



FGD Stackout Pad Area 2024 Annual Landfill Inspection Report

H.W. Pirkey Power Plant, Hallsville, Texas

Submitted to:

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

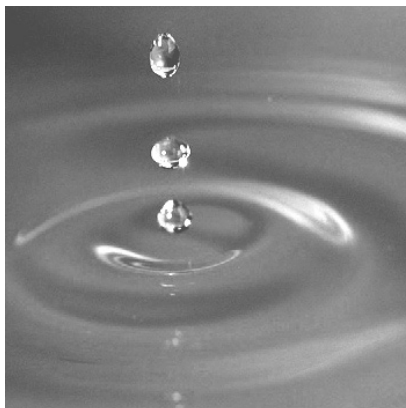
Submitted by:

GEI Consultants, Inc.
5646 Milton Street, Ste 500
Dallas, Texas 75206
469.868.7639

July 8, 2024

Project 2305686

AEP Document ID: GEVR-24-003



Noelle Gaspard, PE
Water Resources Practice Lead

Pedro Amaya, PE
Senior Consultant

2024 Annual Inspection Report



**FGD Stackout Pad Area
Pirkey Power Plant
AEP Document ID: GEVR-24-003**

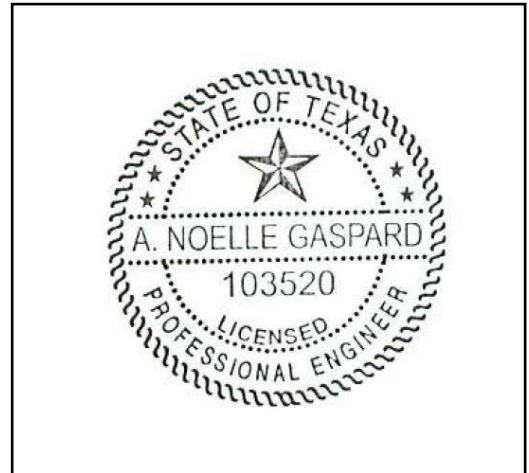
Noelle Gaspard

Signature

Noelle Gaspard, PE
Water Resources Practice Lead
GEI Consultants, Inc.

July 8, 2024

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).

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JRP

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1. Introduction

GEI Consultants, Inc. (GEI) was retained by AEP to implement the 2024 Inspection and Maintenance Program at AEP facilities and to provide the H.W. Pirkey Plant with an evaluation of the CCR FGD Stackout Pad to fulfill requirements of 30 TAC 352.841 (40 CFR 257.84). As part of the evaluation, GEI's Pedro Amaya, PE and Aria Fathi, PE performed the 2024 inspection for the CCR FGD Stackout Pad Area. Mr. W. Greg Carter PE of AEP's Regional Engineering participated in the inspection and provided contextual background. This report was prepared by 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 facility.

The inspection was performed on March 20, 2024. Weather conditions were mostly cloudy, visibility was good with temperatures approximately 70 degrees Fahrenheit. There was 1.25 inches of rainfall recorded in the seven days prior to the inspection and 0.00 inches of rainfall on the day of inspection.

2. Description of FGD Stackout Pad Area

The H.W. Pirkey Power Plant is in southern Harris County, approximately 6 miles southeast of Hallsville, Texas, as shown in Figure 1 – Site Location Map. The facility arrangement is provided on Figure 2 – Facility Plan. The FGD Stackout Pad Area is located west of the main plant and is a designated Coal Combustion Residuals (CCR) Unit that is subject to 40 CFR 257.84 Inspection Requirements for CCR Landfills. The FGD Stackout Pad Area is designed to temporarily hold a stockpile of CCR material until it is hauled to an on-site landfill for permanent disposal. A radial arm stacker was used to deposit the CCR material on the ground surface within the footprint of the FGD Stackout Pad Area. A stone berm with a geomembrane cover exists around the perimeter of the FGD Stackout Pad Area to contain any contact water. All contact water drains by gravity to the lower surge pond or auxiliary surge pond for circulation back to the plant. There is a truck wash station that is used for washing the tires of dump trucks that drive into the FGD Stackout Pad Area.

