HALEY ALDRICH

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**REPORT ON**

# PERIODIC STRUCTURAL STABILITY ASSESSMENT
# POND 003
# NEW MADRID POWER PLANT
# MARSTON, MISSOURI

by Haley & Aldrich, Inc.
Cleveland, Ohio

for Associated Electric Cooperative, Inc.
Marston, Missouri

File No. 0216303
October 2026



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October 14, 2026
File No. 0216303

Associated Electric Cooperative, Inc.
New Madrid Power Plant
P.O. Box 156
Marston, Missouri 63866

Attention: Mr. Blake Pinkerton
Manager, Environmental

Subject: Periodic Structural Stability Assessment
Pond 003
New Madrid Power Plant
Marston, Missouri

Dear Mr. Pinkerton:

Haley & Aldrich, Inc. (Haley & Aldrich) prepared the enclosed report on the Periodic Structural Stability Assessment (Assessment) for the Associated Electric Cooperative, Inc. (AECI) coal combustion residuals (CCR) surface impoundment referred to as Pond 003 located at the New Madrid Power Plant (NMPP) near Marston, Missouri.

Haley & Aldrich conducted our site visit and assessment of Pond 003 on September 28, 2026. This work was performed on behalf of AECI in accordance with the U.S. Environmental Protection Agency's Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, Title 40 Code of Federal Regulations (CFR) Part 257 (CCR Rule), in particular 40 CFR §257.73(d).

The scope of work consisted of: 1) obtaining and reviewing readily available reports, investigations, plans, and data pertaining to the Pond 003 surface impoundment; 2) performing a visual assessment of Pond 003; 3) evaluating whether the design, construction, operations, and maintenance of Pond 003 are consistent with recognized and generally accepted good engineering practices for the maximum volume of CCR material and CCR wastewater that can be impounded therein; and 4) preparing and submitting this report presenting the results of our assessment, including recommendations and remedial actions.

Thank you for inviting us to complete this assessment and please feel free to contact us if you wish to discuss the contents of the report.

Sincerely yours,
**HALEY & ALDRICH, INC.**



Steven F. Putrich, P.E.
Principal Consultant

Enclosures

# Executive Summary

Haley & Aldrich, Inc. (Haley & Aldrich) prepared this report summarizing the results of the 2026 Periodic Structural Stability Assessment for the Associated Electric Cooperative, Inc. (AECI)-owned and operated Pond 003 (Unit), including our site evaluation of the Unit. Pond 003 is an existing coal combustion residuals (CCR) surface impoundment located at the New Madrid Power Plant (NMPP) near Marston, Missouri.

Our assessment was conducted in accordance with the Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, Title 40 Code of Federal Regulations (CFR) Part 257, Subpart D (CCR Rule), effective October 19, 2015, including subsequent revisions, specifically related to 40 CFR §257.73(d). The Initial Structural Stability Assessment for Pond 003 was completed in October 2016 and the first periodic assessment was completed in October 2021.

The Unit is located between the U.S. Army Corps of Engineers (USACE) Mississippi River Levee and the Mississippi River. The dike consists of an earthen embankment with a crest length of approximately 9,300 feet around the entire impoundment. The northern portion of the impoundment is incised, and the western portion includes the USACE Mississippi River Levee. Therefore, the constructed dike is considered to be the approximately 5,000 feet of the eastern side of the Unit and portions of the northern and southern sides. The dike embankment is approximately 10 to 20 feet in height according to records and survey information and is constructed of locally sourced silty clays. The impoundment has a surface area of approximately 110 acres.

Pond 003 was constructed to store and manage CCR material, coal pile runoff, and plant process water. Pond 003 ceased receipt of CCR, process water, and other waste streams in 2023. Pond 003 is currently undergoing closure construction activities; however, the impoundment remains subject to the applicable requirements of 40 CFR §257.73(d) until closure is completed. Pond 003 is currently maintained as a dry basin during the closure construction. The only source to the impoundment is direct precipitation. Discharge from the Utility Waste Landfill via an overflow pump leads directly to the outlet structure. This flow does not contribute to the water volume in the CCR impoundment.

## IMPOUNDMENT ASSESSMENT AND RECOMMENDATIONS

Based on conditions observed during Haley & Aldrich's visual evaluation of Pond 003, discussions with site personnel, and a review of available documents, no deficiencies were observed. However, the following areas for monitoring were noted:

- vegetation exceeding 6 inches within the riprap on the downstream slope;[1]
- vegetation exceeding 6 inches within the riprap on the upstream slope;[1] and
- mature trees in the downstream area of the dike.

[1] Note that the U.S. Court of Appeals for the D.C. Circuit vacated the 6-inch standard in 2016. The U.S. Environmental Protection Agency (EPA) has not finalized replacement requirements. However, the height of vegetation must be maintained to a height that does not obscure the slope during inspections or interfere with riprap performance.

Haley & Aldrich recommends the following actions:

- Monitor vegetation within the riprap and apply herbicide or implement other removal measures as necessary.
- Monitor the mature trees downstream of Pond 003 for signs of decay and impact to the dike during the weekly and monthly inspections.

## STRUCTURAL STABILITY ASSESSMENT

In accordance with 40 CFR §257.73(d), the owner or operator of a CCR surface impoundment must conduct initial and periodic structural stability assessments to determine whether the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering practices for the maximum volume of CCR and CCR wastewater that can be impounded therein.

Haley & Aldrich reviewed pertinent information provided to us and inspected Pond 003 as described above. Based on our review of available information and observations during our evaluation, we have concluded the following in accordance with 40 CFR §257.73(d):

1. 40 CFR §257.73(d)(1)(i) – Stable Foundations and Abutments:

   Based on the review of available subsurface information, as-built records, survey data, and observations during the September 28, 2026 evaluation, the impoundment was judged to have stable foundations and abutments.

2. 40 CFR §257.73(d)(1)(ii) – Adequate Slope Protection:

   Based on observations during the September 28, 2026 site evaluation, the top half of the upstream slope was covered by grassy vegetation and appeared to be regularly mowed. The lower portion of the upstream slope was protected with riprap that was installed for historical operating conditions. The downstream slope of the eastern and southern portion of the dike was graded to an approximate slope of 3 horizontal to 1 vertical (3H:1V) or flatter towards the north. Slope was covered in healthy grass cover and appeared to be regularly mowed. The bottom half of the downstream slope consisted of riprap. The southern portion of the impoundment shares a dike with an adjacent impoundment which was covered by grassy vegetation that appeared to be regularly mowed.

3. 40 CFR §257.73(d)(1)(iii) – Dikes Mechanically Compacted:

   Although records on the construction of the Pond 003 are not available, test borings through the embankment and laboratory testing performed by Haley & Aldrich and others indicate that the berm fill was mechanically compacted to a density sufficient to withstand the range of applicable loading conditions in the Unit.

4. 40 CFR §257.73(d)(1)(iv) – Height of Vegetation:

   At the time of the September 28, 2026 impoundment evaluation, portions of the eastern downstream slopes had taller vegetation, primarily observed within the riprap of the bottom half of

the eastern embankment. On the upstream slopes, vegetation was higher as well, some as high as 36 inches. Vegetation on the upstream slope had previously been treated with herbicide.

5. 40 CFR §257.73(d)(1)(v)(A) – Spillway Construction and Flow Conditions:

   Pond 003 historically discharged through a concrete decant structure located at the southeastern end of the impoundment. Being a concrete structure, the structure is non-erodible, designed to carry the expected sustained flows, and appears to be in good condition. There is no emergency spillway. Since Pond 003 stopped receiving material in 2023, only limited discharge occurs associated with precipitation.

6. 40 CFR §257.73(d)(1)(v)(B) – Spillway Capacity:

   The 2021 Periodic Hazard Potential Classification Assessment classified Pond 003 as having significant hazard potential. Accordingly, the 1,000-year flood event was modeled and the spillway capacity evaluated in the Inflow Design Flood Control System Plan in accordance with 40 CFR §257.82 – Hydrologic and Hydraulic Capacity Requirements for CCR Surface Impoundments. The Periodic Hazard Potential Classification Assessment and Inflow Design Flood Control System Plan are being updated under separate cover and are outside the scope of this report.

7. 40 CFR §257.73(d)(1)(vi) – Hydraulic Structures Underlying or Passing Through Embankment:

   Only limited portions of the intake were visible during the September 28, 2026 evaluation. The outlet structure appeared to be in good condition. The visible downstream portion of the discharge pipe was in fair condition, with localized damage that did not appear to impair outlet function or warrant any immediate repair.

   The accessible portions of the outlet structure and discharge pipe appeared intact, with no visible joint separations, cracking, leakage, deformation or displacement, and the adjacent ground showed no visible settlement or evidence of loss of support. AECI reported that the system has been operating as intended.

