BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	PCB AS 2021-008
PETITION OF AMEREN ENERGY	)	(Adjusted Standard – Land)
MEDIAN VALLEY COGEN LLC (OLD	)	
MEREDOSIA) FOR AN ADJUSTED	)	
STANDARD FROM 35 ADMIN. CODE	)	
PART 845	)	

NOTICE OF FILING

To: See attached Service List

PLEASE TAKE NOTICE that I have today electronically filed with the Office of the Clerk of the Pollution Control Board Ameren Energy Medina Valley Cogen LLC's Demonstrative Exhibits, a copy of which is herewith served upon you.

Dated: November 13, 2026

AMEREN ENERGY MEDINA VALLEY COGEN LLC

By: __/s/Kristen L. Gale _____

Kristen L. Gale
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CERTIFICATE OF SERVICE

The undersigned, an attorney, certifies that a true copy of the foregoing Notice of Filing and Ameren Energy Medina Valley Cogen LLC's Demonstrative Exhibits were electronically filed on November 13, 2026 with the following:

Don Brown, Clerk of the Board
Illinois Pollution Control Board
60 E. Van Buren Street, Suite 630
Chicago, IL 60605
don.brown@illinois.gov

and that a copy was sent via e-mail on November 13, 2026 to the parties on the service list.

Dated: November 13, 2026 /s/Kristen L. Gale

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In the Matter of: Ameren Energy Medina Valley Cogen, LLC (Old Meredosia)

Testimony of Craig Giesmann

Director of Environmental Services

Nov. 17, 2026

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Meredosia
Power Station
2026




ILLINOIS RIVER
BOTTOM ASH POND (CLOSED)
FLY ASH POND (CLOSED)
OLD ASH POND (CLOSED)
MONITORING WELL LOCATION
APPROXIMATE PROPERTY BOUNDARY
UNITS OF CCP MANAGEMENT
APPROXIMATE GROUNDWATER MONITORING ZONE
SITE BASE MAP
FIGURE 1-2
637

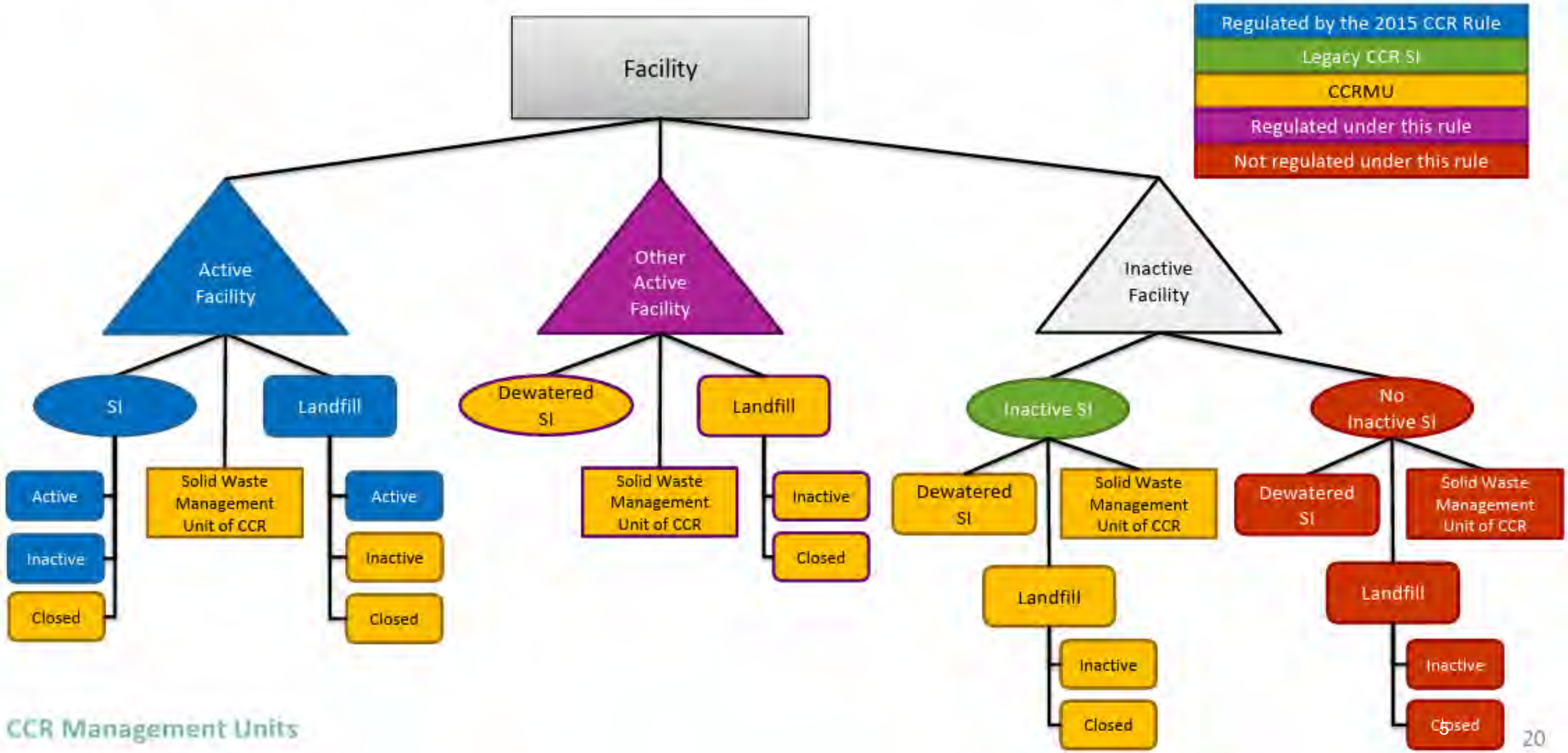
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Old Meredosia
2026



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Regulated Universe



CCR Management Units

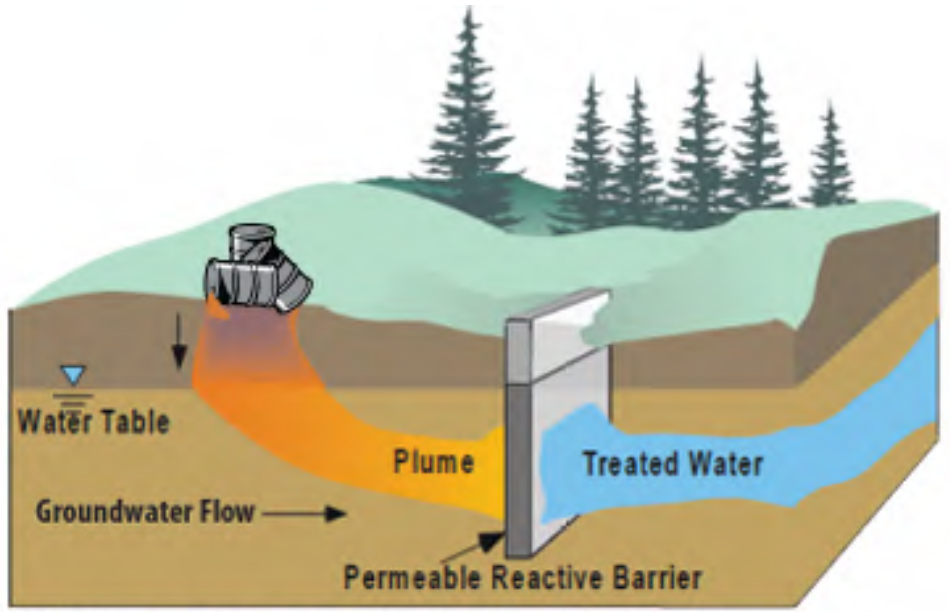
Permeable Reactive Barrier

A permeable reactive barrier, or "PRB," is a wall created below ground to clean up contaminated groundwater.

The wall is "permeable," which means that groundwater can flow through it.

Water must flow through the PRB to be treated. The "reactive" materials that make up the wall trap harmful contaminants.

The treated groundwater flows out the other side of the wall.



PRB treats a plume of groundwater contaminants.

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PRB Treatability Study - Two Phases

- Phase 1 - Screening / Proof of Concept
  - Several products tested in batch test reactors
  - Dosages selected based on manufacturer recommendations and prior experience with similar sites
  - Boron reduction efficiencies compared to untreated control
- Phase 2 – Refinement Phase with Columns
  - Based on Phase 1 results - three products selected
  - Columns used to simulate in situ conditions
    - Phase 1 dosages mixed with site soil
    - Site-specific groundwater flow through columns at site-specific groundwater velocity

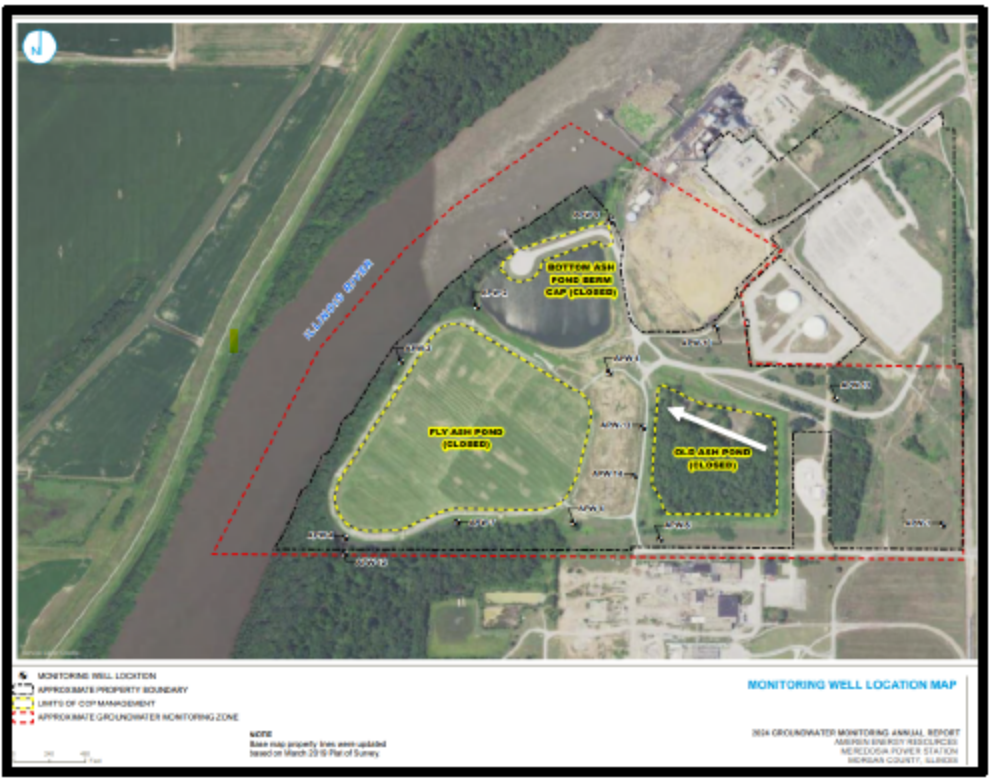
Presentation to Illinois EPA

Old Ash Pond, Meredosia Power Station
PRB Design – Boron Treatment

Ameren

February 3, 2026

Presentation to Illinois EPA



Note: Quarterly groundwater contour figures provided in annual reports

November 2025 Downgradient Boron Concentrations

Ameren

Groundwater grab samples from temporary borings along a 100-foot spacing:

- Determine extent and concentration of boron impact downgradient of Old Ash Pond
- Temporary Borings TB-1, TB-2 and TB-3 exceed the regulatory boron criteria of 2.0 mg/L
- TB-4 through TB-9 had concentrations less than applicable regulatory boron criteria



Presentation to Illinois EPA

Approximate PRB Lateral Extent – Rembind 100x

Based on typical groundwater flow direction (2020 – 2025) corresponding to temporary boring data (Nov 2025 groundwater grab samples) and monitoring well groundwater sample concentrations, the PRB (wall) is positioned to intercept groundwater as it migrates from the Old Ash Pond northwest towards the Illinois River

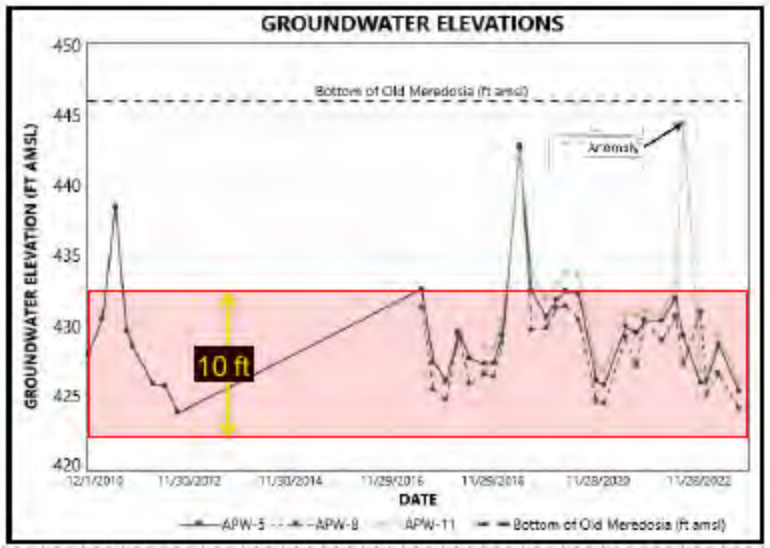


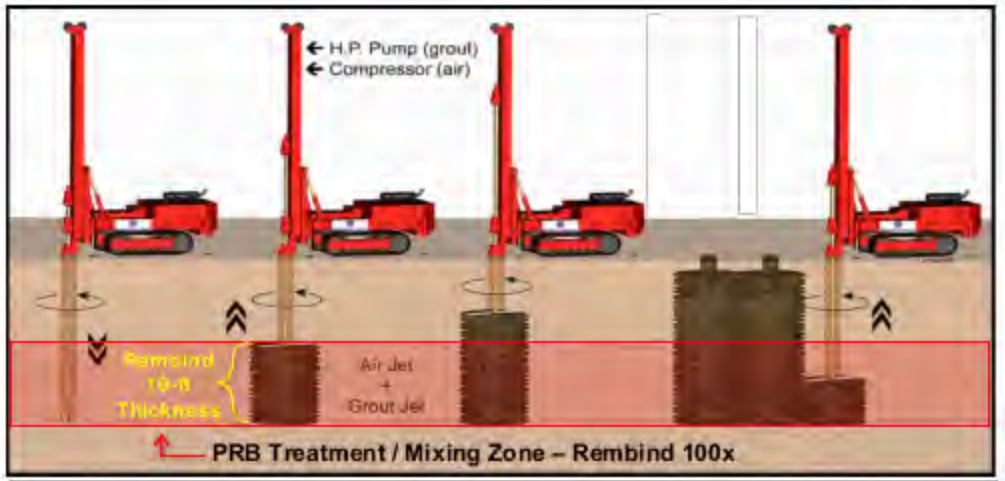
Presentation to Illinois EPA

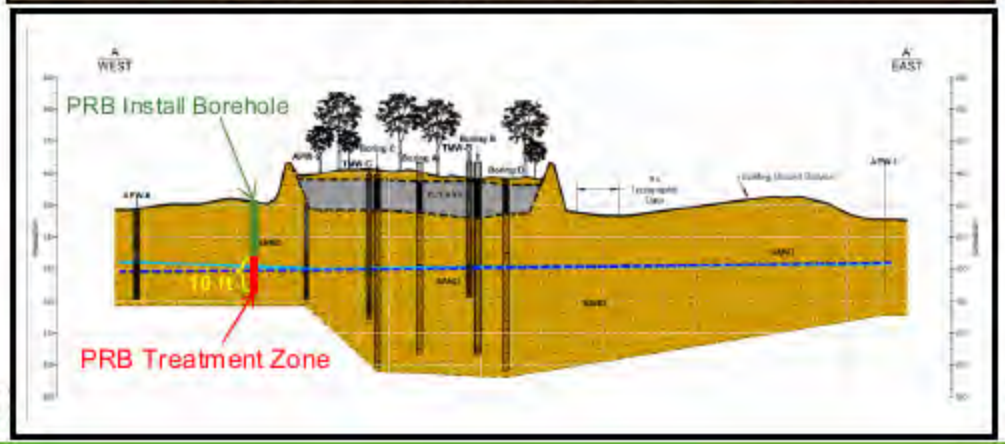
PRB Vertical Installation and Target Treatment Interval

Material mixed into a slurry to concentrations/ratios determined from the treatability study through hollow-stem/flight auger to the target zone depth utilizing an overlapping auger-hole methodology.

PRB will be installed to a target incept elevation zone of 422-432 feet above mean sea level.





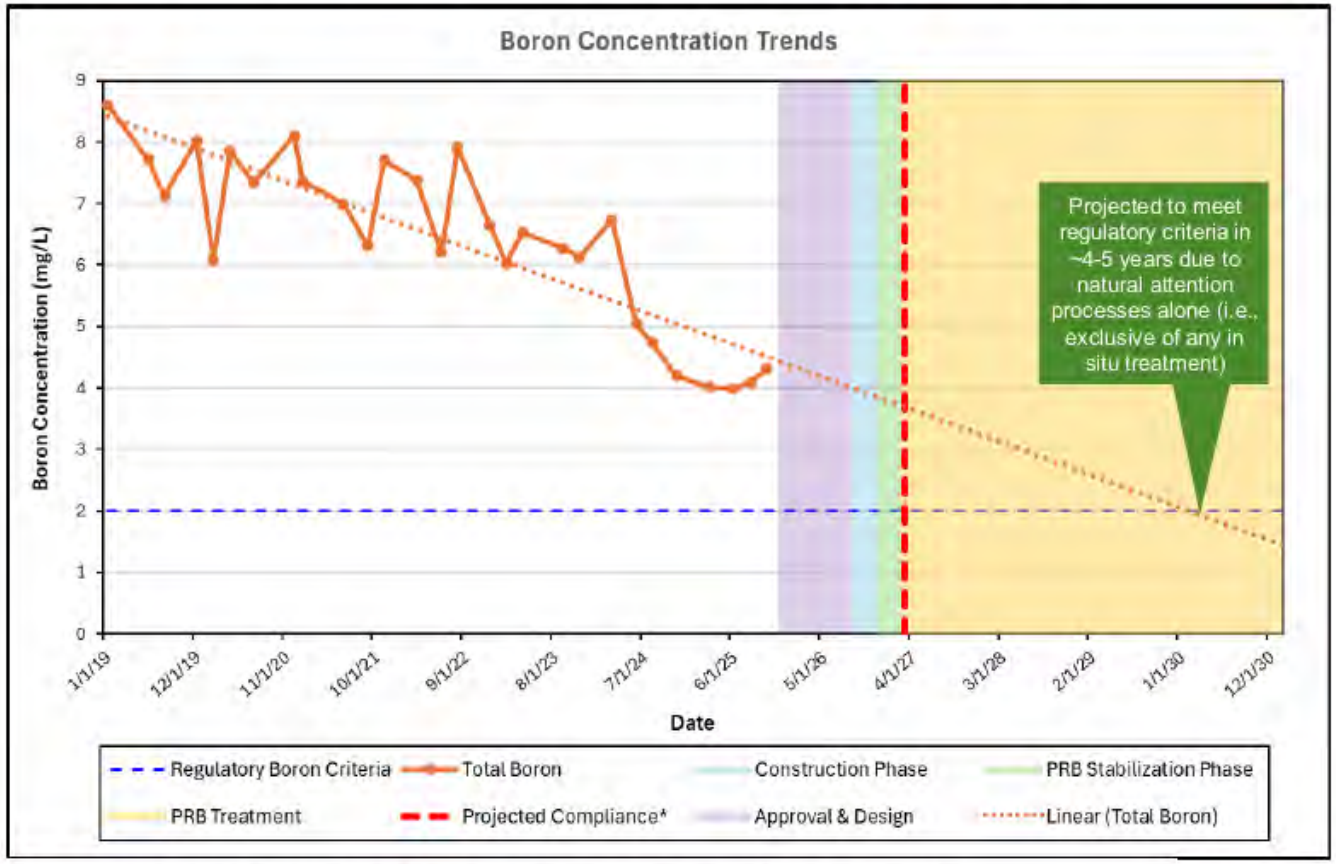


10

Presentation to Illinois EPA

Projected Boron Concentrations Downgradient of Ash Pond

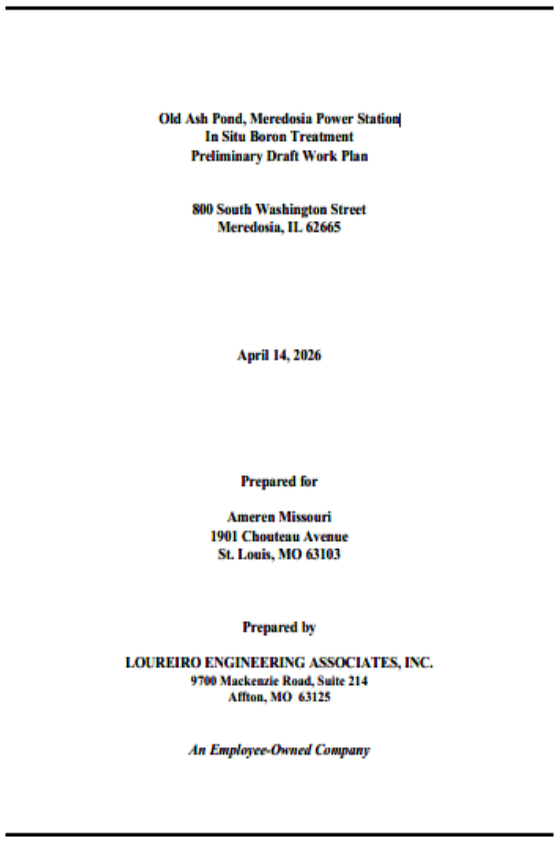
Corrective Action through a downgradient PRB intercepting groundwater flow should reduce the compliance by 3+ years if implemented in late 2026.