Photographs taken during the inspection are included in Appendix A - Photolog. Each photograph that was captured during the inspection was tagged as either a general site observation, recommended for monitoring, or recommended as an item to be addressed. Our inspection did not identify any items to be addressed in the FGD Stackout Pad Area. The site observations are presented on Figure 3 – Site Plan and Figure 4 – Items to be Monitored.

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

A review of available information regarding the status and condition of the FGD Stackout Pad Area which include files available in the operating record, such as design and construction information, previous periodic structural stability assessments, previous 7-day inspection reports, and previous annual inspections has been conducted. Based on the visual inspection and a review of the data available, there were no visual indications of actual or potential structural integrity 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 overall geometry of the FGD Stackout Pad Area since the previous annual inspection.

As part of the closure-by-removal the FGD Stackout Pad Area was excavated to remove all the FGD materials and an additional 1-foot of native soil subgrade. This operation was completed in November 2023. Closure of the FGD Stackout Pad Area is pending groundwater monitoring results.

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

At the time of the inspection, all the FGD materials had been removed from the Stackout Pad Area and disposed at the onsite landfill.

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:

- Uncontrolled Seepage (Leachate Outbreak)
 - Leachate outbreak is the uncontrolled release of leachate from the Landfill.
- 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.
- 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.

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

A visual inspection of the FGD Stackout Pad Area was conducted to identify any signs of integrity distress of the FGD Stackout Pad Area and associated structures. Specific items inspected included all structural elements of the perimeter berms, and drainage patterns.

Overall, the facility is in good condition. The FGD Stackout Pad Area is being closed by removing all CCR and an additional one foot of the subgrade. At the time of the inspection the exposed Stackout Pad Area subgrade had small patches of vegetation and some soft/wet areas where silt had accumulated. Inspection photos are included in Attachment A - Photolog.

1. In general, the gravel perimeter berm with a geomembrane cover appeared to be in good condition.
2. Surface water runoff from along the eastern perimeter berm is conveyed underneath an access road via a steel pipe culvert. Storm water from this culvert outlets onto a concrete slab with curb walls underneath the supports for the conveyor belt that previously supplied the radial arm stacker. A section of these curb wall has been notched out to allow surface water runoff to drain to the drainage ditch that feeds the Auxiliary Surge Pond.
3. Small erosion rills were observed where the FGD Stackout Pad surface area drains into the Auxiliary Surge Pond. This area should be graded to maintain positive drainage and to prevent excessive erosion.
4. The FGD Stackout Pad Area was closed-by-removal by removing all the CCR materials and over excavating an additional 1-foot of native soil subgrade. Closure of the FGD Stackout Pad Area is pending groundwater monitoring results.

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

Based on visual inspection and interviews with site personnel there were no changes to the Stackout Pad Area since that would affect the stability of the facility.

5. Summary Findings

5.1 General Notes and Maintenance Considerations

The following general maintenance items are provided for consideration to maintain the FGD Stackout Pad Area.

1. In general, the closed FGD Stackout Pad Area is in good condition. The Plant is performing regular maintenance and inspections as required.
2. The FGD stackout Pad Area is no longer in service as a result of the Pirkey Plant decommissioning. CCR and 1-foot of subgrade material was removed in accordance with the FGD Stack-out Area Closure Plan. The FGD Stackout Pad Area closure is pending groundwater monitoring results.
3. Continue with the regular maintenance of the area with repair of significant erosion rills that have formed from the FGD Stackout Pad Area to the Auxiliary Surge Pond.
4. Consider re-seeding/mulching/fertilizing the area to promote grass cover and minimized erosion and sediment transport.