   These observations support the structural integrity of the accessible portions of the outlet structure and discharge pipe; however, the evaluation did not directly verify the condition of buried pipe sections, concealed bedding, or internal sediment and debris accumulation.

8. 40 CFR §257.73(d)(1)(vii) – Inundation of Downstream Slopes:

   The impoundment is located adjacent to the Mississippi River and has the potential to be inundated under higher than normal river elevations. River stage fluctuations in this reach of the Mississippi River generally occur gradually over extended periods, allowing pore water pressures within the embankment to equilibrate with changing boundary conditions. As a result, conditions that would typically warrant evaluation of rapid drawdown stability are not anticipated. Therefore, a rapid drawdown analysis was not performed as part of this assessment, and inundation associated with elevated river levels was not identified as a potential concern with respect to embankment stability.

9. 40 CFR §257.73(d)(2) – Deficiencies and Recommendations:

   The Periodic Structural Stability Assessment did not identify any structural stability deficiencies for Pond 003.

## PREFACE

The assessment of the general condition of Pond 003 is based upon available data and visual evaluations. Detailed investigation and analyses involving topographic mapping, subsurface investigations, testing, and detailed computational evaluations are beyond the scope of this report.

The described condition of Pond 003 is based on observations of field conditions during the visual evaluation and other data available to the inspection team. It is important to note that the condition of the structure depends on numerous and constantly changing internal and external conditions and is evolutionary in nature. It would be incorrect to assume that the present condition of the structure will continue to represent the condition of the structure in the future.

## CERTIFICATION

I certify that the Periodic Structural Stability Assessment for AECI's Pond 003 at the New Madrid Power Plant was conducted in accordance with 40 CFR §257.73(d) of the CCR Rule.

Signed: _____
Qualified Professional Engineer

Printed Name: Steven F. Putrich
Missouri License No.: 2014035813
Title: Principal Consultant
Company: Haley & Aldrich, Inc.

Professional Engineer's Seal:




Steven F. Putrich

Digitally signed by Steven F. Putrich
Date: 2026.10.14 15:23:58 -04'00'

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# 1. Description of Project

## 1.1 GENERAL

### 1.1.1 Authority

On behalf of Associated Electric Cooperative, Inc. (AECI), Haley & Aldrich, Inc. (Haley & Aldrich) completed this Periodic Structural Stability Assessment (Assessment) for the AECI Pond 003 (Unit) coal combustion residuals (CCR) surface impoundment located at New Madrid Power Plant (NMPP) near Marston, Missouri. This work was completed in accordance with the U.S. Environmental Protection Agency's (EPA's) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, Title 40 Code of Federal Regulations (CFR) Part 257 (CCR Rule), specifically 40 CFR §257.73(d).

This report summarizes the results of Haley & Aldrich's 2026 Assessment for the Pond 003 and its dikes, including our September 28, 2026 visual evaluation of the Unit.

### 1.1.2 Purpose of Work

This Assessment documents whether the design, construction, operations, and maintenance of Pond 003 are consistent with recognized and generally accepted good engineering practices for the maximum volume of CCR material and CCR wastewater that can be impounded therein. The visual assessment is intended to identify signs of distress or malfunction of the existing CCR surface impoundment, should they exist. This report summarizes those findings and notes conditions observed that are disrupting or have the potential to disrupt the operation and safety of the surface impoundment. Photographs taken during the assessment are included in **Appendix A** and a copy of the Inspection Checklist is included in **Appendix B**.

The investigation is divided into four parts: 1) obtain and review readily available reports, investigations, plans, and data pertaining to the Pond 003 surface impoundment; 2) perform a visual evaluation of the surface impoundment dike; 3) evaluate whether the design, construction, operations, and maintenance of the impoundment and dike are consistent with generally accepted good engineering practices; and 4) prepare and submit this report presenting the results of our evaluation, including recommendations and remedial actions.

### 1.1.3 Definitions

To provide the reader with a better understanding of the report, definitions of commonly used terms associated with dams and dikes are provided in **Appendix C**. Many of these terms may be included in this report. The terms are presented under common categories associated with dams and surface impoundments which include: 1) orientation; 2) dam or dike components; 3) hazard potential classification; and 4) miscellaneous.

## 1.2 DESCRIPTION OF PROJECT

### 1.2.1 Location

Pond 003, also historically referred to as Slag Pond 1, Ash Pond 1, and the Unlined Ash Pond, is located at the NMPP near Marston, Missouri. The Site is accessible from the west via State Highway EE (off U.S. Route 55) and from the north and south from Levee Road. Pond 003 is located adjacent to the power plant, which is located at latitude 36° 30.4' North and longitude 89° 33.5' West, as shown on the attached Project Location Map in **Figure 1.** The impoundments can be accessed by vehicles from earthen access roads from the NMPP. Access to the site and dikes is restricted by full-time security and barriers and fences at the plant.

### 1.2.2 Owner/Operator

Pond 003 is owned and maintained by Associated Electric Cooperative, Inc.

| Impoundment Owner/Caretaker | |
|---|---|
| Name | AECI<br>New Madrid Power Plant |
| Mailing Address | 41 Saint Jude Industrial |
| Town, State, Zip | Marston, Missouri 63866 |
| Contact | Dennis Cox |
| Title | Supervisor, Coal Plant Engineering |
| Email Address | dcox@aeci.org |
| Emergency Phone | 911 |

### 1.2.3 Purpose of Pond 003

NMPP is a two-unit coal-fired power plant, with a maximum generating capacity of approximately 1,200 megawatts. Pond 003 was constructed in 1972 to store and manage CCR material, coal pile runoff, and plant process water. Pond 003 ceased receipt of CCR material, process water, and other wastestreams in 2023 and is currently undergoing closure construction activities; however, the impoundment remains subject to the applicable requirements of 40 CFR §257.73(d) until closure is completed. Pond 003 is currently maintained as a dry basin during the closure construction. The only source of inflow to the impoundment is direct precipitation. Discharge from the Utility Waste Landfill (UWL) via an overflow pump leads directly to the outlet structure and does not contribute to the water volume in the CCR impoundment.

### 1.2.4 Description of the Impoundment and Appurtenances

Pond 003 is located southeast of the NMPP between the U.S. Army Corps of Engineers (USACE) Mississippi River Levee and the Mississippi River, as shown on **Figure 2**. The dike consists of an earthen embankment with a crest length of approximately 9,300 feet around the entire impoundment. The northern portion of the impoundment is incised, and the western portion includes the USACE Mississippi River Levee. Therefore, the constructed dike is considered to be approximately 5,000 feet of the eastern side of the Unit and portions of the northern and southern sides. The dike embankment is approximately 10 to 20 feet in height according to records and survey information and is constructed of locally sourced silty clays.

The impoundment has a surface area of approximately 110 acres and is currently maintained as a dry basin during the closure construction. The observed water level elevation was at approximately elevation (El.) 285 feet North American Vertical Datum of 1988 (NAVD88), approximately 1 foot of water within the Clear Pond area, during the September 28, 2026 site assessment. A gravel access road is present on the dike crest. The upstream and downstream slopes are vegetated and the upstream shoreline is protected with riprap. The bottom half of the eastern embankment downstream slope is also covered with riprap. Pond 003 embankments were designed with 3 horizontal to 1 vertical (3H:1V) upstream and downstream slopes. Photographs taken during the assessment are included in **Appendix A** show these general conditions. A key to the photo locations is included as **Figure 3**.

Pond 003 was constructed to store and manage CCR material, coal pile runoff, and plant process water. Pond 003 ceased receipt of CCR material, process water, and other waste streams in 2023. Pond 003 is currently undergoing closure construction activities. Pond 003 is currently maintained as a dry basin during the closure construction.

Since preparation of the 2021 Periodic Structural Stability Assessment, subsurface borings have been completed within Pond 003 to characterize the extent and thickness of CCR materials and better define the underlying basin geometry. The boring data were evaluated in conjunction with the impoundment configuration shown on the original design drawings to approximate the bottom-of-pond surface, resulting in a refined estimate of the available storage volume. The dike has a structural height of approximately 20 feet. See **Figure 4** for estimates of the remaining capacity and storage volumes in Pond 003.

### 1.2.5 Standard Operational Procedures

The impoundment is operated and maintained by NMPP personnel. Maintenance of the dike includes regular mowing of the upstream and downstream slopes and removing vegetation from the riprap on upstream slopes. Weekly inspections are also completed.

NMPP personnel monitor and inspect the dike according to a series of informal unwritten and formal written protocols. These protocols include:

- observation of the impoundment embankments during normal operation;
- inspecting the slope protection, including the vegetation and riprap;
- monitoring precipitation-related ponding and drainage conditions; and
- historical semiannual inspection of the impoundments by NMPP personnel (now completed weekly).