* Compliance point downgradient of PRB is under development / yet to be determined.

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PRB Preliminary Work Plan



Old Ash Pond, Meredosia Power Station
In Situ Boron Treatment
Preliminary Draft Work Plan

800 South Washington Street
Meredosia, IL 62665

April 14, 2026

Prepared for

Ameren Missouri
1901 Chouteau Avenue
St. Louis, MO 63103

Prepared by

LOUREIRO ENGINEERING ASSOCIATES, INC.
9700 Mackenzie Road, Suite 214
Affton, MO 63125

An Employee-Owned Company

- Will treat boron in groundwater and also other metals (*although none others are above Part 845*)
- ~470 feet long & 10 feet high
- Installed 30-40 feet below ground surface of Old Meredosia
- Rembind 100x injected as a slurry
- APW-15 and APW-16 installed on either side of PRB

Electronic Filing: Received, Clerk's Office 11/13/2026

Dimitri Quafisi, P.G.

Hydrogeology and Field Investigation Lead, Haley & Aldrich, Inc.

- M.S., Geology, East Carolina University; B.S., Marine Science, Coastal Carolina University
- Professional Geologist, Pennsylvania (Reg. No. PG005284)
- More than 10 years of experience in complex hydrogeologic evaluation and interpretation, specializing in groundwater flow and solute transport
- Conceptual site models and 3D groundwater flow and transport models
- Lead groundwater modeler for multiple large-scale coal combustion residual ponds, energy clients, Midwest
- Geological Society of America

Electronic Filing: Received, Clerk's Office 11/13/2026

2023 Haley & Aldrich Report

Electronic Filing: Received, Clerk's Office 05/01/2023

TECHNICAL MEMORANDUM ON
ENGINEERING REVIEW/EXPERT WITNESS SUPPORT
PETITION FOR ADJUSTED STANDARD FOR OLD MEREDOSIA
MEREDOSIA, ILLINOIS

by
Haley & Aldrich, Inc.
Cleveland, Ohio

for
Brown, Hay + Stephens, LLP
Springfield, Illinois

File No. 0206891
April 2023

Electronic Filing: Received, Clerk's Office 05/01/2023

TECHNICAL MEMORANDUM

19 April 2023
File No. 0206891

TO: Claire A. Manning, Attorney
Brown, Hay + Stephens, LLP
205 S. Fifth Street, Suite 1000
Springfield, Illinois 62705-2459

FROM: Haley & Aldrich, Inc.
Neal Kochis, Senior Project Manager
Steven F. Putrich, Principal Consultant

SUBJECT: Technical Memorandum – Engineering Review/Expert Witness Support
Petition for Adjusted Standard for Old Meredosia
Illinois Pollution Control Board Docket AS 2021-008

Introduction

Haley and Aldrich, Inc. (Haley & Aldrich) has been engaged to consult with Ameren Corporation, Ameren Legal, and its outside counsel, Brown, Hay + Stephens, LLP to provide an engineering review and expert witness support for the petition for adjusted standards for a long-closed Ameren Meredosia Power Station (Site) ash pond (Old Meredosia) as an alternative to closure-in-place (CIP) or closure-by-removal (CBR) in accordance with 35 Illinois Administrative Code (IAC) Part 845 Standards for the Disposal of Coal Combustion Residuals (CCR) in Surface Impoundments (Part 845). This technical memorandum provides a summary of our engineering review and findings based on available Site information and associated site civil and geotechnical engineering assessments and ancillary annual Site inspections completed for Old Meredosia on behalf of Ameren.

PROJECT APPROACH

The approach for this engineering review is to utilize available Site-related information to perform a comparative assessment of Old Meredosia's current conditions and overall engineering performance versus a theoretical condition, which includes the incorporation of engineered elements to satisfy a Part 845-compliant closure condition. Those closure conditions under Part 845 include two options: 1) CIP with the installation of a new cover system; and 2) performing a CBR of the ash contained within the footprint of Old Meredosia. The comparative assessment is based on an objective and systematic evaluation of the performance of Old Meredosia (under both the current conditions and as a Part 845-

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Attachments to 2023 H&A Report

- Attachment A – WSP's March 2023 Site Investigation Report
- Attachment B – 2022 Geotechnology Sampling and Testing Report
- Attachment C – Groundwater Flow Contour Maps
- Attachment D – 2017 Geotechnology Liquefaction Analysis
- Attachment E – Ameren Meredosia Annual Dam Safety Inspection reports
- Attachment F – EDR Historical Aerial Photographs

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Criteria Used for Comparative Assessment

- The stratigraphy of the pond and its separation from the groundwater
- The stability of the embankments and erosion of the cover
- The cover and its vegetation
- The ecology on the unit
- The human health and ecological risk assessment
- The impacts of carrying out a Part 845 closure

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Where Old Meredosia sits



Am. Pet. Ex. 2 (H&A 2023 Technical Memorandum), Figure 1 – Site Location Map – PAS App'x p. 638

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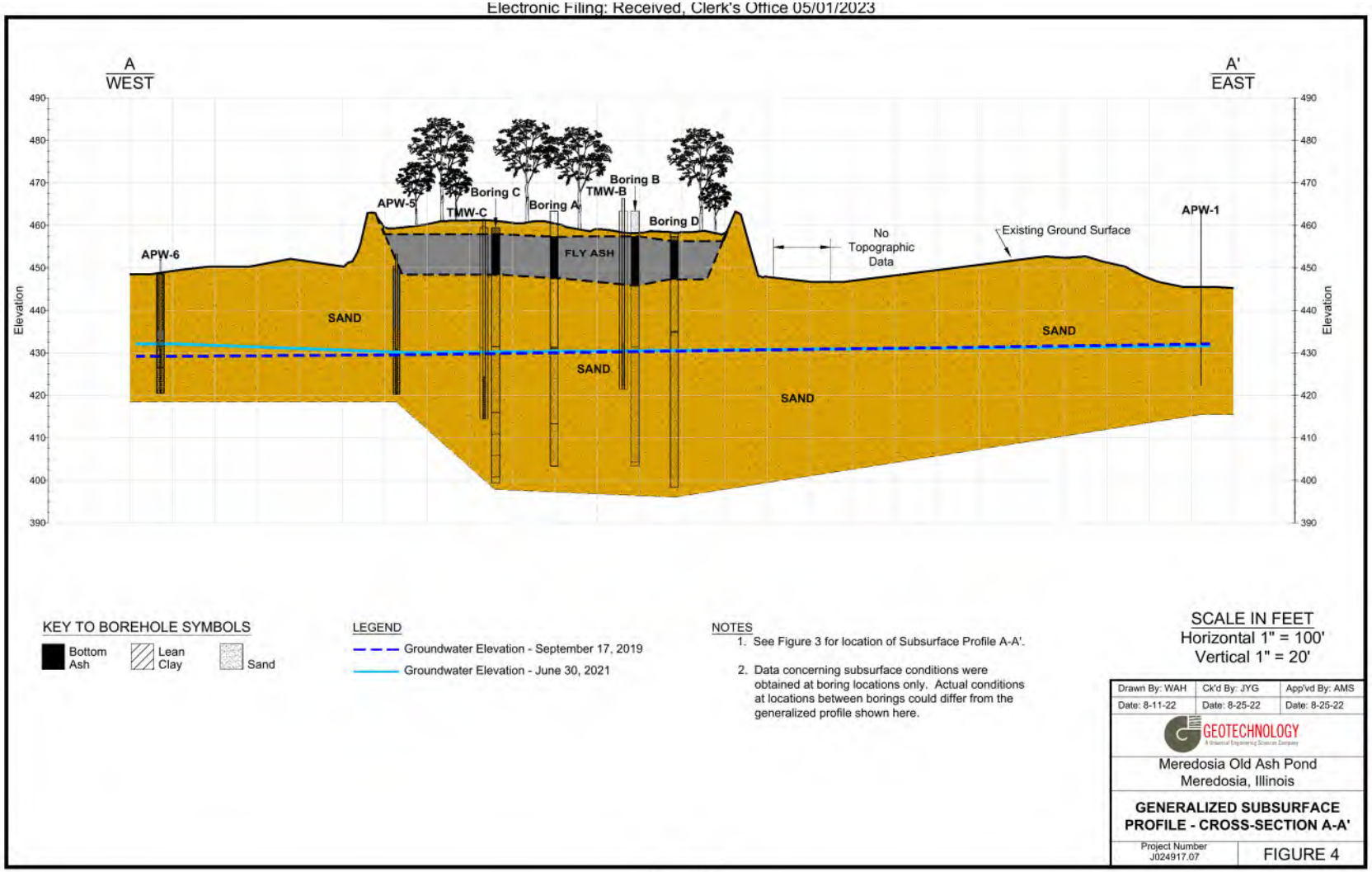
Old Meredosia Current Conditions

- Pond Stratigraphy and Positive Groundwater Separation
  - Base of the Unit Evaluation