5.2 Items to be Monitored

- Item 1 – Monitor the FGD Stackout Pad Area Ditch for wet conditions.

5.3 Items to be Addressed

- No items to be addressed.

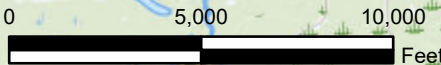
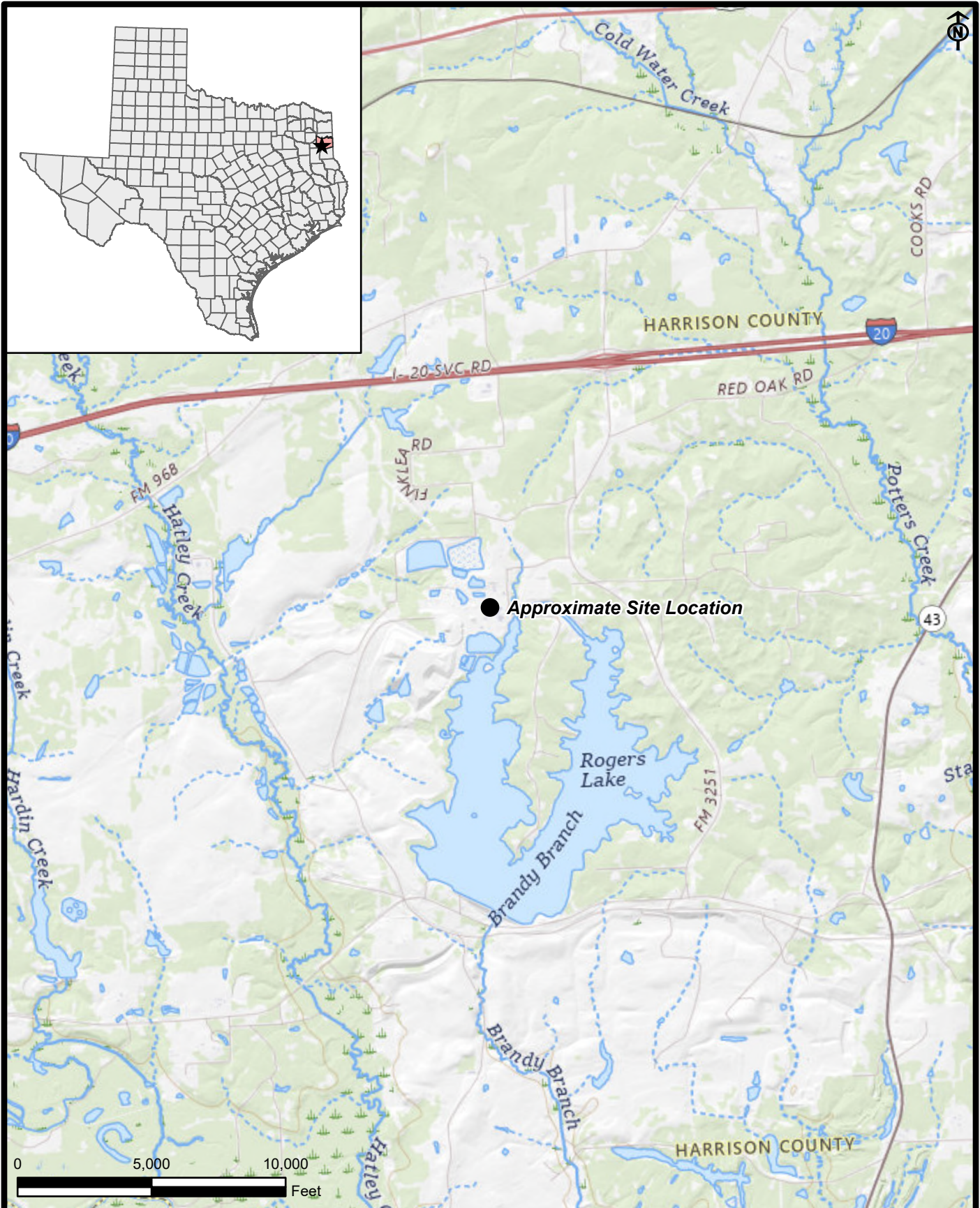
5.4 Deficiencies (257.84(b)(2)(iii))