### 1.2.6 Hazard Potential Classification

The 2021 Periodic Hazard Potential Classification Assessment classified Pond 003 as having significant hazard potential. AECI is concurrently completing a periodic update to the Hazard Potential Classification prepared in accordance with 40 CFR §257.73(a)(2) and other applicable CCR Rule requirements that will be available on AECI's CCR compliance website. The periodic hazard potential classification assessment is outside the scope of this report and will be provided under separate cover.

## 1.3 PERTINENT ENGINEERING DATA

### 1.3.1 Drainage Area

Based on the original design documents and observations from the September 28, 2026 site visit, Pond 003 does not receive drainage from the surrounding areas, only the immediate access roads on top of the dike and direct precipitation.

### 1.3.2 Reservoir

Since preparation of the 2021 Structural Stability Assessment, subsurface borings have been completed within Pond 003 to characterize the extent and thickness of CCR materials and better define the underlying basin geometry. The boring data were evaluated in conjunction with the impoundment configuration shown on the original design drawings to approximate the bottom-of-pond surface, resulting in a refined estimate of the available storage volume. The dam has a structural height of approximately 20 feet. See **Figure 4** for estimates of the remaining capacity and storage volumes in Pond 003.

In general, the reservoir contains varying amounts of fly ash, boiler slag, and coal fines. At some locations, the CCR materials have been staged to levels above the exterior dikes.

The impoundment is located outside (on the river side) of the Mississippi River levee system. The elevation of the embankment crest of Pond 003 generally matches the elevation of the Mississippi River Levee (approximately El. 308). **Table 1** details the total storage capacity and the remaining storage capacity at the time of the site assessment. The impounded CCR volume was approximated by comparing the most recent survey to the approximated pond bottom surface described in Section 1.2.4. The remaining storage capacity was approximated by comparing the most recent survey to the elevation of the crest low point (approximate El. 307). The total storage capacity was then estimated by adding the impounded CCR volume and the remaining storage capacity.

**Table 1: Storage Capacity Volumes**

| Impounded CCR Volume (acre-feet) | Existing Remaining Storage Capacity Volume (acre-feet) | Total Storage Capacity Volume (acre-feet) |
|---|---|---|
| 2,205 | 95 | 2,300 |

The impounded water volume during the 2026 assessment was approximated to be 2 acre-feet. As described on **Figure 4**, this volume was determined by comparing the elevation of the pond during the 2026 assessment (approximately El. 285) to the most recent survey.

### 1.3.3 Discharges from Pond 003

CCR material, coal pile runoff, and plant process water were historically discharged into Pond 003 via three pipes located at the northern end of the impoundment. The discharged process water and CCR material flowed through a channel in the impounded CCR. Decanted discharges from the impoundment flowed to a concrete decant structure with concrete stop logs. A discharge pipe directed water through the dike and into a discharge channel that flows to the Mississippi River. Pond 003 ceased receipt of CCR material, process water, and other wastestreams in 2023, and the discharge of CCR material, coal pile

runoff, and plant process water through this process was discontinued. Pond 003 is currently maintained as a dry basin during the closure construction, and the only source of inflow to the impoundment is direct precipitation. Discharge from the UWL via an overflow pump leads directly to the outlet structure and does not contribute to the water volume in the CCR impoundment.

### 1.3.4 Relevant Elevations

Elevations referenced in this report are in feet and are based on NAVD88. The low point on the dike crest is at approximately El. 307 and the pond is currently maintained as a dry basin during the closure construction.

| | | |
|---|---|---|
| A. | Top of Dike | Ranges from El. 307 to El. 309 |
| B. | Normal Pool | N/A[2] |
| C. | Spillway Crest | El. 299.02 |
| D. | Upstream Water at Time of Evaluation | El. 285 |
| E. | Spillway Type | Concrete Drop Inlet with vitrified clay pipe |
| F. | Spillway Invert | El. 281.6 |

### 1.3.5 Design and Construction Records

Pond 003 was constructed in 1972 to create a sedimentation and storage basin for fly ash and boiler slag. The dike was designed by Burns & McDonnell between 1970 and 1971.

### 1.3.6 Operating Records

Currently, AECI qualified-person inspections occur at intervals not exceeding seven days in accordance with 40 CFR §257.83. Written operational records have not been historically maintained for the impoundment before the CCR Rule. AECI maintains an operating record for required information.

[2] Pond 003 operates as a dry basin and only receives direct precipitation.

# 2. Visual Evaluation

## 2.1 DESCRIPTION OF EVALUATION

On September 28, 2026, Haley & Aldrich completed a visual evaluation of Pond 003 and dike. The following paragraphs describe the conditions observed during the evaluation. Photographs taken during the evaluation are included in **Appendix A**. A key to the photo locations is included as **Figure 3**. A copy of the Inspection Checklist is included in **Appendix B**.

## 2.2 GENERAL FINDINGS

### 2.2.1 Upstream Slope

CCR material has been staged to an elevation above the dike crest to the west and north; consequently, much of the upstream slope could not be observed. Where accessible, the upstream slope appeared uniform, at an approximate 3H:1V slope or flatter, and is protected from erosion and wave action. The top half of the slope was covered with grassy vegetation, some of which was overgrown. The bottom half of the slope consisted of riprap with isolated areas containing vegetation less than 3 feet in height. Misalignments, depressions, ruts, bulging, erosion, burrows, or other signs of distress were not observed.

### 2.2.2 Crest

The crest elevation is approximately El. 308. The western crest of the dike blends into the Mississippi River Levee crest and consists of a paved access road. The eastern and southern portions of the dike crest consist of a gravel access road. Along its entire length, the crest alignment appeared generally level, with no depressions, settlement, misalignment, rutting, or other irregularities observed.

### 2.2.3 Downstream Slope

The downstream slope of the dike was generally graded to approximately 3H:1V, and healthy grass vegetation covered much of the slope. The western portion of the dike is part of the Mississippi River Levee and was covered with grass approximately 6 inches tall, which appeared to be regularly mowed.

The bottom half of the eastern embankment downstream slope was covered with riprap with grassy vegetation observed within the riprap, some of which exceeded a height of 36 inches.

The downstream slopes of the eastern and southern portions of the dike were graded to an approximately 3H:1V slope, gradually becoming flatter to the north. Outside of the riprap areas, the slopes were covered in healthy grass about 6 inches tall, which appeared to be regularly mowed.

The southwestern downstream slope of Pond 003 is shared with the Lined Pond that closed in January 2021. The Lined Pond has a geomembrane liner in both the bottom liner and final cover systems. This western portion of the southern dike crest between Pond 003 and the Lined Pond is accessed by a gravel-surfaced access road. The Lined Pond final cover grades are approximately equal to the Pond 003 crest elevation and cover the Pond 003 downstream slope at this location, making this portion of the

Pond 003 downstream slope unobservable. Misalignments, depressions, ruts, bulging, erosion, burrows, or other signs of distress were not observed during the September 28, 2026 visual evaluation.

### 2.2.4 Spillway and Emergency Spillway

Three 10-inch-diameter high-density polyethylene pipes historically discharged CCR material, coal pile runoff, and plant process water into Pond 003. Decanted water flows from Pond 003 through a concrete drop outlet structure at the southern end of the pond. The drop outlet structure consists of concrete stop logs that control the water level in the impoundment and a 24-inch-diameter discharge pipe. The decanted water then flows into a riprap- and earth-lined channel that conveys it to the Mississippi River. The downstream portion of the pipe was visible in the discharge channel and appeared to be in fair condition. The outlet structure will be removed and replaced during the Pond 003 closure construction.

Since Pond 003 stopped receiving material in 2023, only limited precipitation-related discharge occurs.

No other emergency spillway exists.

### 2.2.5 Downstream Toe Area

Along the eastern portion of the dike, mature trees exist approximately 25 feet from the downstream toe between the Pond 003 dike and the Mississippi River. This wooded area is approximately 200 to 300 feet wide. Wet or soft spots were not observed along the downstream toe area.

### 2.2.6 Vegetation and Slope Protection

The 6-inch federal vegetation height language formerly appearing in 40 CFR §257.73(d)(1)(iv) was judicially vacated and is not used herein as an operative federal compliance criterion. Vegetation within the upstream and downstream riprap was evaluated as an operation-and-maintenance condition relevant to maintaining adequate slope protection, evaluation visibility, and recognized and generally accepted good engineering practices under 40 CFR §257.73(d)(1)(ii). Vegetation management is recommended as a preventive maintenance measure.

## 2.3 CARETAKER INTERVIEW

On the day of the visual evaluation, Haley & Aldrich met with AECI personnel familiar with the operations, maintenance, and construction of Pond 003. Information provided by AECI personnel has been incorporated into this report.

## 2.4 OPERATION AND MAINTENANCE PROCEDURES

The impoundment is operated and maintained by NMPP personnel and is inspected weekly. Maintenance of the dike includes regular mowing of the upstream and downstream slopes and removing vegetation from the riprap on upstream slopes. A formal operations and maintenance plan does not exist for the Unit.

