM	LATITUDE: 33.04522075	LONGITUDE: -94.84364288
DIRECTION: 229°	SITE LOCATION: CASON, TEXAS		
DESCRIPTION: Drainage Feature. Address Major Erosion, Consider cleaning out the silt built up in the checkdam and re-establish vegetation.			
PHOTO BY: GEI CONSULTANTS, INC.			