There were no visual signs of structural integrity issues or disruptive conditions that were present 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 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 contact AEP-Geotechnical Engineering Shah Baig (Phone: 614-716-2241, email: sbaig@aep.com) or Bryan Brunton (Phone: 614-477-2659, email: bwbrunton@aep.com)

Figure 1 – Site Location Map




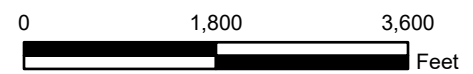
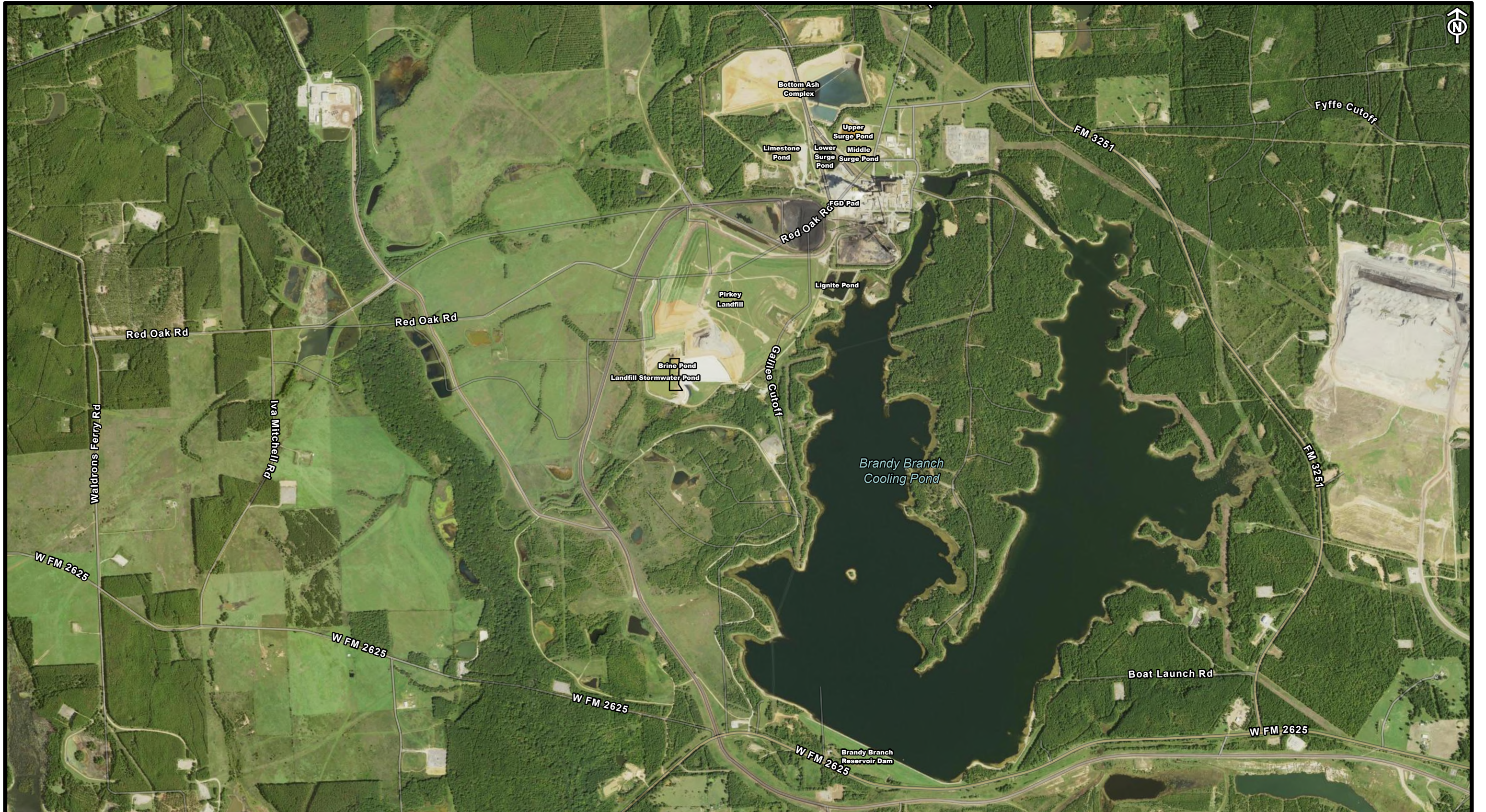
<p>2024 FGD Stackout Pad Area Inspection Report Pirkey Power Plant Hallsville, Texas</p>	 <p>GEI Consultants</p>	<p>SITE LOCATION MAP</p>
<p>American Electric Power Service Corporation Columbus, OH 43215</p>	<p>Project 2305686</p>	<p>May 2024 Fig. 1</p>