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What is underneath it

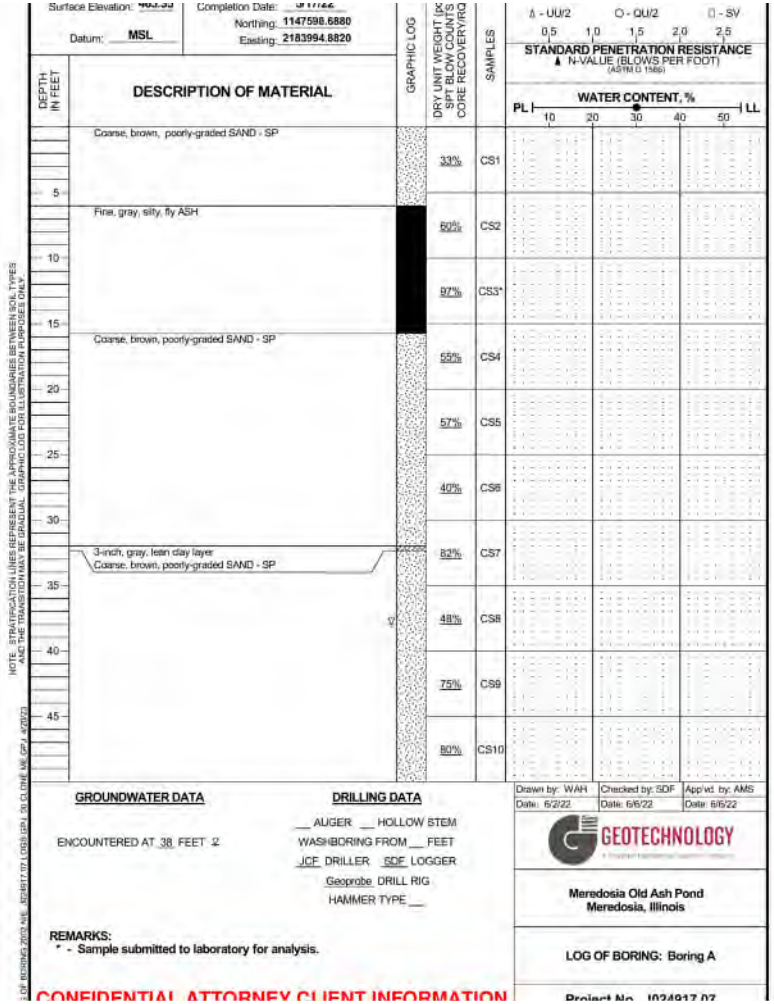
Electronic Filing: Received, Clerk's Office 05/01/2023

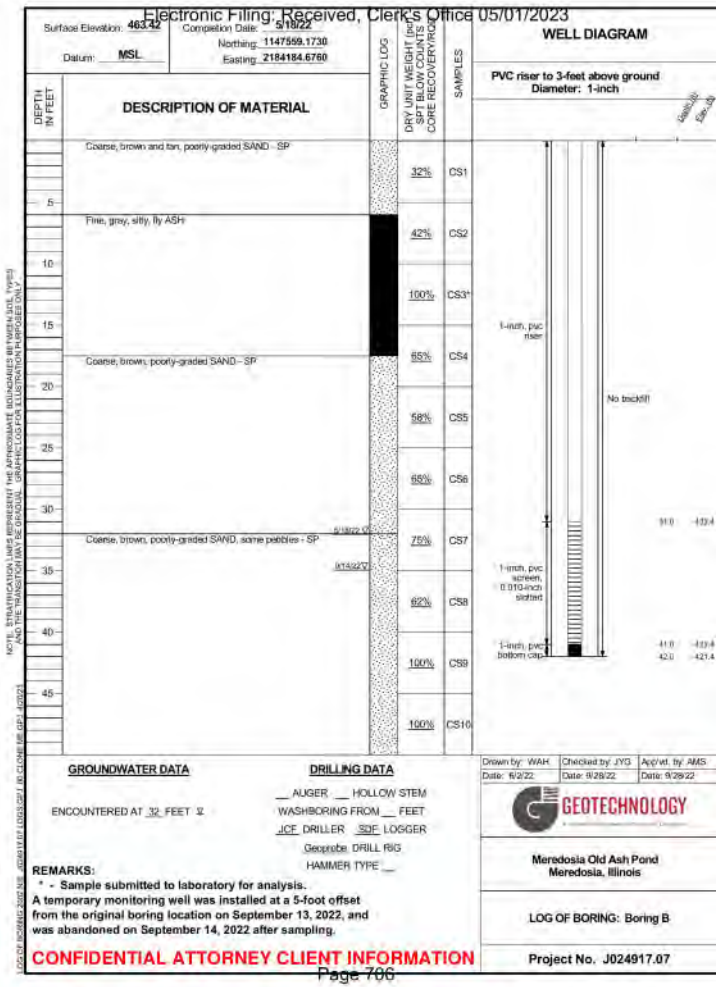


Am. Pet. Ex. 2, Att. B (Geotechnology 2022 Report) – Generalized Subsurface Profile, Cross-Section A-A' – PAS App'x p. 702

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Two boring logs, same story – Borings A and B





Boring A – water encountered at 38 feet (p. 704)

Boring B – water encountered at 32 feet; base of ash 445.9 (p. 706)

Am. Pet. Ex. 2, Att. B (Geotechnology 2022 Report) – Logs of Boring A and Boring B – PAS App'x pp. 704, 706

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Old Meredosia Current Conditions

- Pond Stratigraphy and Positive Groundwater Separation
  - Base of the Unit Evaluation
  - Seasonal High Groundwater Table

Electronic Filing: Received, Clerk's Office 11/13/2026

Normal conditions and the reversal – January 29 and June 4, 2019



January 29, 2019 – flow west/northwest, toward the river (p. 881)



June 4, 2019 – river at flood, flow reversed to the east (p. 882)

Am. Pet. Ex. 2, Att. C (Contour Maps 2010 to 2021) – Ramboll 2019 Annual Report, Figures 2-1 and 2-2 – PAS App'x pp. 881, 882

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Old Meredosia Current Conditions

- Pond Stratigraphy and Positive Groundwater Separation
  - Base of the Unit Evaluation
  - Seasonal High Groundwater Table
  - Groundwater Separation

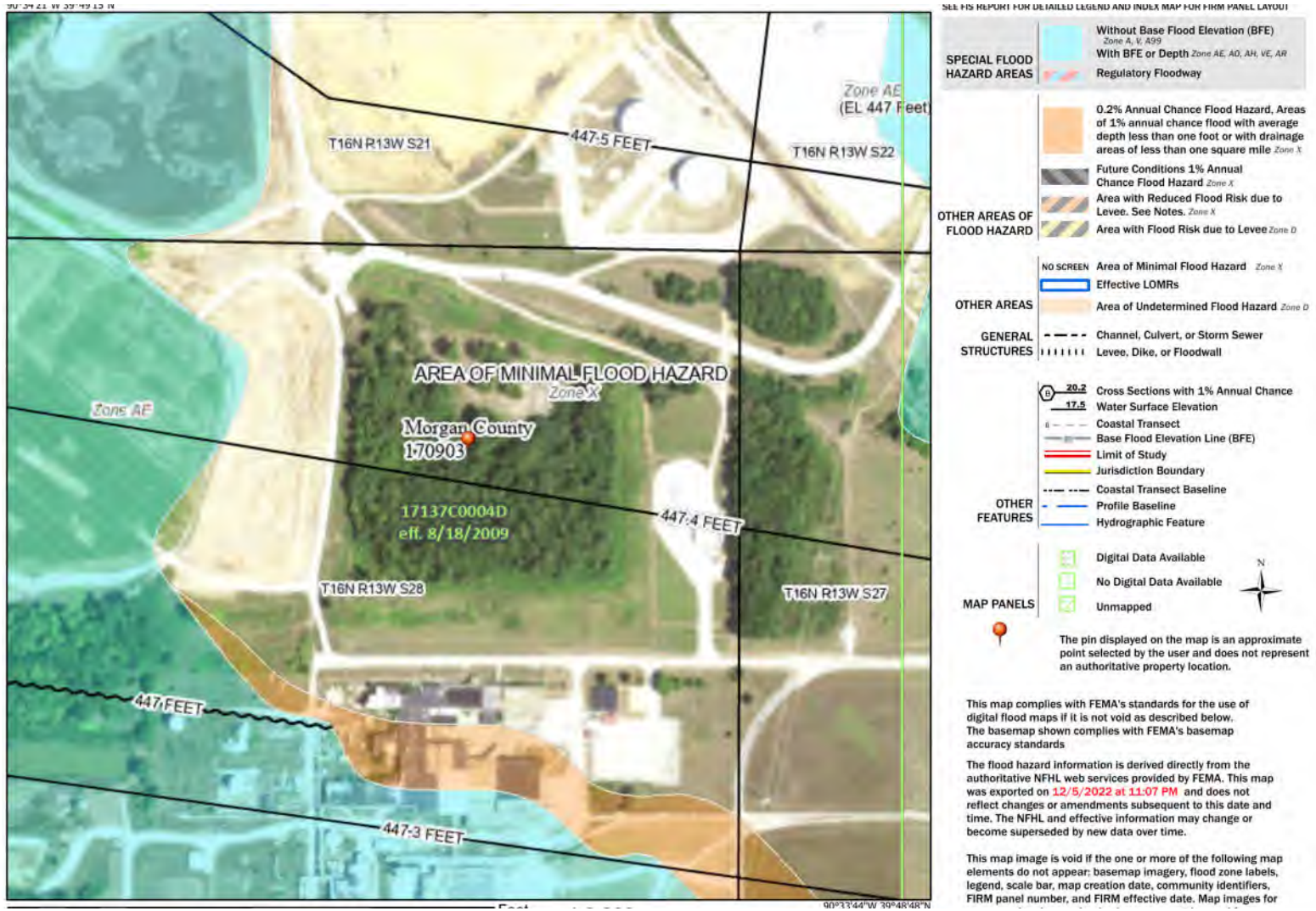
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Old Meredosia Current Conditions

- Pond Stratigraphy and Positive Groundwater Separation
- Stability of Embankments and Cover Erosion Protection/Management
  - Floodplain

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Outside the floodplain



Am. Pet. Ex. 2 (H&A 2023 Technical Memorandum), Figure 6 – FEMA National Flood Hazard Layer FIRMette – PAS App'x p. 643

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Old Meredosia Current Conditions

- Pond Stratigraphy and Positive Groundwater Separation
- Stability of Embankments and Cover Erosion Protection/Management
  - Floodplain
  - Liquefaction
  - Dam Safety

