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**Ash Landfill**

# 2025 Annual CCR Landfill Inspection Report

Welsh Power Plant, Cason, Texas

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

**Submitted by:**
GEI Consultants, Inc.
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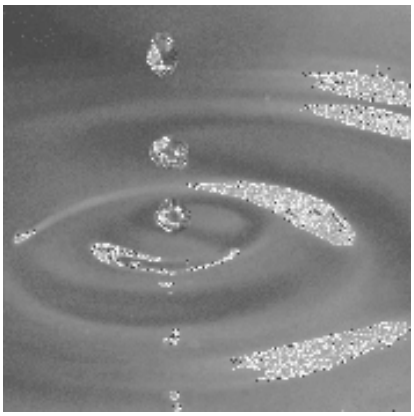
August 14, 2025
Project 2305686
AEP Document ID: GEVR-25-014



William Walton, PE (TX)
Senior Vice President

Megan Jehring, PE
Senior Engineer

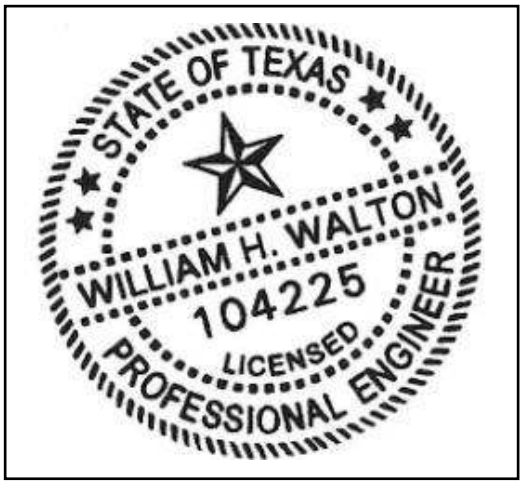
**2025 Annual Inspection Report**

**CCR Landfill**
**Welsh Power Plant**
**AEP Document ID: GEVR-25-014**

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 257.84(b).

# Table of Contents



JRP
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# 1. Introduction

GEI Consultants, Inc. (GEI) was retained by AEP to implement the 2025 Landfill Inspection Program at AEP facilities. As part of the program, GEI's Pedro Amaya, PE and Megan Jehring, PE performed the 2025 inspection for the Ash Landfill 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 William Walton, PE (TX) and 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, 2025. Weather conditions were sunny with high temperatures approaching 90 degrees Fahrenheit. According to a regional weather station, the surrounding area received about 0.7-inches of rain in the 7 days before 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. Photographs taken during the inspection are included in Appendix A – Photolog. The location of 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.

# 2. Description of Landfill

The AEP-SWEPCO Welsh Power Plant has a deed recorded Ash Landfill (also known as Fly Ash Storage Area or Phase 1) in Titus County, Texas. The Welsh Ash Landfill is on record with the Texas Commission on Environmental Quality (TCEQ) as an Industrial Solid Waste Facility (Registration Number 31086).

The Welsh Ash Landfill receives bottom ash, economizer ash, and fly ash from two 528 MW coal fired boilers. Typically, the Welsh Power Plant annually produces approximately 100,000 cubic yards of fly ash and 30,000 cubic yards of bottom and economizer ash.

The Welsh Ash Landfill is generally operated in two sections. The eastern two-thirds of the landfill is primarily composed of dredged bottom ash, economizer ash, and fly ash material sluiced to the ash landfill between approximately 1986 and 2000. Since 2000, this area has been the primary disposal area for the landfill and is currently active. An ash marketer is contracted to sell all marketable ash material for beneficial reuse to extend the life of the landfill. The ash marketer utilizes the remaining western one-third of the landfill as a temporary storage and process area.

Recently, the CCR materials generated from the closure of the Bottom Ash Storage Pond were placed and moisture conditioned in the eastern two-thirds of the Ash Landfill. This process will continue until the remaining CCR materials within the CCR ponds onsite are removed and disposed of at the Landfill.

# 3. Review of Available Information (257.84(b)(1)(i))

A review of available information regarding the status and condition of the Landfill which includes files available in the operating record, such as design and construction information, previous 7-day inspection reports, 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 adverse conditions.