Figure 2 – Facility Plan



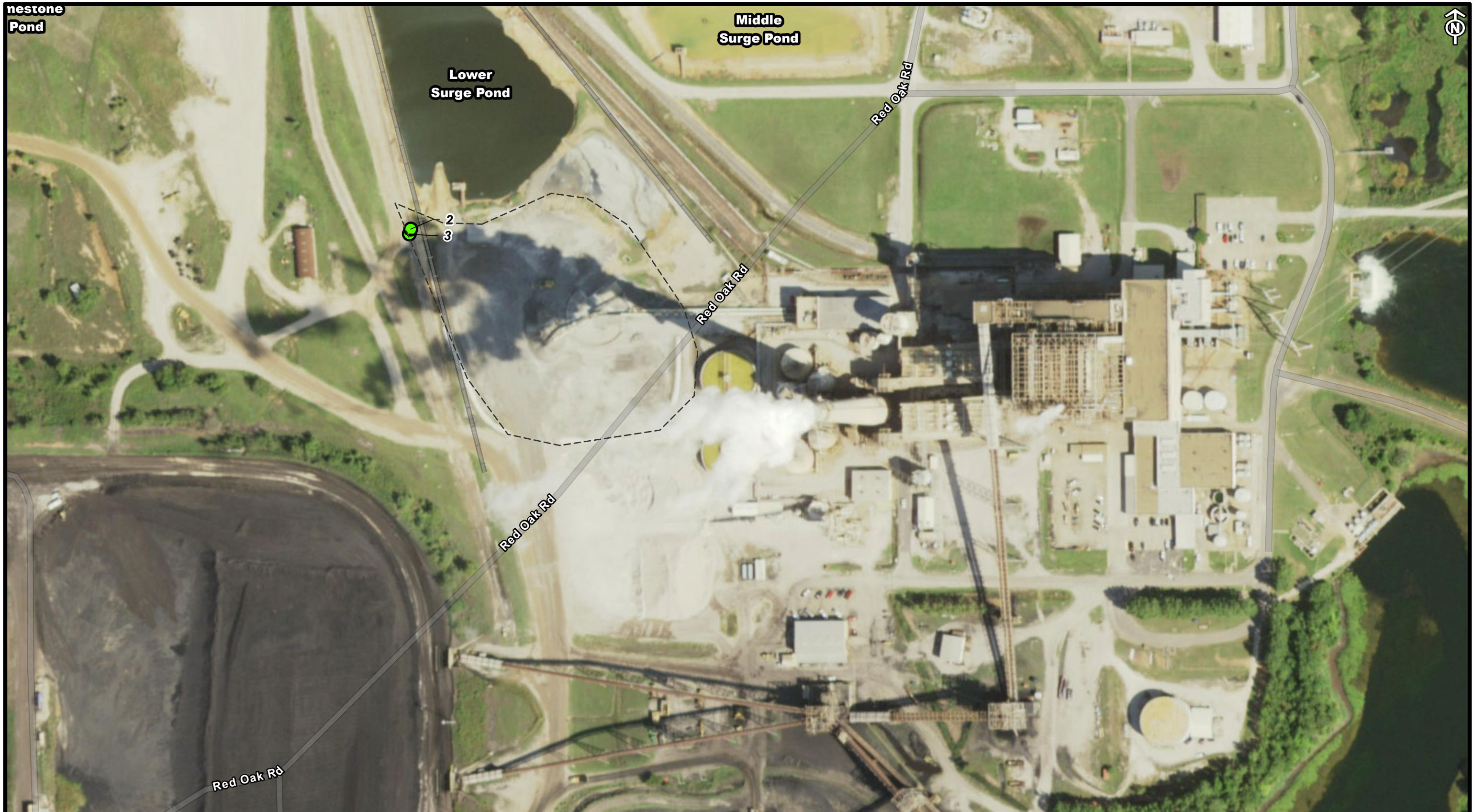
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 Hallsville, Texas
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 Columbus, OH 43215