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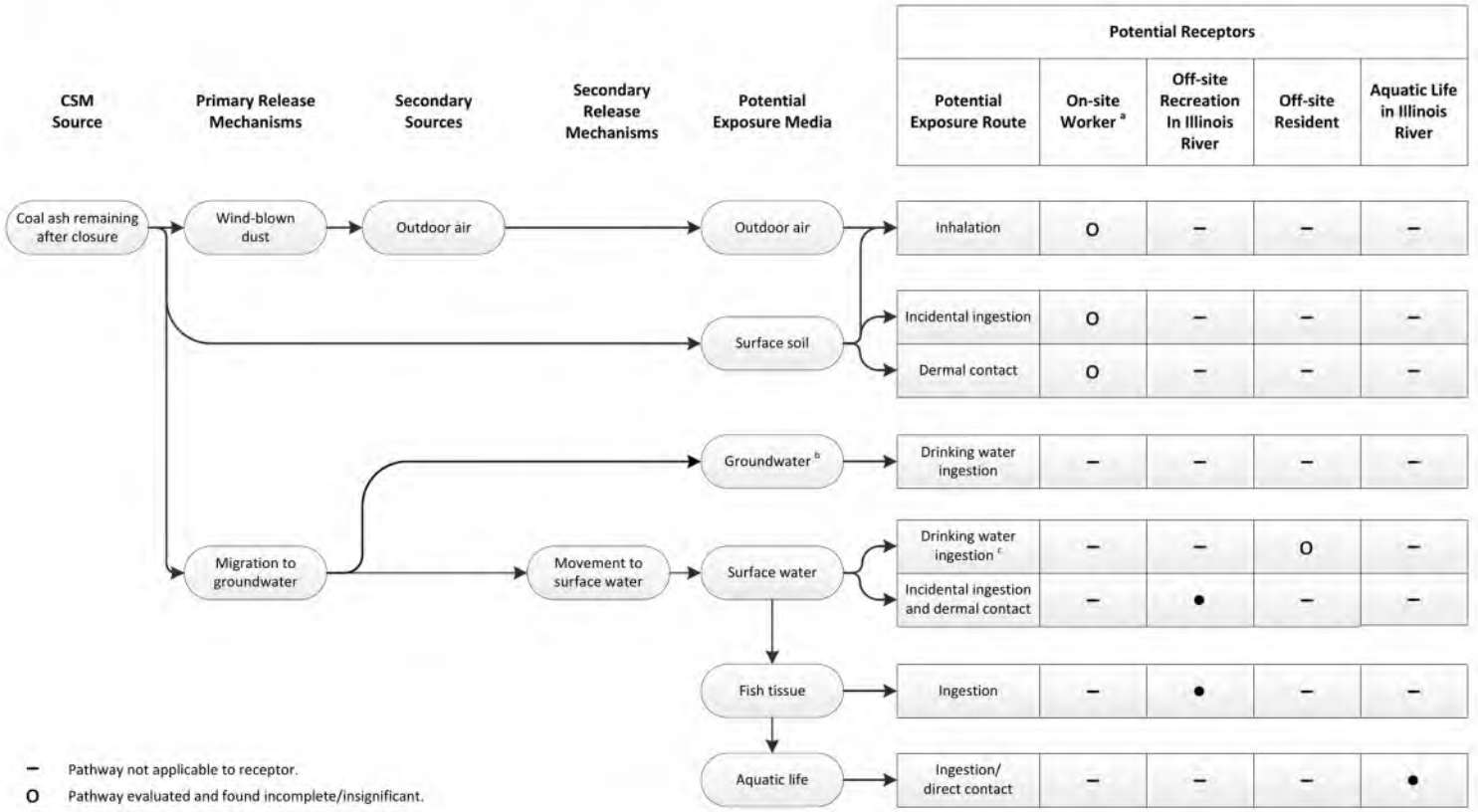
Old Meredosia Current Conditions

- Pond Stratigraphy and Positive Groundwater Separation
- Stability of Embankments and Cover Erosion Protection/Management
- Infiltration Management
- Ecological Assessment Conditions
- Human Health and Ecological Risk Assessment

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Preliminary Conceptual Site Model

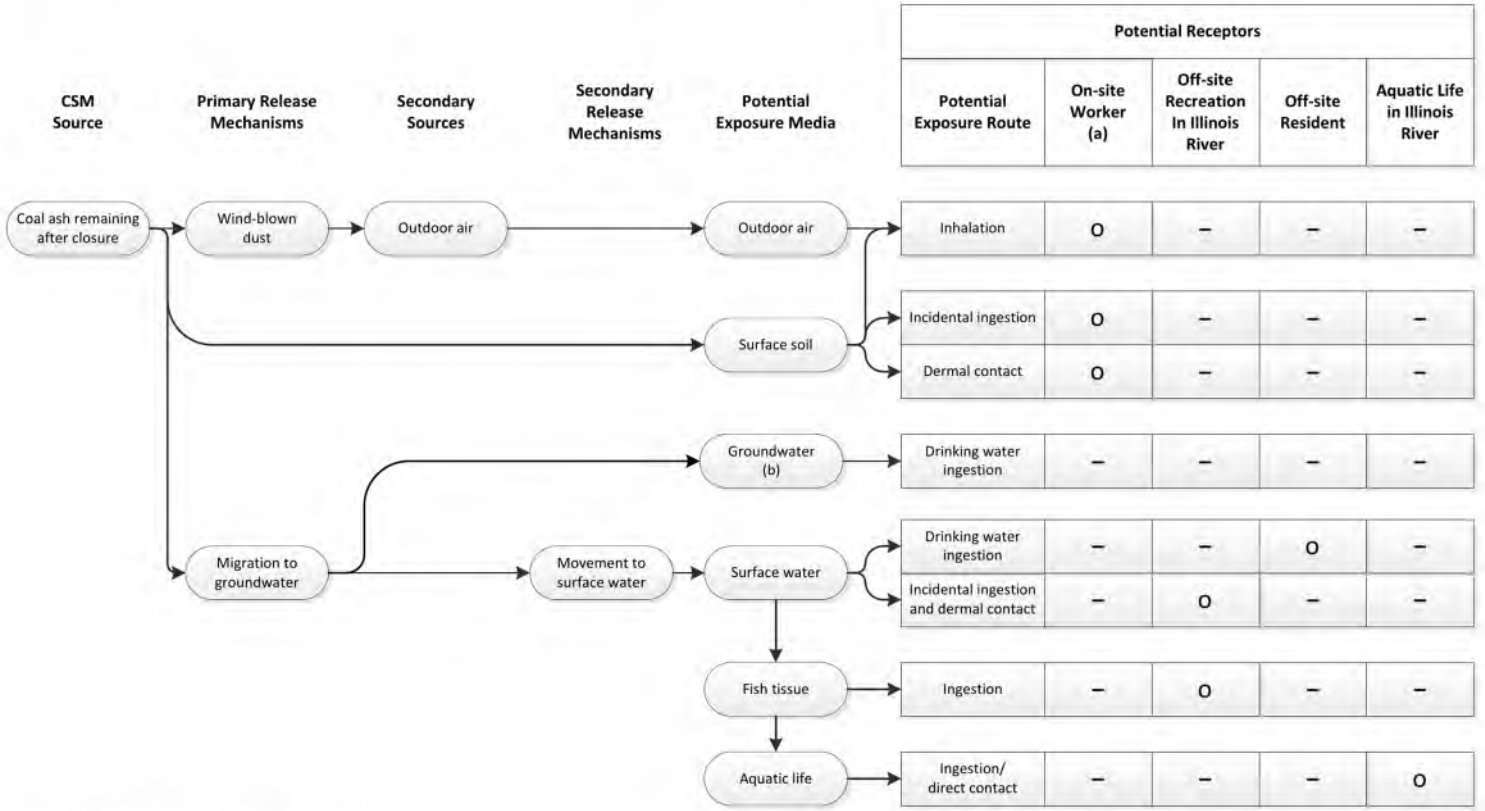
Figure 7
Preliminary Conceptual Site Model
Old Meredosia Risk Evaluation
Ameren Meredosia Power Station, Illinois



Am. Pet. Ex. 3 (H&A Risk Evaluation), Figure 7 – Preliminary Conceptual Site Model – PAS App'x p. 1067

Final Conceptual Site Model

Figure 8
Final Conceptual Site Model Old Meredosia Risk Evaluation Ameren
Meredosia Power Station, IL



Am. Pet. Ex. 3 (H&A Risk Evaluation), Figure 8 – Final Conceptual Site Model – PAS App'x p. 1068

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Potential Adverse Impacts of Part 845 Closure

- Removing seventeen acres of fifty-year-old forest and habitat;
- construction traffic, accidents, and safety;
- dust;
- fuel and emissions – 30,000 truck trips for removal or 15,000 for a new cover;
- consumption of borrow soil and landfill space; and the cost

Current Conditions versus Part 845

Status Quo Condition Old Meredosia			IL Part 845 Implications / Impacts				
Engineering Element	Engineering Performance	Overall Risk / Environmental Performance	Construction Activity	CIP (Closure in Place with 845 Cover)	CBR (Closure by Removal)	Likelihood of Construction / Operational Impact	Improvement / Benefit to Overall Environmental Performance
Pond stratigraphy and positive groundwater separation	positive groundwater separation	No Risk and Adequate Environmental Protection In Current Condition	Removal of Vegetative Cover and Regrading of Footprint	X	X	High Impacts to Ecosystem /Habitat	No Notable Improvement or Benefit to Overall Environmental Performance
Stability of embankments and cover erosion protection/management	stable conditions and erosion managed		CCR removal and decontaminating all areas in pond footprint	N/A	X	High - land disturbance and CCR handling	
Infiltration management – cover and vegetative protection	positive runoff and adequate infiltration management		Truck/Material Transport Across Public Roads (either importing new materials or removal of CCRs)	X	X	Medium/High - transport risks	
Ecological assessment conditions – highlights and benefits of current ecosystem	supports thriving ecosystem and protection of habitat		Construction of Part 845 Compliant Cap (excluding importing of large quality of cover materials)	X	N/A	Medium/High - land disturbance and CCR handling	

Am. Pet. Ex. 2 (H&A 2023 Technical Memorandum), Summary Comparison – Status Quo Conditions vs. Part 845 Implications/Impacts – PAS App'x p. 634