# 4. Inspection (257.84(b)(1)(ii))

## 4.1 Changes in Geometry Since Last Inspection (257.84(b)(2)(i))

No modifications have been made to the geometry of the Landfill since the last annual inspection. The overall geometry of the landfill has remained unchanged, except for the change in topography of the active disposal, ash processing areas, and construction activities per the Landfill design.

## 4.2 Volume (257.84(b)(2)(ii))

In accordance with 257.84(b), the approximate volume of CCR added to or removed from the landfill for beneficial use between April 2024 and May 2025 was estimated by AEP as follows. The CCR Tracking Spreadsheet provided by Landfill staff indicates that approximately 425,432 cubic yards of ash by product was added to the landfill while approximately 12,666 cubic yards of ash by product (fly ash and flex base) were removed from the landfill. This estimate results in a net additional volume of approximately 412,766 cubic yards of CCR material in the Landfill.

From the 2024 CCR inspection report, the estimated volume was given as 1,004,273 cubic yards of the CCR material. Applying an estimated net addition of 412,766 cubic yards, the total volume of CCR in the Welsh Landfill is estimated to be 1,417,039 cubic yards.

$$1{,}004{,}273 + 412{,}766 = 1{,}417{,}039 \text{ cubic yards}$$

## 4.3 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 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.

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 a landfill has developed a problem that could impact the structural integrity of the landfill. There are four general categories of deficiencies. These four categories are described below:

1. Uncontrolled Seepage (Leachate Outbreak)

   Leachate outbreak is the uncontrolled release of leachate from the Landfill.

2. Displacement of the Embankment

   Displacement of the embankment is large scale movement of part of the landfill. 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.

## 4.4 Visual Inspection (257.84(b)(1)(ii))

A visual inspection of the Landfill was conducted to identify any sign of distress or malfunction of the landfill and appurtenant structures. Specific items inspected included structural elements of the landfill perimeter berms, temporary and final covers, drainage features, disposal cells and appurtenances such as leachate collection systems.

Overall, the facility is in satisfactory condition. The landfill is functioning as intended with no signs of potential structural weakness or conditions, which are disrupting the safe operation of the Ash Landfill.

1. The landfill side slopes are in good condition and well maintained where vegetation has been established as shown in Photo No. 1, 4, 17, and 19. Some of the interim landfill side slopes should be monitored for vegetation establishment and for minor erosion as shown in Photo No. 2, 3, 10, 11, 12, and 14. Some areas may need to be re-vegetated / regraded if the conditions become significant.

2. The landfill crest/active area and chimney drains are in good condition as shown in Photo No. 5. The landfill processing area is also in good condition as shown in Photo No. 6 and Photo No. 9.

3. The landfill drainage features are in good condition, with no observed blockages that could restrict flow as shown in Photo No. 13 and Photo No. 16. Some woody vegetation is becoming established in one landfill drainage let down as shown in Photo No. 18. The woody vegetation should be maintained / addressed to 12-inches or less before it becomes larger and more difficult to maintain.

## 4.5 Change that Effect Stability or Operation (257.84(b)(2)(iv))

Based on interviews with plant personnel and field observations the following changes to the Landfill were made since the last annual inspection:

- South stability dike extension construction.
- Structural dike construction on the north, east, and south sides to allow additional ash to be landfilled.
- Chimney drain construction that coincides with ash placement.

These actions are consistent with the design and operation of the landfill and do not negatively affect the current stability of the landfill and facilitate future re-configuration and operation.

# 5. Summary Findings

## 5.1 General Observations

In general, the landfill is functioning as intended and the active area, interim cover, final cover, material processing area, runoff control system, and leachate collection system piping network appeared to be functioning. Regular maintenance and inspections are being conducted as required.

## 5.2 General Maintenance Considerations

The following maintenance items were identified during the visual inspection.

- Continue to maintain vegetation to 12-inches or less on the landfill side slopes and within 25 feet of the toe of slope.
- Continue to monitor drainage features for blockages that could restrict flow.
- Continue to monitor leachate pump flow rates and maintain pumps and set on/off monitoring transducers as needed.

## 5.3 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 landfill side slope and address if it becomes significant.
- Item 3 – Monitor the minor erosion on the landfill side slope and address if it becomes significant.
- Item 11 – Monitor the minor erosion on the landfill side slope and address if it becomes significant.
- Item 12 – Monitor the minor erosion on the landfill side slope and address if it becomes significant.

## 5.4 Items to be Addressed

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

- Item 14 – Address major erosion on the landfill side slope.