## 2.5 EMERGENCY ACTION PLAN

A written Emergency Action Plan (EAP) for Pond 003 was originally completed on April 17, 2017 and was subsequently updated in 2022. The EAP details the site directives to be followed during an emergency or potential risk of impoundment failure. The site is staffed full-time with heavy earthmoving construction equipment available at the site to support potential emergency operations and repairs. The April 18, 2022 EAP reflects the most recent update and supersedes the previous versions.

## 2.6 OVERTOPPING POTENTIAL

Because Pond 003 is maintained as a dry basin during the closure construction and receives only direct precipitation, the overtopping potential of the dike is low. Riprap has been installed on the upstream slope as well to provide protection.

# 3. Impoundment Assessment and Recommendations

## 3.1 ASSESSMENT

Based on conditions observed during Haley & Aldrich's visual evaluation of Pond 003, discussions with site personnel, and a review of available documents, no deficiencies were observed; however, the following areas for monitoring were noted:

- vegetation exceeding 6 inches in height within riprap on the upstream and downstream slopes; and
- mature trees between Pond 003 and the Mississippi River to the east.

## 3.2 RECOMMENDATIONS

Haley & Aldrich recommends the following actions:

1. Spray herbicide or implement other vegetation removal strategies, as needed, to treat the riprap on the upstream and downstream slopes to prevent excessive vegetation.
2. Monitor the downstream toe area along the eastern portion of the dike to prevent the growth of trees or other woody vegetation within 25 feet of the toe of slope; monitor existing mature trees downstream of Pond 003 for signs of decay or potential impacts to the dike during the weekly and monthly inspections.

# 4. Structural Stability Assessment

In accordance with 40 CFR §257.73(d), the owner or operator of a CCR surface impoundment must conduct initial and periodic structural stability assessments to determine whether the design, construction, operations, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering practices for the maximum volume of CCR material and CCR wastewater that can be impounded therein. The Initial Structural Stability Assessment for Pond 003 was completed in 2016 and the first periodic assessment was completed in 2021. This report serves as the second periodic assessment.

Haley & Aldrich reviewed the pertinent information provided to us and inspected Pond 003 as described above. Based on our review of available information and observations during our evaluation, we have concluded the following in accordance with 40 CFR §257.73(d):

1. 40 CFR §257.73(d)(1)(i) – Stable Foundations and Abutments:

   Based on the review of available subsurface information, as-built records, survey data, and observations during the September 28, 2026 evaluation, the impoundment was judged to have stable foundations and abutments.

2. 40 CFR §257.73(d)(1)(ii) – Adequate Slope Protection:

   Based on observations during the September 28, 2026 site evaluation, the top half of the upstream slope was covered with grassy vegetation and appeared to be regularly mowed. The lower portion of the upstream slope was protected with riprap that was installed for historical operating conditions. The downstream slope of the eastern and southern portion of the dike was graded to an approximate slope of 3H:1V or flatter to the north. The slope was covered with healthy grass that appeared to be regularly mowed. The bottom half of the downstream slope consisted of riprap. The southern portion of the impoundment shares a dike with an adjacent impoundment, which was covered with grassy vegetation that appeared to be regularly mowed.

3. 40 CFR §257.73(d)(1)(iii) – Dikes Mechanically Compacted:

   Although records on the construction of the Pond 003 are not available, test borings through the embankment and laboratory testing performed by Haley & Aldrich and others indicate that the berm fill was mechanically compacted to a density sufficient to withstand the range of applicable loading conditions in the Unit.

4. 40 CFR §257.73(d)(1)(iv) – Height of Vegetation:

   At the time of the September 28, 2026 impoundment evaluation, portions of the eastern downstream slopes had taller vegetation, primarily observed within the riprap of the bottom half of the eastern embankment. On the upstream slopes, vegetation was higher as well, some as high as 36 inches. Vegetation on the upstream slope had previously been treated with herbicide.

5. 40 CFR §257.73(d)(1)(v)(A) – Spillway Construction and Flow Conditions:

   Pond 003 historically discharged through a concrete decant structure located at the southeastern end of the impoundment. Being a concrete structure, the structure is non-erodible, designed to carry the expected sustained flows, and appears to be in good condition. There is no emergency spillway. Since Pond 003 stopped receiving material in 2023, only limited discharge occurs associated with precipitation.

6. 40 CFR §257.73(d)(1)(v)(B) – Spillway Capacity:

   The 2021 Periodic Hazard Potential Classification Assessment classified Pond 003 as having significant hazard potential. Accordingly, the 1,000-year flood event was modeled and the spillway capacity evaluated in the Inflow Design Flood Control System Plan in accordance with 40 CFR §257.82 – Hydrologic and Hydraulic Capacity Requirements for CCR Surface Impoundments. The Periodic Hazard Potential Classification Assessment and Inflow Design Flood Control System Plan are being updated under separate cover and are outside the scope of this report.

7. 40 CFR §257.73(d)(1)(vi) – Hydraulic Structures Underlying or Passing Through Embankment:

   Only limited portions of the intake were visible during the September 28, 2026 evaluation. The outlet structure appeared to be in good condition. The visible downstream portion of the discharge pipe was in fair condition, with localized damage that did not appear to impair outlet function or warrant immediate repair.

   The accessible portions of the outlet structure and discharge pipe appeared intact, with no visible joint separations, cracking, leakage, deformation, or displacement, and the adjacent ground showed no visible settlement or evidence of loss of support. AECI reported that the system has been operating as intended.

   These observations support the structural integrity of the accessible portions of the outlet structure and discharge pipe; however, the evaluation did not directly verify the condition of buried pipe sections, concealed bedding, or internal sediment and debris accumulation.

8. 40 CFR §257.73(d)(1)(vii) – Inundation of Downstream Slopes:

   The impoundment is located adjacent to the Mississippi River and has the potential to be inundated under higher-than-normal river elevations. River stage fluctuations in this reach of the Mississippi River generally occur gradually over extended periods, allowing pore water pressures within the embankment to equilibrate with changing boundary conditions. As a result, conditions that would typically warrant evaluation of rapid drawdown stability are not anticipated. Therefore, a rapid drawdown analysis was not performed as part of this assessment, and inundation associated with elevated river levels was not identified as a potential concern with respect to embankment stability.

9. 40 CFR §257.73(d)(2) – Deficiencies and Recommendations:

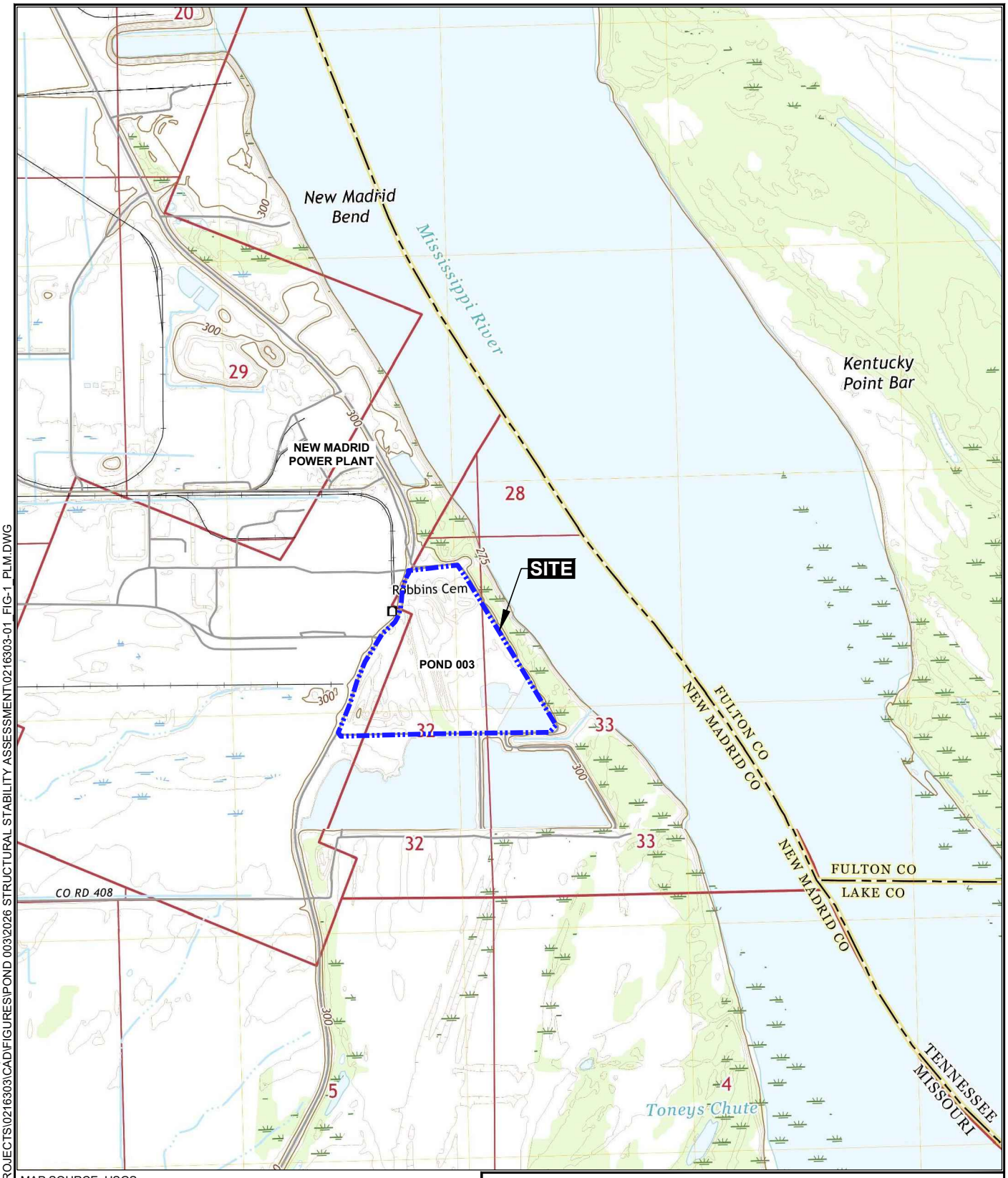
   The Periodic Structural Stability Assessment did not identify any structural stability deficiencies for Pond 003.