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Findings and Conclusions

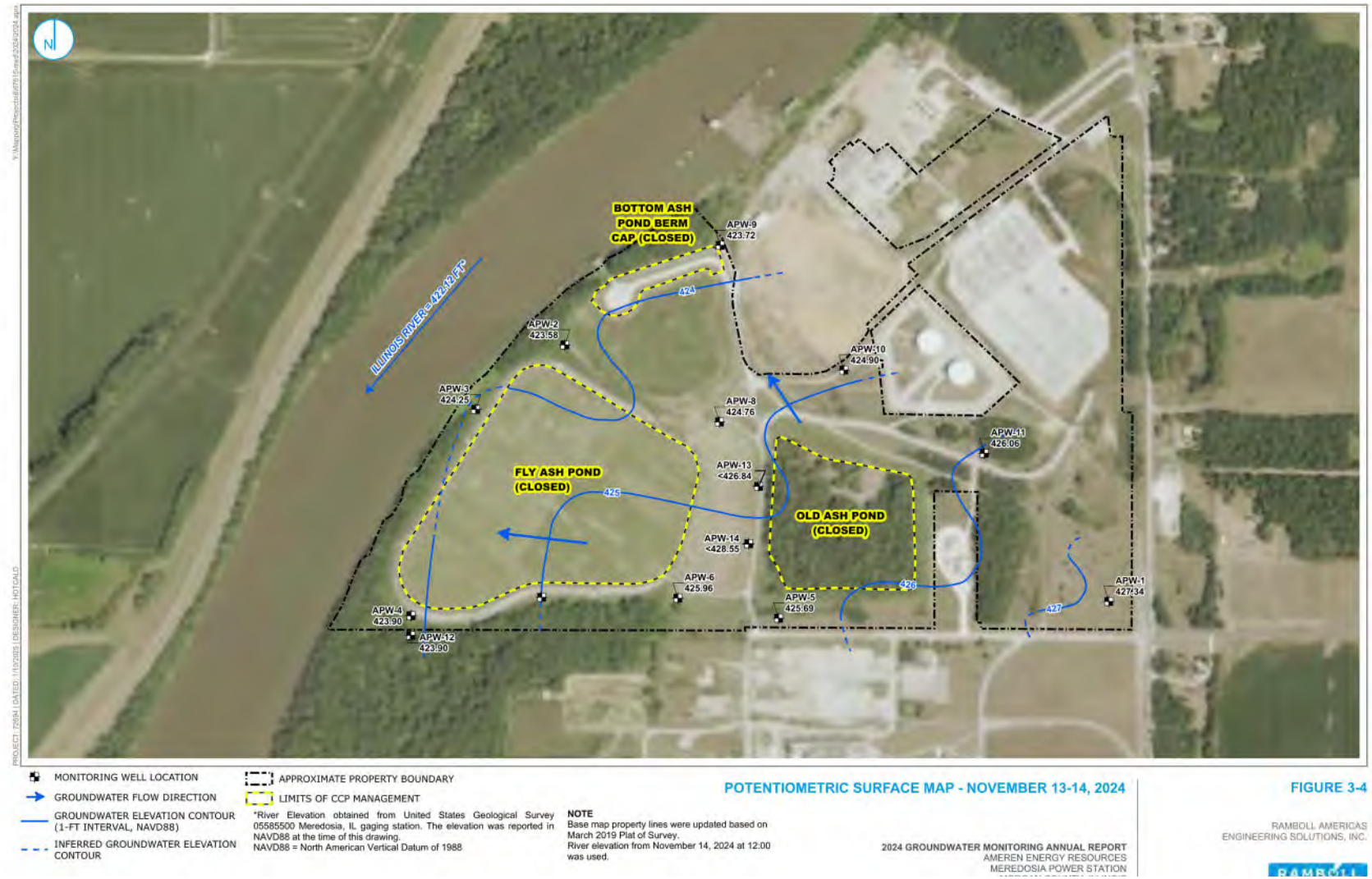
- Current Unit closure is protective of human health and the environment
- Destruction of the existing ecosystem;
- Medium to high likelihood of construction impacts
- No additional protection for Part 845 Closure

Haley & Aldrich Update Memorandum, April 3, 2026

Dimitri Quafisi, P.G. and Neal Kochis

- Predominate nature of the groundwater flow at the Site
- Evaluation of the separation between the base of the unit and the seasonal high groundwater
- Evaluation of the potential for groundwater flow off Site

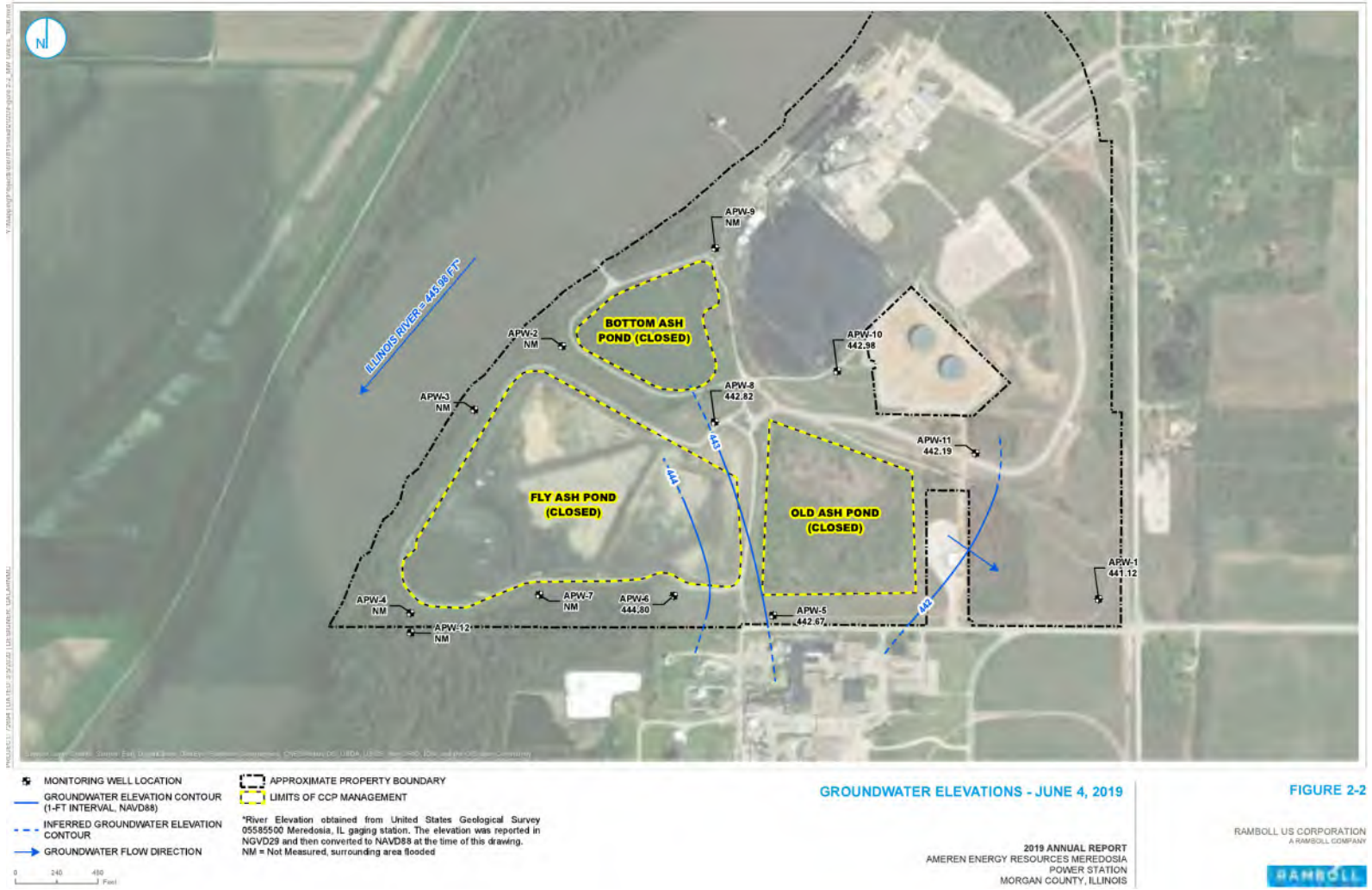
Which way the groundwater flows – normal conditions



2d Am. Pet. Ex. 7, Att. A (contour maps) – Potentiometric Surface Map, November 13 to 14, 2024 (Ramboll) – PAS App'x p. 1218

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Which way the groundwater flows – abnormal conditions