- Item 15 – Maintain/Address vegetation to 12-inches or less near the landfill toe of slope.
- Item 18 – Maintain/Address vegetation to 12-inches or less in the letdown channel.

## 5.5 Deficiencies (257.84(b)(2)(iii))

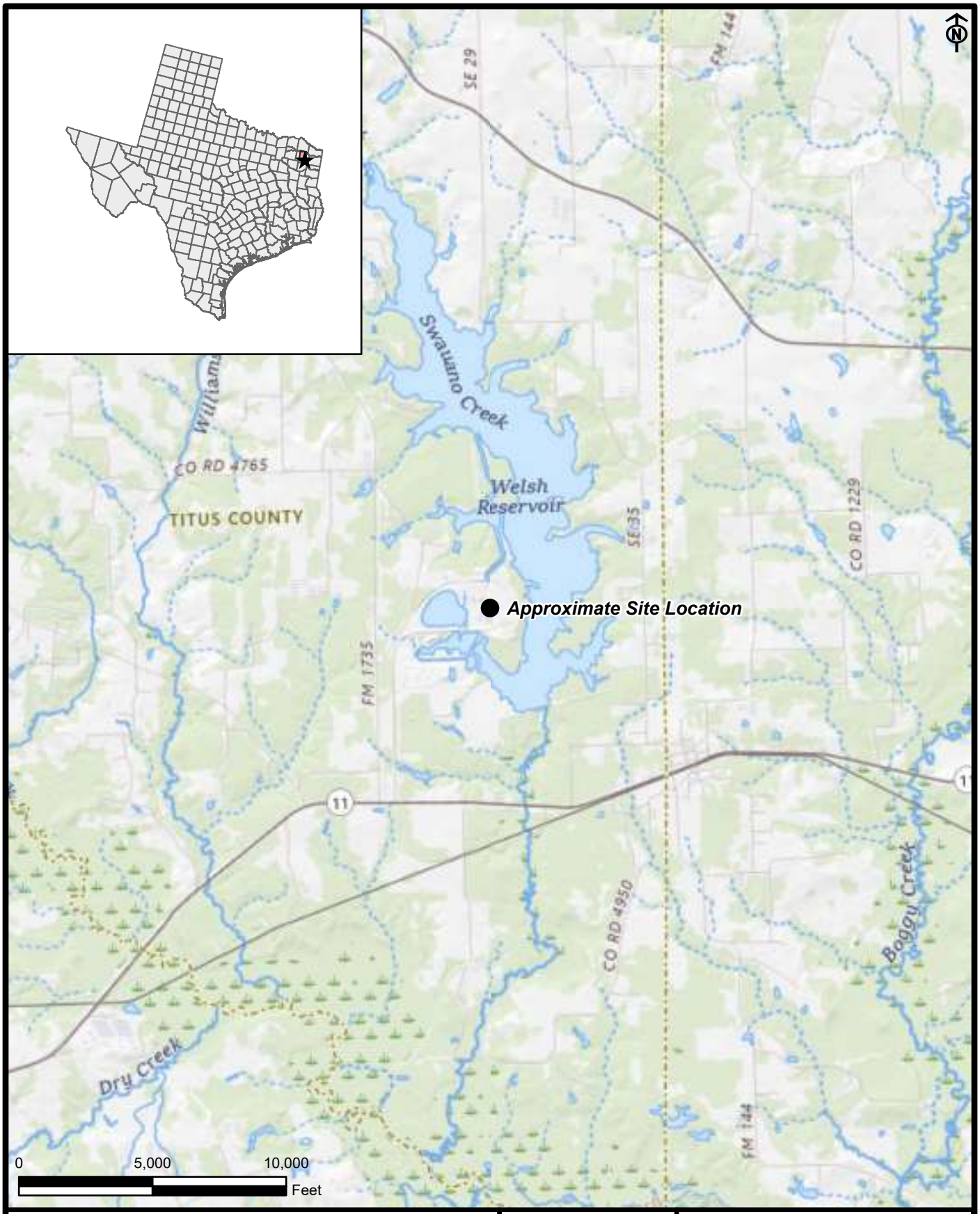
There were no signs of structural weakness or disruptive conditions that were observed at the time of the inspection that would require additional investigation or remedial action. There were no deficiencies noted during this inspection or during any of the periodic 7-day inspections.