AECI is concurrently completing a Periodic Safety Factor Assessment in accordance with 40 CFR §257.73(e), the results of which will be provided under separate cover. The Initial Safety Factor Assessment was completed in 2016 and the first Periodic Safety Factor Assessment was completed in 2021.

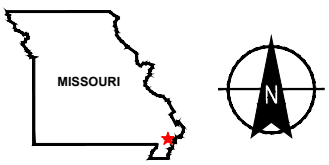
# 5. References

1. GZA GeoEnvironmental, Inc., 2011. *Round 7 Dam Assessment, Associated Electric Cooperative, Inc. New Madrid Power Plant Ash Pond 1 & 2 and Slag Pond 1 & 2 Impoundments*. June.

# FIGURES




MAP SOURCE: USGS
QUADRANGLES: NEW MADRID, MO-KY 2021
POINT PLEASANT, MO-TN-KY 2021




HALEY ALDRICH

ASSOICATED ELECTRIC COOPERATIVE, INC.
NEW MADRID POWER PLANT - POND 003
MARSTON, MISSOURI

# PROJECT LOCATION MAP

APPROXIMATE SCALE: 1IN = 2000 FT
OCTOBER 2026

FIGURE 1

PERROTTA, LUKE Printed: 10/1/2026 11:53 AM Layout: L
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0216303\CAD\FIGURES\POND 003\2026 STRUCTURAL STABILITY ASSESSMENT\0216303-01_FIG-1_PLM.DWG




**LEGEND**

APPROXIMATE LIMITS OF POND 003

**NOTES**

1. AERIAL IMAGERY OBTAINED FROM BING MAPS DATED 2026.

N

0 300 600

SCALE IN FEET

HALEY ALDRICH

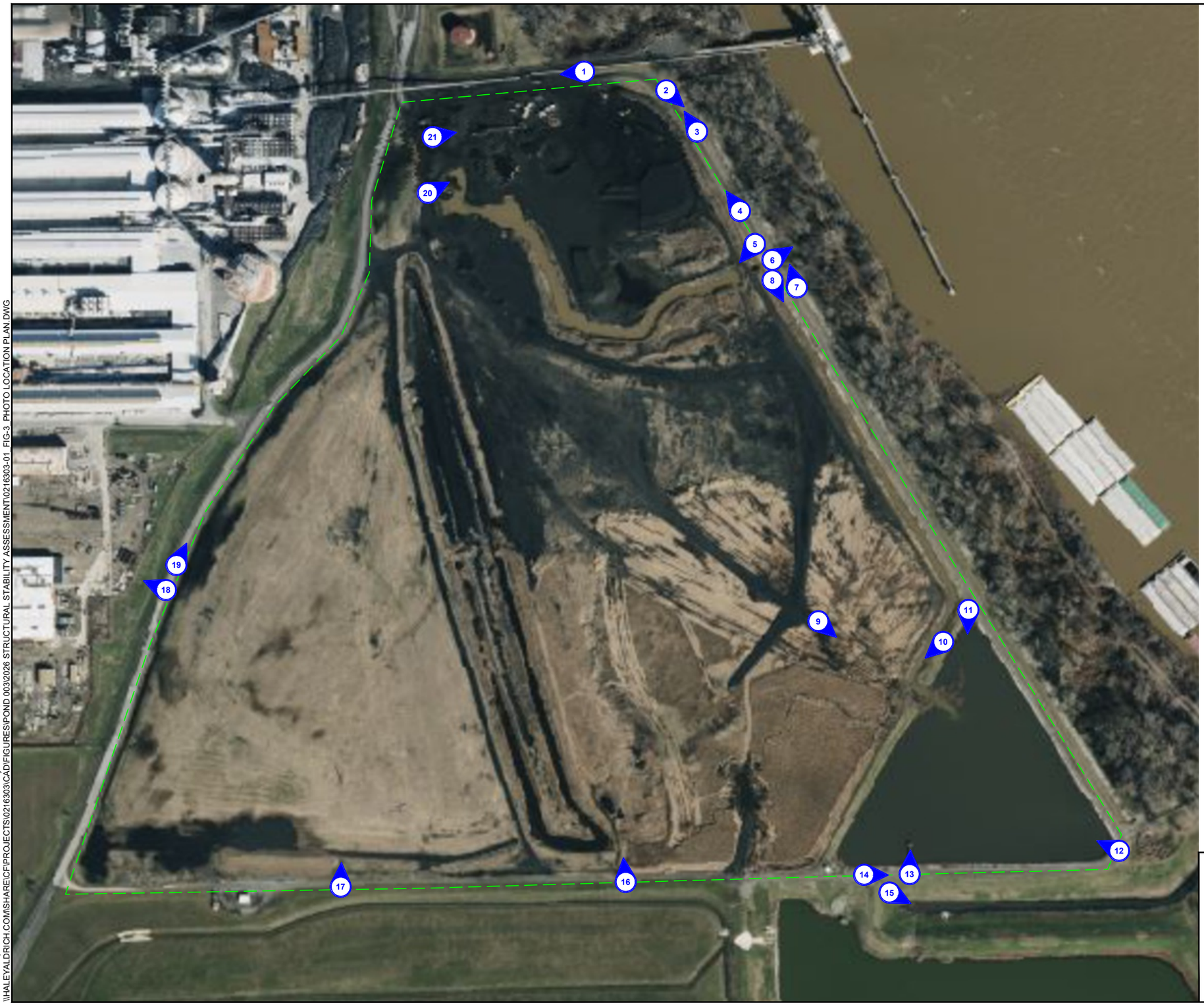
ASSOCIATED ELECTRIC COOPERATIVE, INC.
NEW MADRID POWER PLANT
NEW MADRID, MISSOURI

# POND 003
# SITE PLAN

SCALE: AS SHOWN
OCTOBER 2026

FIGURE 2

PERROTTA, LUKE Printed: 10/1/2026 11:53 AM Layout: SITE PLAN
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0216303\CAD\FIGURES\POND 003\2026 STRUCTURAL STABILITY ASSESSMENT\0216303-01_FIG-2_SITE PLAN.DWG