FACILITY PLAN
 May 2024
 Fig. 2

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Figure 3 – Site Plan

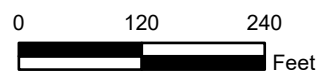


LEGEND:

-  General Observation
-  Approximate FGD Stackout Pad Area

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.



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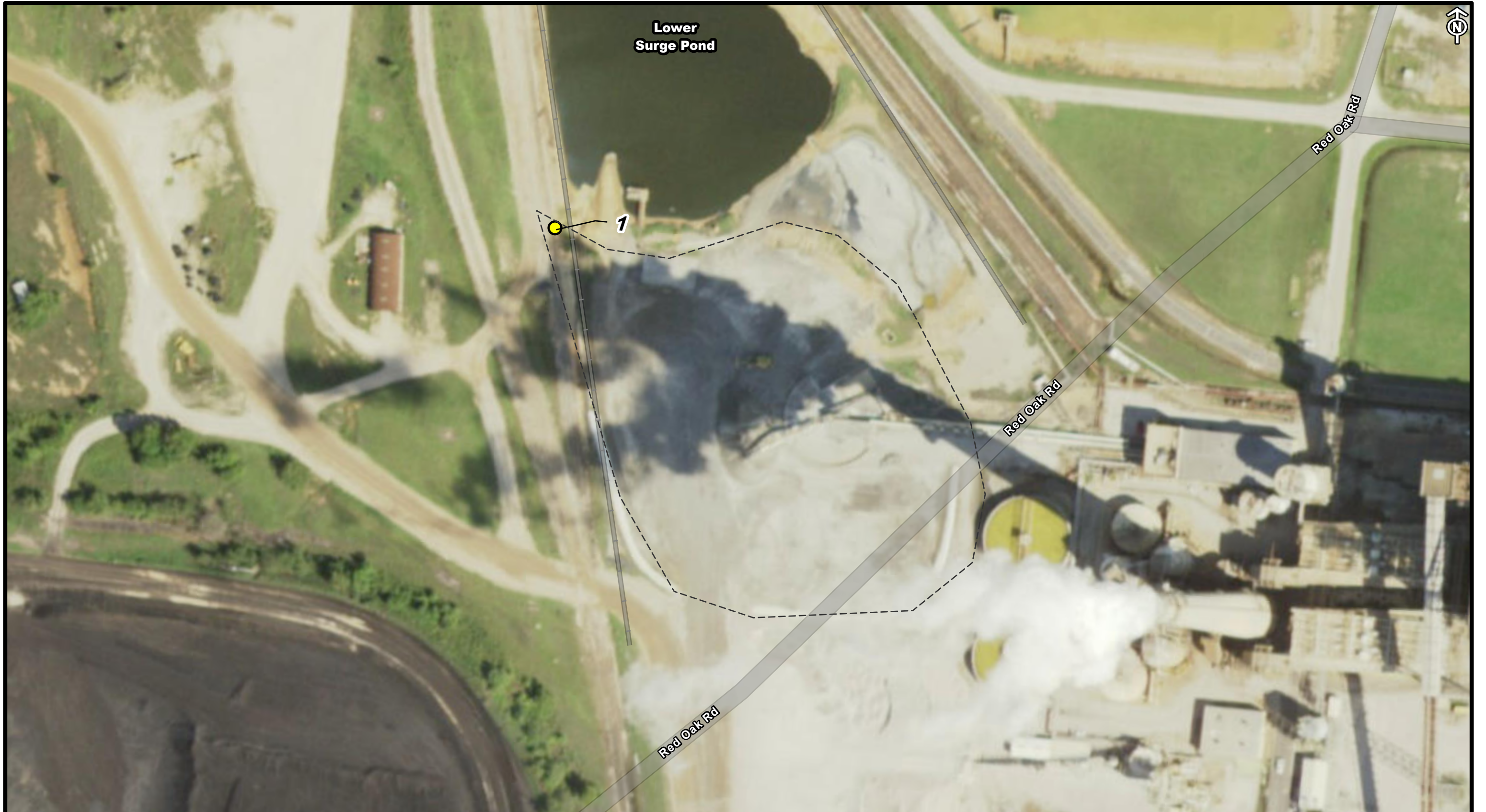
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SITE PLAN