A deficiency is defined as either:

1. Uncontrolled seepage (leachate outbreak),
2. Displacement of the embankment,
3. Blockage of control features, or
4. Erosion, more than minor maintenance.

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

# Figure 1 – Site Location Map




2025 Annual CCR Landfill Inspection Report
Welsh Plant Ash Landfill
Cason, Texas

American Electric Power Service Corporation
Columbus, OH 43215

GEI Consultants

Project 2501323

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


2025 Annual CCR Landfill Inspection Report
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FACILITY PLAN

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
- Background Monitoring Well
- Down Gradient Montioring Well

**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.

0 300 600 Feet

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SITE PLAN

May 2025 Fig. 3

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

## 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.

0 300 600 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.

0 300 600 Feet

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ITEMS TO BE ADDRESSED

May 2025 Fig. 5

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# Appendix A – Photolog

# Photographic Log

**Project:** Welsh Power Plant, CCR Landfill Inspection
**Client:** American Electric Power **GEI Project:** 2501323

| PHOTOGRAPH NO: 1 | DATE: May 13, 2025 2:21 PM | LATITUDE: 33.04716995 | LONGITUDE: -94.84321954 |
|---|---|---|---|
| DIRECTION: 202° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Landfill Sideslope, General Photo, Typical Conditions. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

| PHOTOGRAPH NO: 2 | DATE: May 13, 2025 2:30 PM | LATITUDE: 33.04727731 | LONGITUDE: -94.84523504 |
|---|---|---|---|
| DIRECTION: 259° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Landfill Sideslope. Monitor minor erosion, and address if it becomes significant. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

# Photographic Log

**Project:** Welsh Power Plant, CCR Landfill Inspection
**Client:** American Electric Power **GEI Project:** 2501323

| PHOTOGRAPH NO: 3 | DATE: May 13, 2025 2:39 PM | LATITUDE: 33.04718592 | LONGITUDE: -94.84675026 |
|---|---|---|---|
| DIRECTION: 224° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Landfill Sideslope. Monitor minor erosion, and address if it becomes significant. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

| PHOTOGRAPH NO: 4 | DATE: May 13, 2025 2:43 PM | LATITUDE: 33.0472222 | LONGITUDE: -94.84730616 |
|---|---|---|---|
| DIRECTION: 355° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Landfill Sideslope, General Photo, Typical Conditions. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

# Photographic Log

**Project:** Welsh Power Plant, CCR Landfill Inspection
**Client:** American Electric Power **GEI Project:** 2501323

| PHOTOGRAPH NO: 5 | DATE: May 13, 2025 2:45 PM | LATITUDE: 33.04740798 | LONGITUDE: -94.84698712 |
|---|---|---|---|
| DIRECTION: 317° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION:<br><br>Landfill Crest/ Active Area. General Photo, Typical Conditions.<br><br>Chimney drain in the center of the photograph. |  | | |
| PHOTO BY:<br><br>GEI CONSULTANTS, INC. | | | |

| PHOTOGRAPH NO: 6 | DATE: May 13, 2025 2:47 PM | LATITUDE: 33.04745 | LONGITUDE: -94.84750166 |
|---|---|---|---|
| DIRECTION: 221° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION:<br><br>Landfill Processing Area. General Photo, Typical Conditions. |  | | |
| PHOTO BY:<br><br>GEI CONSULTANTS, INC. | | | |

# Photographic Log

**Project:** Welsh Power Plant, CCR Landfill Inspection
**Client:** American Electric Power **GEI Project:** 2501323

| PHOTOGRAPH NO: 7 | DATE: May 13, 2025 2:51 PM | LATITUDE: 33.04808071 | LONGITUDE: -94.84769659 |
|---|---|---|---|
| DIRECTION: 235° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Drainage Feature, Contact Water Retention Basin. General Photo, Typical Conditions. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

| PHOTOGRAPH NO: 8 | DATE: May 13, 2025 2:56 PM | LATITUDE: 33.04700884 | LONGITUDE: -94.84943639 |
|---|---|---|---|
| DIRECTION: 263° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Material Processing Area. General Photo, Typical Conditions. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