**LEGEND**

- APPROXIMATE LIMITS OF POND 003
- 1 PHOTO LOCATION/DIRECTION

**NOTES**

1. AERIAL IMAGERY OBTAINED FROM BING MAPS DATED 2026.

N

0 300 600

SCALE IN FEET

HALEY ALDRICH

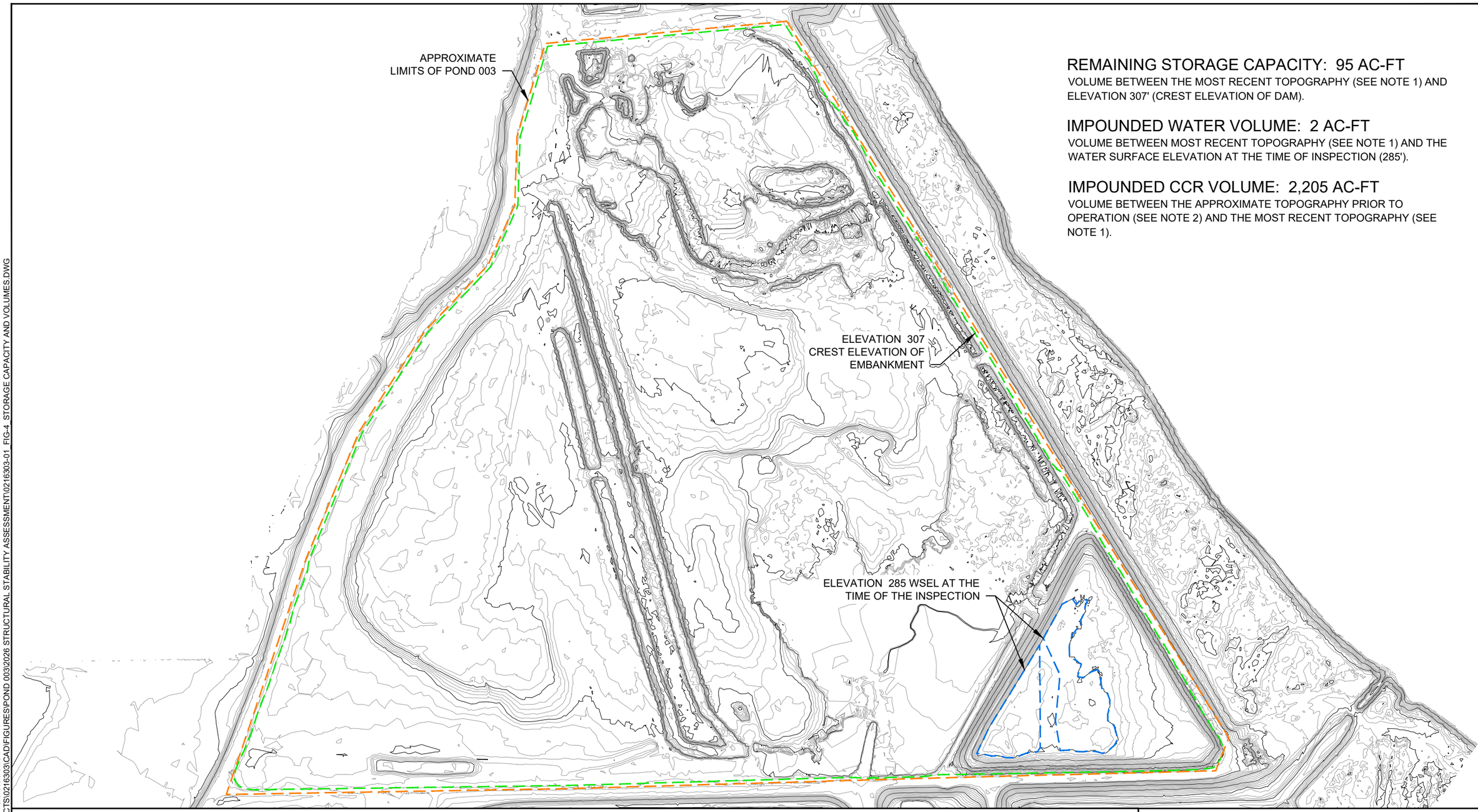
ASSOCIATED ELECTRIC COOPERATIVE, INC.
NEW MADRID POWER PLANT
NEW MADRID, MISSOURI

# POND 003
# PHOTO LOCATION PLAN

SCALE: AS SHOWN
OCTOBER 2026

FIGURE 3

PERROTTA, LUKE Printed: 10/1/2026 11:53 AM Layout: PHOTO LOCATION PLAN
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0216303\CAD\FIGURES\POND 003\2026 STRUCTURAL STABILITY ASSESSMENT\0216303-01_FIG-3_PHOTO LOCATION PLAN.DWG




## REMAINING STORAGE CAPACITY: 95 AC-FT

VOLUME BETWEEN THE MOST RECENT TOPOGRAPHY (SEE NOTE 1) AND ELEVATION 307' (CREST ELEVATION OF DAM).

## IMPOUNDED WATER VOLUME: 2 AC-FT

VOLUME BETWEEN MOST RECENT TOPOGRAPHY (SEE NOTE 1) AND THE WATER SURFACE ELEVATION AT THE TIME OF INSPECTION (285').

## IMPOUNDED CCR VOLUME: 2,205 AC-FT

VOLUME BETWEEN THE APPROXIMATE TOPOGRAPHY PRIOR TO OPERATION (SEE NOTE 2) AND THE MOST RECENT TOPOGRAPHY (SEE NOTE 1).

**LEGEND**

- ELEVATION 285' WSEL DURING INSPECTION
- ELEVATION 307' CREST ELEVATION OF EMBANKMENT
- APPROXIMATE LIMITS OF POND 003

**NOTES**

1. EXISTING TOPOGRAPHY BASED ON SURVEY COMPOSITES. CLEAR POND FIELD SURVEYS CONDUCTED BY SMITH & CO. ENGINEERS IN APRIL 9, 2026 AND OCTOBER 24, 2025. POND AND SURROUNDING AREA IS A COMPILATION OF UAS LIDAR, PHOTOGRAMMETRY, AND FIELD SURVEY COMPLETED BY ENGINEERING SURVEYS & SERVICES IN MARCH 1, 2023.
2. SUBSURFACE BORING DATA AND THE ORIGINAL DESIGN DRAWINGS WERE USED TO APPROXIMATE THE ORIGINAL POND BOTTOM SURFACE. THE RESULTING SURFACE WAS USED TO ESTIMATE THE VOLUME OF CCR IMPROUNDED WITHIN POND 003.

N

0 300 600
SCALE IN FEET

HALEY ALDRICH

ASSOCIATED ELECTRIC COOPERATIVE, INC.
NEW MADRID POWER PLANT
MARSTON, MISSOURI

# POND 003
# STORAGE CAPACITY AND IMPOUNDED CCR AND WATER VOLUMES

SCALE: AS SHOWN
OCTOBER 2026

FIGURE 4

\\HALEYALDRICH\SHARE\CF\PROJECTS\0216303\CAD\FIGURES\POND 003\2026 STRUCTURAL STABILITY ASSESSMENT\0216303-01_FIG-4_STORAGE CAPACITY AND VOLUMES.DWG
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ALUCAS

# APPENDIX A
# Photo Log



***Photo 1: Typical view of the northern berm (looking west)***



***Photo 2: Gravel access road to monitoring wells on downstream slope of east embankment (looking southeast)***



***Photo 3: Downstream slope of embankment at northeast corner of unit (looking north)***



***Photo 4: Typical view of gravel road on top of eastern embankment (looking north)***



***Photo 5: Monitoring wells on the eastern embankment (looking southwest)***



***Photo 6: Gravel access road to monitoring wells on downstream slope of east embankment (looking east)***



***Photo 7: Typical vegetative growth around riprap on downstream slope of the eastern embankment (looking north)***



***Photo 8: Typical vegetative growth around riprap on upstream slope of the eastern embankment (looking south)***



***Photo 9: Monitoring wells inside of Pond 003 footprint (looking southeast)***



***Photo 10: Splitter berm acting as the northwestern embankment of the existing Clear Pond (looking southwest)***



***Photo 11: Typical view of the existing Clear Pond from the eastern embankment (looking southwest)***



***Photo 12: Typical view of the existing Clear Pond from the southeastern corner of the unit (looking northwest)***



***Photo 13: Pond 003 outlet structure with UWL sedimentation ponds force main (looking north)***



***Photo 14: Riprap slope protection with sparse vegetation and Pond 003 outlet structure in the background (looking northeast)***



***Photo 15: Typical view of discharge channel with minor ponding (looking east)***



***Photo 16: Typical interior access road with heavy vegetation inside of pond footprint (looking north)***



***Photo 17: Typical view of western portion of Pond 003 from the southern embankment (looking north)***



***Photo 18: Exterior monitoring wells to the west of the US Army Corps of Engineers Levee (looking west)***



***Photo 19: Paved roadway on top of western embankment (US Army Corps of Engineers Levee) (looking north)***



***Photo 20: Decommissioned sluicing pipes inside of Pond 003 footprint (looking east)***



***Photo 21: Typical view of CCR material with vegetative growth inside of Pond 003 footprint (looking east)***

# APPENDIX B
# Inspection Form

# DAM SAFETY INSPECTION CHECKLIST

NAME OF DAM: Pond 003

STATE ID #: MO-0001171

REGISTERED: (YES/NO) No

NID ID #: N/A

STATE SIZE CLASSIFICATION: N/A

STATE HAZARD CLASSIFICATION: N/A

CHANGE IN HAZARD CLASSIFICATION REQUESTED?: (YES/NO)

*DAM LOCATION INFORMATION*

CITY/TOWN: New Madrid

COUNTY/STATE: *New Madrid/Missouri*

DAM LOCATION: (street address if known) 41 St. Jude Park, Marston, MO

ALTERNATE DAM NAME: N/A

USGS QUAD.: New Madrid, MO-KY

LAT.: 36° 30.4' N

LONG.: 89° 33.5' W

DRAINAGE BASIN: N/A

RIVER: Mississippi River

IMPOUNDMENT NAME(S): Unlined Ash Pond (003 Pond)