May 2024

Fig. 3

Figure 4 – Items to be Monitored

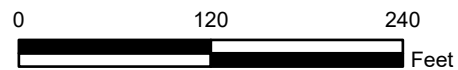


LEGEND:

-  Monitor
-  Approximate FGD Stackout Pad Area

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.



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ITEMS TO BE MONITORED

July 2024

Fig. 4



Appendix A - Photolog

Photographic Log



Project: Pirkey Power Plant, FGD Pad Inspection
Client: American Electric Power

GEI Project: 2305686


PHOTOGRAPH NO: 1	DATE: March 20, 2024 3:24 PM	LATITUDE: 32.46225774	LONGITUDE: -94.48789602
SITE LOCATION: HALLSVILLE, TEXAS			
DESCRIPTION: Toe Ditch of Stackout Area, FGD Pad. Looking Northwest. Wet Area, Monitor Conditions.			
PHOTO BY: GEI CONSULTANTS, INC.			
PHOTOGRAPH NO: 2	DATE: March 20, 2024 3:21 PM	LATITUDE: 32.4621712975198	LONGITUDE: -94.4878871356651
SITE LOCATION: HALLSVILLE, TEXAS			
DESCRIPTION: Stackout Area, FGD Pad. Looking East. General Photo, Typical Conditions.			
PHOTO BY: GEI CONSULTANTS, INC.			

Photographic Log



Project: Pirkey Power Plant, FGD Pad Inspection
Client: American Electric Power

GEI Project: 2305686

PHOTOGRAPH NO: 3	DATE: March 20, 2024 3:20 PM	LATITUDE: 32.46214471	LONGITUDE: -94.48789725
SITE LOCATION: HALLSVILLE, TEXAS			
DESCRIPTION: Stackout Pad. Looking Southeast. General Photo, Typical Conditions.	 A wide-angle photograph showing a large, flat, reddish-brown dirt area in the foreground, which is a stackout pad. In the background, there is an industrial facility with various structures, including a tall cylindrical tower, scaffolding, and conveyor belts. The sky is overcast and grey.		
PHOTO BY: GEI CONSULTANTS, INC.			