Electronic Filing: Received, Clerk's Office 11/13/2026

The river, 2009 to 2024

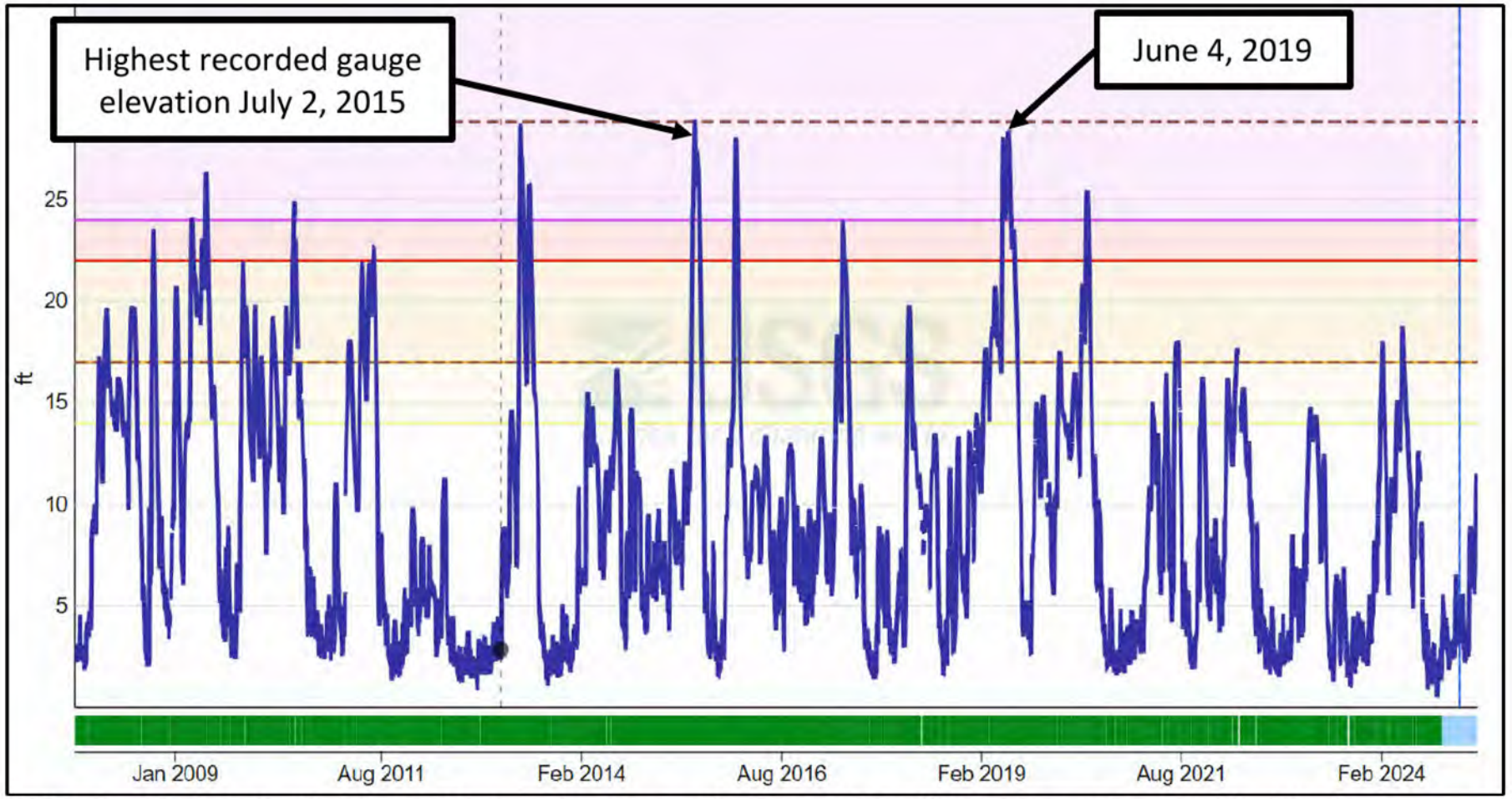


Figure 2 – USGS gauge height continuous data for station 05585500, Illinois River at Meredosia, Illinois.

2d Am. Pet. Ex. 7 (H&A Update Memo), Figure 2 – USGS gauge 05585500, Illinois River at Meredosia – PAS App'x p. 1169

2019 Flood Period from May through June

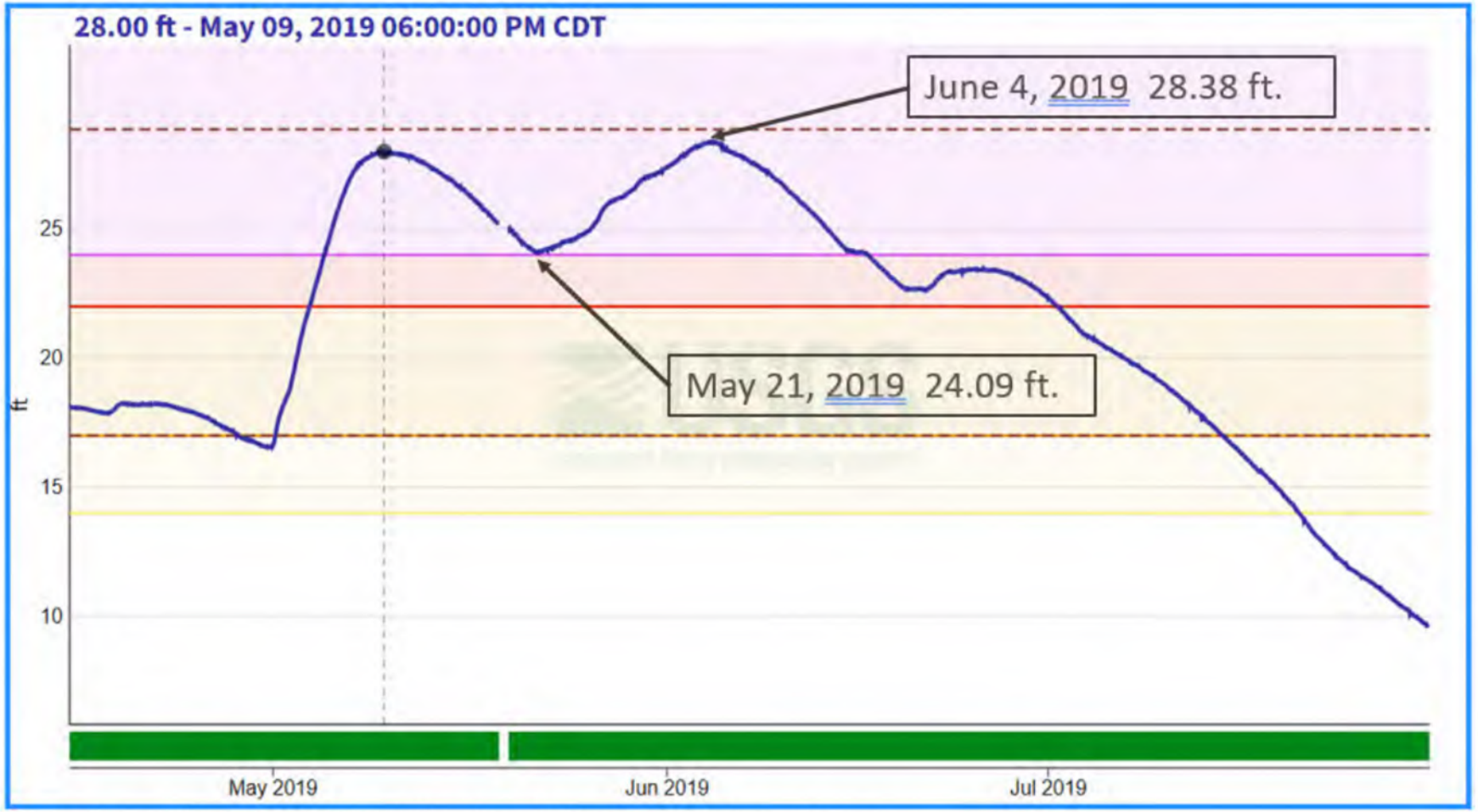


Figure 3: Detailed view of 2019 flood period from May through June.

2d Am. Pet. Ex. 7 (H&A Update Memo), Figure 3 – Detailed view of the 2019 flood period, May through June – PAS App'x p. 1170

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Groundwater Does Not Intersect with the Base of Old Meredosia

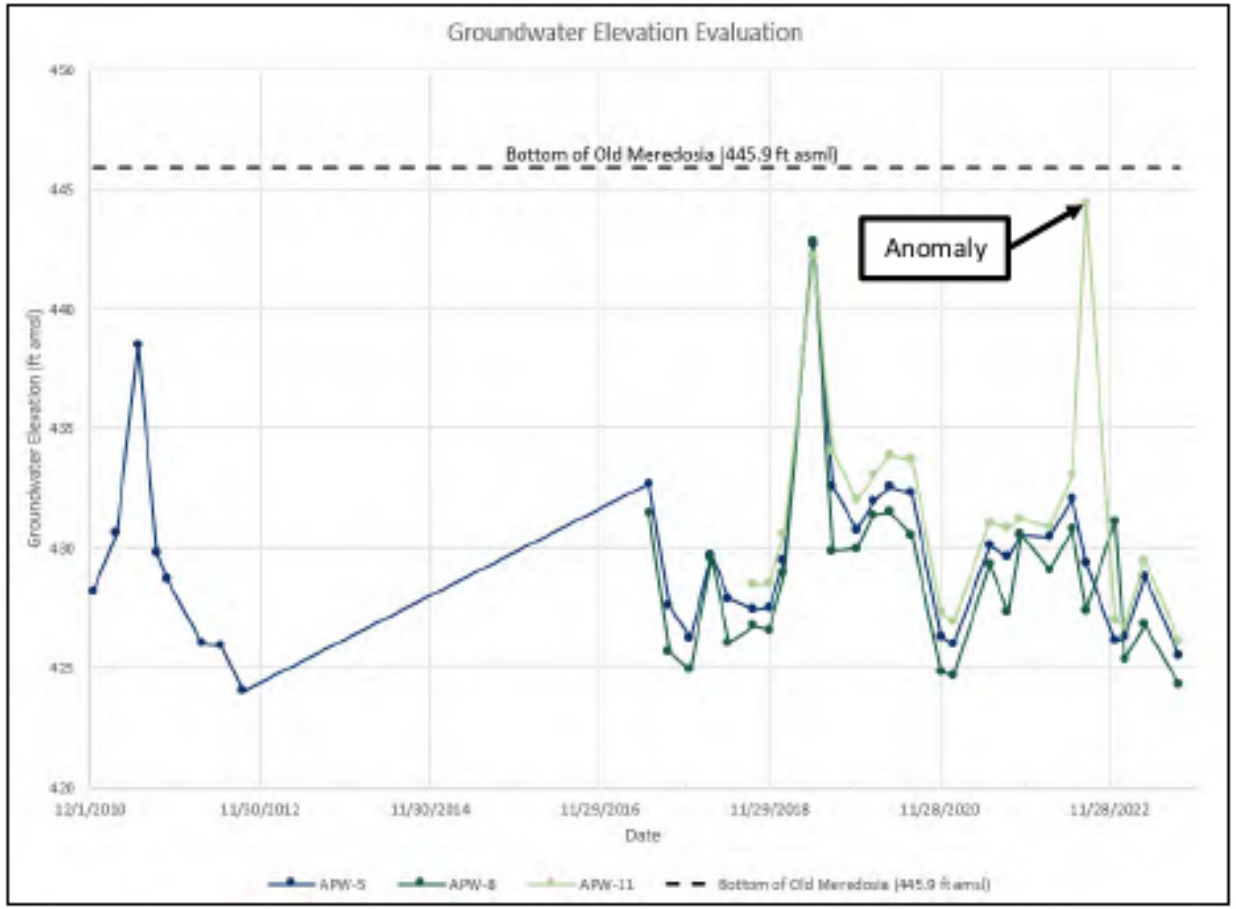


Figure 4: Groundwater elevations over time for three monitoring wells near the Old Meredosia Unit. Elevation of the bottom of the unit is presented for reference.