*GENERAL DAM INFORMATION*

TYPE OF DAM: Earthen Incised and Bermed

OVERALL LENGTH (FT): 9300

PURPOSE OF DAM: Sedimentation and Storage Basin

NORMAL POOL STORAGE (ACRE-FT): N/A

YEAR BUILT: 1972

MAXIMUM POOL STORAGE (ACRE-FT): 175

STRUCTURAL HEIGHT (FT): 20

EL. NORMAL POOL (FT): N/A

HYDRAULIC HEIGHT (FT): 8

EL. MAXIMUM POOL (FT): 307.0 (minimum crest elevation)

RESERVOIR SURFACE AREA (ACRES): 110

WINTER DRAWDOWN (FT BELOW NORMAL POOL) 0.0

PUBLIC ROAD ON CREST: No

DRAWDOWN VOL. (AC-FT) 0.0

PUBLIC BRIDGE OVER SPILLWAY: No

NAME OF DAM: Pond 003 STATE ID #: MO-0001171

INSPECTION DATE: September 28, 2026 NID ID #: N/A

*INSPECTION SUMMARY*

DATE OF INSPECTION: September 28, 2026 DATE OF PREVIOUS INSPECTION: July 7, 2025

TEMPERATURE/WEATHER: Sunny, 87 ARMY CORPS PHASE I: No (YES/NO) If YES, date

CONSULTANT: Haley & Aldrich, Inc. PREVIOUS ALT. PHASE I: No (YES/NO) If YES, date

BENCHMARK/DATUM: NAVD88

OVERALL PHYSICAL CONDITION OF DAM: Satisfactory DATE OF LAST REHABILITATION: N/A

SPILLWAY CAPACITY: N/A

EL. POOL DURING INSP.: 285 EL. TAILWATER DURING INSP.: 279

*PERSONS PRESENT AT INSPECTION*

| NAME | TITLE/POSITION | REPRESENTING |
|---|---|---|
| Jason Pokorny | Program Manager | Haley & Aldrich, Inc |
| Andy Lucas | Technical Specialist | Haley & Aldrich, Inc |
| Luke Perrotta | Staff Engineer | Haley & Aldrich, Inc |
| Dennis Cox | Supervisor, Coal Plant Eng. | AECI |
| | | |

| | | | |
|---|---|---|---|
| NAME OF DAM: | Pond 003 | STATE ID #: | MO-0001171 |
| INSPECTION DATE: | September 28, 2026 | NID ID #: | N/A |

| | | | | | |
|---|---|---|---|---|---|
| OWNER: | ORGANIZATION | Associated Electric Cooperative, I | CARETAKER: | ORGANIZATION | Associated Electric Cooperative, Inc. |
| | NAME/TITLE | Mr. Dennis Cox | | NAME/TITLE | Mr. Dennis Cox |
| | STREET | P.O. Box 156 | | STREET | P.O. Box 156 |
| | TOWN, STATE, ZIP | New Madrid, MO 63869 | | TOWN, STATE, ZIP | New Madrid, MO 63869 |
| | PHONE | | | PHONE | |
| | EMERGENCY PH. # | | | EMERGENCY PH. # | |
| | FAX | | | FAX | |
| | EMAIL | | | EMAIL | |
| | OWNER TYPE | Private | | | |

| | | | |
|---|---|---|---|
| PRIMARY SPILLWAY TYPE | Decant Structure | | |
| SPILLWAY LENGTH (FT) | N/A | SPILLWAY CAPACITY (CFS) | N/A |
| AUXILIARY SPILLWAY TYPE | N/A | AUX. SPILLWAY CAPACITY (CFS) | N/A |
| NUMBER OF OUTLETS | One | OUTLET(S) CAPACITY (CFS) | Unknown |
| TYPE OF OUTLETS | One Decant | TOTAL DISCHARGE CAPACITY (CFS) | Unknown |
| DRAINAGE AREA (SQ MI) | 0.17 | SPILLWAY DESIGN FLOOD (PERIOD/CFS) | Unkown |
| HAS DAM BEEN BREACHED OR OVERTOPPED? (YES/NO): | No | IF YES, PROVIDE DATE(S) | |
| FISH LADDER (LIST TYPE IF PRESENT) | No | | |
| DOES CREST SUPPORT PUBLIC ROAD? (YES/NO) | No | IF YES, ROAD NAME: | |
| PUBLIC BRIDGE WITHIN 50' OF DAM? (YES/NO): | No | IF YES, ROAD/BRIDGE NAME: | |
| | | MHD BRIDGE NO. (IF APPLICABLE) | |

NAME OF DAM: Pond 003 STATE ID #: MO-0001171

INSPECTION DATE: September 28, 2026 NID ID #: N/A

## EMBANKMENT (U/S SLOPE)

| AREA INSPECTED | CONDITION | OBSERVATIONS | NO ACTION | MONITOR | REPAIR |
|---|---|---|---|---|---|
| U/S SLOPE | 1. SLIDE, SLOUGH, SCARP | None observed | X | | |
| | 2. SLOPE PROTECTION TYPE AND COND. | None observed | X | | |
| | 3. SINKHOLE/ANIMAL BURROWS | None observed | X | | |
| | 4. EMB.-ABUTMENT CONTACT | None observed | X | | |
| | 5. EROSION | None observed | X | | |
| | 6. UNUSUAL MOVEMENT | None observed | X | | |
| | 7. VEGETATION (PRESENCE/CONDITION) | Sparse vegetation within riprap. | | X | |
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ADDITIONAL COMMENTS: Ash has been stockpiled to an elevation equal to the embankment in the Northern portion of the Unlined Ash Pond. Therefore, the upstream slope was covered by ash and not visible for inspection in most locations. Vegetation exceeding 6-in. within riprap was observed in isolated areas.

NAME OF DAM: Pond 003 STATE ID #: MO-0001171

INSPECTION DATE: September 28, 2026 NID ID #: N/A

## EMBANKMENT (CREST)

| AREA INSPECTED | CONDITION | OBSERVATIONS | NO ACTION | MONITOR | REPAIR |
|---|---|---|---|---|---|
| CREST | 1. SURFACE TYPE | Gravel access road, western crest was paved levee road | X | | |
| | 2. SURFACE CRACKING | None observed | X | | |
| | 3. SINKHOLES, ANIMAL BURROWS | None observed | X | | |
| | 4. VERTICAL ALIGNMENT (DEPRESSIONS | None observed | X | | |
| | 5. HORIZONTAL ALIGNMENT | None observed | X | | |
| | 6. RUTS AND/OR PUDDLES | None observed | X | | |
| | 7. VEGETATION (PRESENCE/CONDITION) | Regularly mowed grass | X | | |
| | 8. ABUTMENT CONTACT | N/A | X | | |
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ADDITIONAL COMMENTS:

NAME OF DAM: Pond 003 STATE ID #: MO-0001171

INSPECTION DATE: September 28, 2026 NID ID #: N/A

## EMBANKMENT (D/S SLOPE)

| AREA INSPECTED | CONDITION | OBSERVATIONS | NO ACTION | MONITOR | REPAIR |
|---|---|---|---|---|---|
| D/S SLOPE | 1. WET AREAS (NO FLOW) | None observed | X | | |
| | 2. SEEPAGE | None observed | X | | |
| | 3. SLIDE, SLOUGH, SCARP | None observed | X | | |
| | 4. EMB.-ABUTMENT CONTACT | N/A | X | | |
| | 5. SINKHOLE/ANIMAL BURROWS | None observed | X | | |
| | 6. EROSION | None observed | X | | |
| | 7. UNUSUAL MOVEMENT | None observed | X | | |
| | 8. VEGETATION (PRESENCE/CONDITION) | Woody vegetation near toe of embankment, vegetation in riprap | | X | |
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ADDITIONAL COMMENTS: Grassy vegetation within riprap should be sprayed with herbicide as needed.
Woody vegetation near toe of slope should be monitored.