# Photographic Log

**Project:** Welsh Power Plant, CCR Landfill Inspection
**Client:** American Electric Power **GEI Project:** 2501323

| PHOTOGRAPH NO: 9 | DATE: May 13, 2025 2:59 PM | LATITUDE: 33.04868126 | LONGITUDE: -94.84953107 |
|---|---|---|---|
| DIRECTION: 27° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Material Processing Area. General Photo, Typical Conditions. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

| PHOTOGRAPH NO: 10 | DATE: May 13, 2025 3:11 PM | LATITUDE: 33.04900653 | LONGITUDE: -94.84768009 |
|---|---|---|---|
| DIRECTION: 345° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Landfill Sideslope, Interim Cover Conditions. General Photo, Typical Conditions. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

# Photographic Log

**Project:** Welsh Power Plant, CCR Landfill Inspection
**Client:** American Electric Power **GEI Project:** 2501323

| PHOTOGRAPH NO: 11 | DATE: May 13, 2025 3:15 PM | LATITUDE: 33.04908295 | LONGITUDE: -94.84713742 |
|---|---|---|---|
| DIRECTION: 63° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Landfill Sideslope. Monitor minor erosion and address if it becomes significant. Erosion observed 0.5 to 1 ft deep where vegetation is sparse. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

| PHOTOGRAPH NO: 12 | DATE: May 13, 2025 3:21 PM | LATITUDE: 33.04897045 | LONGITUDE: -94.84610098 |
|---|---|---|---|
| DIRECTION: 96° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Landfill Sideslope. Monitor minor erosion and address if it becomes significant. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

# Photographic Log

**Project:** Welsh Power Plant, CCR Landfill Inspection
**Client:** American Electric Power **GEI Project:** 2501323

| PHOTOGRAPH NO: 13 | DATE: May 13, 2025 3:22 PM | LATITUDE: 33.04897238 | LONGITUDE: -94.84595128 |
|---|---|---|---|
| DIRECTION: 271° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Drainage Feature, Letdown Channel. General Photo, Typical Conditions. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

| PHOTOGRAPH NO: 14 | DATE: May 13, 2025 3:24 PM | LATITUDE: 33.04893775 | LONGITUDE: -94.84579791 |
|---|---|---|---|
| DIRECTION: 53° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Landfill Sideslope. Address major erosion. Erosion observed to be 2-3 ft in depth, 20 ft long. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

# Photographic Log

**Project:** Welsh Power Plant, CCR Landfill Inspection
**Client:** American Electric Power **GEI Project:** 2501323

| PHOTOGRAPH NO: 15 | DATE: May 13, 2025 3:30 PM | LATITUDE: 33.0489286 | LONGITUDE: -94.84337724 |
|---|---|---|---|
| DIRECTION: 200° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Landfill Toe of Slope. Address/maintain vegetation to 12-inches or less. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

| PHOTOGRAPH NO: 16 | DATE: May 13, 2025 3:32 PM | LATITUDE: 33.04897738 | LONGITUDE: -94.84332701 |
|---|---|---|---|
| DIRECTION: 306° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Drainage Feature, Letdown Channel. General Photo, Typical Conditions. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

# Photographic Log

**Project:** Welsh Power Plant, CCR Landfill Inspection
**Client:** American Electric Power **GEI Project:** 2501323

| PHOTOGRAPH NO: 17 | DATE: May 13, 2025 3:34 PM | LATITUDE: 33.04893969 | LONGITUDE: -94.84330146 |
|---|---|---|---|
| DIRECTION: 77° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Landfill Sideslope, General Photo, Typical Conditions. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

| PHOTOGRAPH NO: 18 | DATE: May 13, 2025 3:40 PM | LATITUDE: 33.04740684 | LONGITUDE: -94.84325835 |
|---|---|---|---|
| DIRECTION: 360° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Drainage Feature, Letdown Channel. Address/maintain vegetation to 12-inches or less. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |

# Photographic Log

**Project:** Welsh Power Plant, CCR Landfill Inspection
**Client:** American Electric Power **GEI Project:** 2501323

| PHOTOGRAPH NO: 19 | DATE: May 13, 2025 3:42 PM | LATITUDE: 33.04740099 | LONGITUDE: -94.84327536 |
|---|---|---|---|
| DIRECTION: 270° | SITE LOCATION: CASON, TEXAS | | |
| DESCRIPTION: Landfill Sideslope, General Photo, Typical Conditions. |  | | |
| PHOTO BY: GEI CONSULTANTS, INC. | | | |