NAME OF DAM: Pond 003 STATE ID #: MO-0001171

INSPECTION DATE: September 28, 2026 NID ID #: N/A

## PRIMARY SPILLWAY

| AREA INSPECTED | CONDITION | OBSERVATIONS | NO ACTION | MONITOR | REPAIR |
|---|---|---|---|---|---|
| SPILLWAY | SPILLWAY TYPE | Decant structure | X | | |
| | WEIR TYPE | Concrete stoplogs in decant structure | X | | |
| | SPILLWAY CONDITION | Fair | X | | |
| | TRAINING WALLS | None present | X | | |
| | SPILLWAY CONTROLS AND CONDITION | None present | X | | |
| | UNUSUAL MOVEMENT | None present | X | | |
| | APPROACH AREA | Fair | X | | |
| | DISCHARGE AREA | Fair | X | | |
| | DEBRIS | None present | X | | |
| | WATER LEVEL AT TIME OF INSPECTION | 285 | X | | |
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ADDITIONAL COMMENTS:

NAME OF DAM: Pond 003 STATE ID #: MO-0001171

INSPECTION DATE: September 28, 2026 NID ID #: N/A

## OUTLET WORKS

| AREA INSPECTED | CONDITION | OBSERVATIONS | NO ACTION | MONITOR | REPAIR |
|---|---|---|---|---|---|
| OUTLET WORKS | TYPE | 24" Clay Pipe | X | | |
| | INTAKE STRUCTURE | Decant structure with stoplogs | X | | |
| | TRASHRACK | N/A | X | | |
| | PRIMARY CLOSURE | N/A | X | | |
| | SECONDARY CLOSURE | N/A | X | | |
| | CONDUIT | N/A | X | | |
| | OUTLET STRUCTURE/HEADWALL | Fair | X | | |
| | EROSION ALONG TOE OF DAM | None | X | | |
| | SEEPAGE/LEAKAGE | None | X | | |
| | DEBRIS/BLOCKAGE | None | X | | |
| | UNUSUAL MOVEMENT | None | X | | |
| | DOWNSTREAM AREA | Regularly mowed grassy vegetation. | X | | |
| | | | | | |
| | MISCELLANEOUS | | | | |
| | | | | | |

ADDITIONAL COMMENTS:

Note: Use additional sheets for additional outlets.

NAME OF DAM: Pond 003 STATE ID #: MO-0001171

INSPECTION DATE: September 28, 2026 NID ID #: N/A

## DOWNSTREAM AREA

| AREA INSPECTED | CONDITION | OBSERVATIONS | NO ACTION | MONITOR | REPAIR |
|---|---|---|---|---|---|
| D/S AREA | 1. ABUTMENT LEAKAGE | None Present | X | | |
| | 2. FOUNDATION SEEPAGE | None Present | X | | |
| | 3. SLIDE, SLOUGH, SCARP | None Present | X | | |
| | 4. WEIRS | None Present | X | | |
| | 5. DRAINAGE SYSTEM | None Present | X | | |
| | 6. INSTRUMENTATION | Monitoring Wells | X | | |
| | 7. VEGETATION | Grass. Woody vegetation between east embankment and Mississippi River | X | | |
| | 8. ACCESSIBILITY | Gravel and paved access road along crest. Full time security and fence | X | | |
| | 9. DOWNSTREAM HAZARD DESCRIPTION | Significant | | | |
| | 10. DATE OF LAST EAP UPDATE | 18-Apr-22 | | | |
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ADDITIONAL COMMENTS:

NAME OF DAM: Pond 003 STATE ID #: MO-0001171

INSPECTION DATE: September 28, 2026 NID ID #: N/A

## INSTRUMENTATION

| AREA INSPECTED | CONDITION | OBSERVATIONS | NO ACTION | MONITOR | REPAIR |
|---|---|---|---|---|---|
| INSTR. | 1. PIEZOMETERS | P-1 through P-5 | X | | |
| | 2. OBSERVATION WELLS | Various monitoring wells at perimeter of and interior to unit | X | | |
| | 3. STAFF GAGE AND RECORDER | None present | X | | |
| | 4. WEIRS | None present | X | | |
| | 5. INCLINOMETERS | None present | X | | |
| | 6. SURVEY MONUMENTS | None present | X | | |
| | 7. DRAINS | None present | X | | |
| | 8. FREQUENCY OF READINGS | Quarterly | X | | |
| | 9. LOCATION OF READINGS | Facility's operating records | X | | |
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ADDITIONAL COMMENTS:

NAME OF DAM: Pond 003 STATE ID #: MO-0001171

INSPECTION DATE: September 28, 2026 NID ID #: N/A

## UNDERLYING HYDRAULIC STRUCTURES/PIPES

| AREA INSPECTED | CONDITION | OBSERVATIONS | NO ACTION | MONITOR | REPAIR |
|---|---|---|---|---|---|
| UNDERLYING HYDRAULIC STRUCTURES /PIPES | TYPE | Not observed | X | | |
| | INLET | | | | |
| | CONDUIT | | | | |
| | OUTLET STRUCTURE/HEADWALL | Fair | X | | |
| | EROSION ALONG STRUCTURE | None present | X | | |
| | SEEPAGE/LEAKAGE | None present | X | | |
| | DEBRIS/BLOCKAGE | None present | X | | |
| | UNUSUAL MOVEMENT | | | | |
| | DOWNSTREAM AREA | | | | |
| | | | | | |
| | MISCELLANEOUS | | | | |
| | | | | | |
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ADDITIONAL COMMENTS: Outlet pipe unable to be inspected. Downstream portion of the pipe was visible in the discharge channel and appeared to be in fair condition.

Note: Use additional sheets for additional outlets.

# APPENDIX C
# Definitions

## COMMON DAM SAFETY DEFINITIONS

For a comprehensive list of dam engineering terminology and definitions, refer to the U.S. Army Corps of Engineers, the Federal Energy Regulatory Commission, the Department of the Interior Bureau of Reclamation, or the Federal Emergency Management Agency.

### Orientation

Upstream – Shall mean the side of the dam that borders the impoundment.

Downstream – Shall mean the high side of the dam, the side opposite the upstream side.

Right – Shall mean the area to the right when looking in the downstream direction.

Left – Shall mean the area to the left when looking in the downstream direction.

### Dam Components

Dam – Shall mean any artificial barrier, including appurtenant works, which impounds or diverts water.

Embankment – Shall mean the fill material, usually earth or rock, placed with sloping sides, such that it forms a permanent barrier that impounds water.

Crest – Shall mean the top of the dam, usually provides a road or path across the dam.

Abutment – Shall mean that part of a valley side against which a dam is constructed. An artificial abutment is sometimes constructed as a concrete gravity section, to take the thrust of an arch dam where there is no suitable natural abutment.

Appurtenant Works – Shall mean structures, either in dams or separate there from including but not be limited to spillways; reservoirs and their rims; low level outlet works; and water conduits including tunnels, pipelines, or penstocks, either through the dams or their abutments.

Spillway – Shall mean a structure over or through which water flows are discharged. If the flow is controlled by gates or boards, it is a controlled spillway; if the fixed elevation of the spillway crest controls the level of the impoundment, it is an uncontrolled spillway.

### Size Classification

Large – structure with a height greater than 40 feet or a storage capacity greater than 1,000 acre-feet.

Intermediate – structure with a height between 15 and 40 feet or a storage capacity of 50 to 1,000 acre-feet.

Small – structure with a height between 6 and 15 feet and a storage capacity of 15 to 50 acre-feet.

Non-Jurisdictional – structure less than 6 feet in height and having a storage capacity of less than 15 acre-feet.

**Hazard Classification**
(In the event the impoundment should fail, the following would occur):

Less Than Low Hazard Potential - Failure or mis-operation of the dam results in no probable loss of human life or economic or environmental losses.

Low Hazard Potential - Dams assigned the low hazard potential classification are those where failure or mis-operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.

Significant Hazard Potential - Dams assigned the significant hazard potential classification are those dams where failure or mis-operation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.

High Hazard Potential - Dams assigned the high hazard potential classification are those where failure or mis-operation will probably cause loss of human life.

**General**

EAP – Emergency Action Plan - Shall mean a predetermined plan of action to be taken to reduce the potential for property damage and/or loss of life in an area affected by an impending dam break.

O&M Manual – Operations and Maintenance Manual; Document identifying routine maintenance and operational procedures under normal and storm conditions.

Normal Pool – Shall mean the elevation of the impoundment during normal operating conditions.

Acre-foot – Shall mean a unit of volumetric measure that would cover one acre to a depth of one foot. It is equal to 43,560 cubic feet. One million U.S. gallons = 3.068 acre-feet

Height of Dam – Shall mean the vertical distance from the lowest portion of the natural ground, including any stream channel, along the downstream toe of the dam to the crest of the dam.

Spillway Design Flood (SDF) – Shall mean the flood used in the design of a dam and its appurtenant works particularly for sizing the spillway and outlet works, and for determining maximum temporary storage and height of dam requirements.

**Condition Rating**

Unsafe - Major structural, operational, and maintenance deficiencies exist under normal operating conditions.

Poor - Significant structural, operational and maintenance deficiencies are clearly recognized for normal loading conditions.

Fair - Significant operational and maintenance deficiencies, no structural deficiencies. Potential deficiencies exist under unusual loading conditions that may realistically occur. Can be used when uncertainties exist as to critical parameters.

Satisfactory - Minor operational and maintenance deficiencies. Infrequent hydrologic events would probably result in deficiencies.

Good - No existing or potential deficiencies recognized. Safe performance is expected under all loading including SDF.