2d Am. Pet. Ex. 7 (H&A Update Memo), Figure 4 – Groundwater elevations at APW-5, APW-8 and APW-11; bottom of Old Meredosia at 445.9 ft – PAS App'x p. 1171



MONITORING WELL LOCATION
GROUNDWATER ELEVATION CONTOUR (1-FT INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION

APPROXIMATE PROPERTY BOUNDARY
LIMITS OF CCP MANAGEMENT

*River Elevation obtained from United States Geological Survey 05585500 Meredosia, IL gaging station. The elevation was reported in NGVD29 and then converted to NAVD88 at the time of this drawing.
¹= Groundwater Elevation Not Used For Contouring
²= Well Dry. Groundwater Level Below Bottom of Well Elevation Shown
NGVD29 = National Geodetic Vertical Datum of 1929
NAVD88 = North American Vertical Datum of 1988

NOTE
Base map property lines were updated based on March 2019 Plat of Survey.

1209

GROUNDWATER ELEVATIONS - AUGUST 17-18, 2022

FIGURE 3-3

2022 GROUNDWATER MONITORING ANNUAL REPORT
AMEREN ENERGY RESOURCES
MEREDOSIA POWER STATION
MORGAN COUNTY, ILLINOIS

RAMBOLL US CORPORATION

The velocity calculation

HALEY ALDRICH

CALCULATIONS

Client	Ameren Energy	File No.	0206891-001
Project	Meredosia Power Station	Sheet	1 of 2
Subject	Groundwater Seepage Velocity Calcs	Date	17 November 2023
		Computed By	John Blue
		Checked By	Dimitri Quafisi

Calculation for the estimated groundwater velocity across the old closed ash pond at the Site during a high river stage event in June of 2019.



Hydraulic Conductivity values are estimated at 5.66 x 10^{-2} cm/s based on values reported for the Site area.

The monitoring wells were not tested for hydraulic conductivity; however, Gibb et al. (1979) published hydraulic conductivity values for wells along the Illinois waterway, which included a site-specific value of 1,200 gallons per day/square foot (gpd/ft^2). Both a maximum and an average hydraulic gradient were used. The average hydraulic gradient was based on the ten groundwater gauging events. Two groundwater gauging events were not used because of flooding and inaccessibility of the wells. Removing flooding events provides a more conservative value. The cross sectional area was assumed to be over the entire thickness of the aquifer, and along the entire length of the Fly Ash Pond parallel to the river, plus 50 feet north and south of the pond.

\\haleyaldrich.com\share\CF\Projects\0206891\Project Data\2023 Collection Trench Option

HALEY ALDRICH

CALCULATIONS

Client	Ameren Energy	File No.	0206891-001
Project	Meredosia Power Station	Sheet	2 of 2
Subject	Groundwater Seepage Velocity Calcs	Date	17 November 2023
		Computed By	John Blue
		Checked By	Dimitri Quafisi

$$v = -\frac{K}{n_e}\frac{dH}{dL}$$

v = Seepage velocity, ft./day
K = hydraulic conductivity, ft./day
dH = change in head, ft.
dL = change in length, ft.
n_e = effective porosity, dimensionless

Seepage calculations, k = 5.66E-02 cm/sec. to 5.66E-03 cm/sec.

	Description	v (ft./day)	K (ft./day)	n_e dimensionless	dH (ft.)	dL (ft.)
1. K_{max}		0.802	1.60E+02	0.2	1	1000.0
2. K_{min}		0.080	1.60E+01	0.2	1	1000.0

Groundwater Velocity across old closed ash pond:

K_{max} v = 0.802 ft/day
K_{min} v = 0.08 ft/day

Notes:
Hydraulic Conductivity is based on literature values for the area as no onsite values are available.
effective porosity is assumed to be 0.2 based on typical literature values for sand
distance between contours estimated from 2016 Part 1A Hydro-Geo-Report

Calculation to estimate seepage velocity across the old closed ash pond using the following assumptions:

- **Hydraulic Conductivity –** Based on literature values for the area as no onsite values are available. 1200 gpd/ft^2 is equal to approximately 5.66 x 10^{-2} cm/s. Range of K values used with an order of magnitude less to show variability potential.
- **Effective Porosity –** effective porosity is assumed to be 0.2 based on typical literature values for sand
- **Distance between contours** – Estimated from 2016 Hydro-Geo-Report

\\haleyaldrich.com\share\CF\Projects\0206891\Project Data\2023 Collection Trench Option

1221

2d Am. Pet. Ex. 7, Att. B (velocity calculation) – Groundwater Seepage Velocity Calculation (computed J. Blue, checked D. Quafisi, Nov. 17, 2023) – PAS App'x pp. 1220 to 1221

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How long the 2019 flood lasted

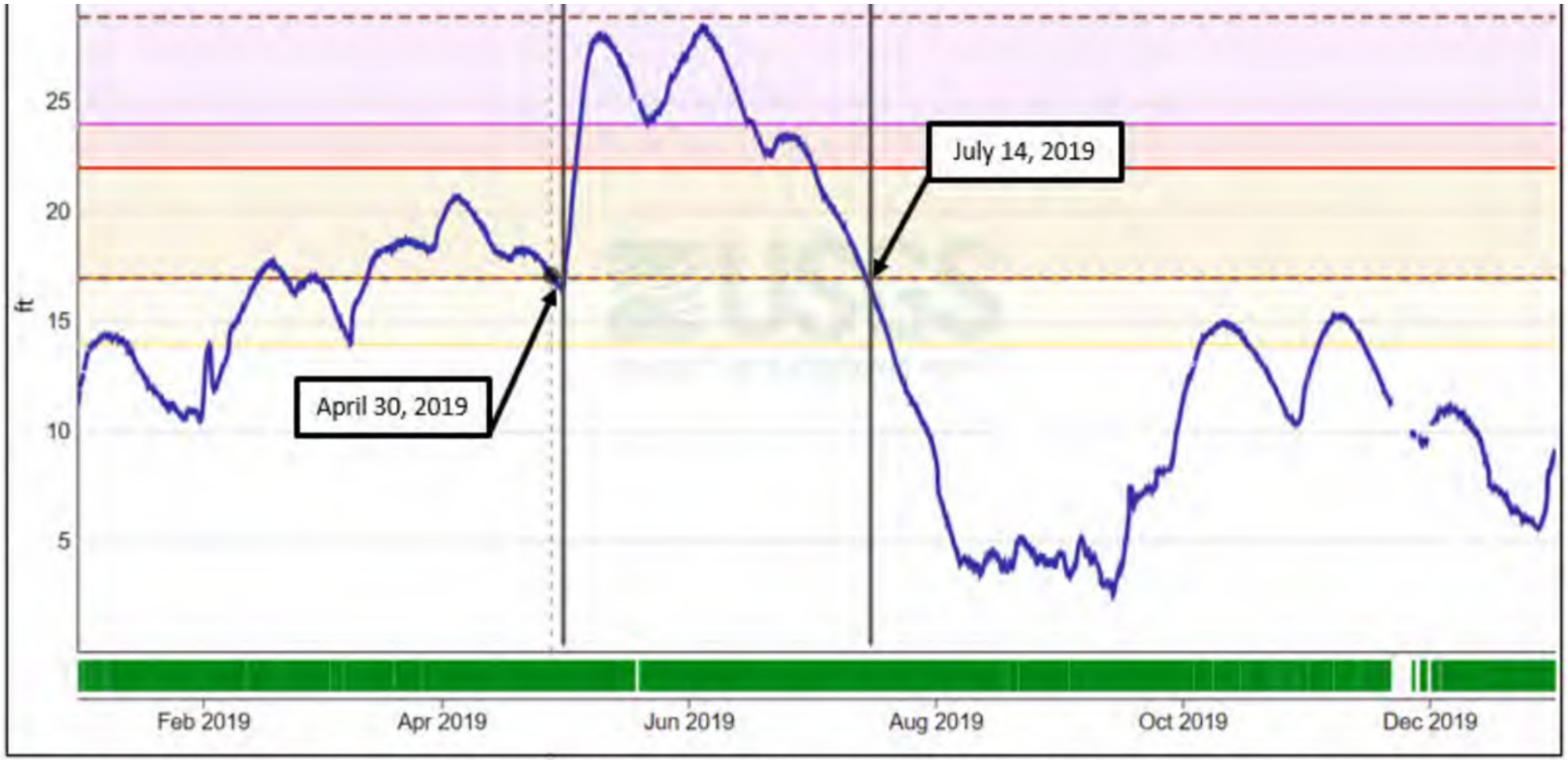


Figure 5: USGS gauging station 05585500 showing the time period for the June 4, 2019 flooding event.

2d Am. Pet. Ex. 7 (H&A Update Memo), Figure 5 – USGS gauging station 05585500, the June 4, 2019 flood period – PAS App'x p. 1172

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Conclusions

- The predominate groundwater flow direction across the Site is from the east to the west/northwest toward the primary hydrogeologic control within the vicinity of the Illinois River.
- The groundwater is in communication with the surface water at the Site, and flood events in the river influence groundwater flow direction, resulting in rare temporary flow reversals during flooding events.
- The separation between the Old Meredosia unit and the groundwater is generally over 10 feet; however, during extreme flooding conditions like those seen in June 4, 2019, separation is still present. Under normal seasonal high-water conditions, the unit does not have a hydraulic connection to the groundwater.
- During the most extreme of the three observed reversals, the sustained reversal lasted approximately 75 days; the time required to travel from the edge of the unit to the property boundary is approximately 140 days, making transport off Site virtually impossible.
- Even under extreme flood conditions, groundwater would not travel from the edge of the unit to the eastern property boundary before flows returned to natural conditions, to the west/northwest.
- No risk to human health or the environment
- The adverse consequences of a Part 845 closure outweigh the potential benefits

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In the Matter of: Ameren Energy Medina Valley Cogen, LLC (Old Meredosia

Testimony of Matthew Basler

Sr. Natural Resources Technical Professional, WSP

Nov. 17, 2026

2023 WSP Report

March 10, 2023

Claire A. Manning, Attorney
BROWN HAY + STEVENS
205 S. Fifth Street
Suite 1000
PO Box 2459
Springfield, IL 62705

Re: Expert Witness Support for Petition for Adjusted Standard for Old Meredosia, Illinois Pollution Control Board Docket AS 2021-008 – Site Investigation Report

Dear Ms. Manning:

At your request WSP USA Environment and Infrastructure, Inc. (WSP) has completed our review of information and site reconnaissance of a long-closed former ash pond, known as Old Meredosia, in Meredosia, Illinois. The attached document provides a summary of the technical approach of our work and key findings.

At your request I have also attached a copy of my resume in Appendix B.

Please let us know is you have any questions or would like to discuss further.

Sincerely,

WSP USA Environment and Infrastructure, Inc.

William Elzinga
Principal Manager
Enclosures

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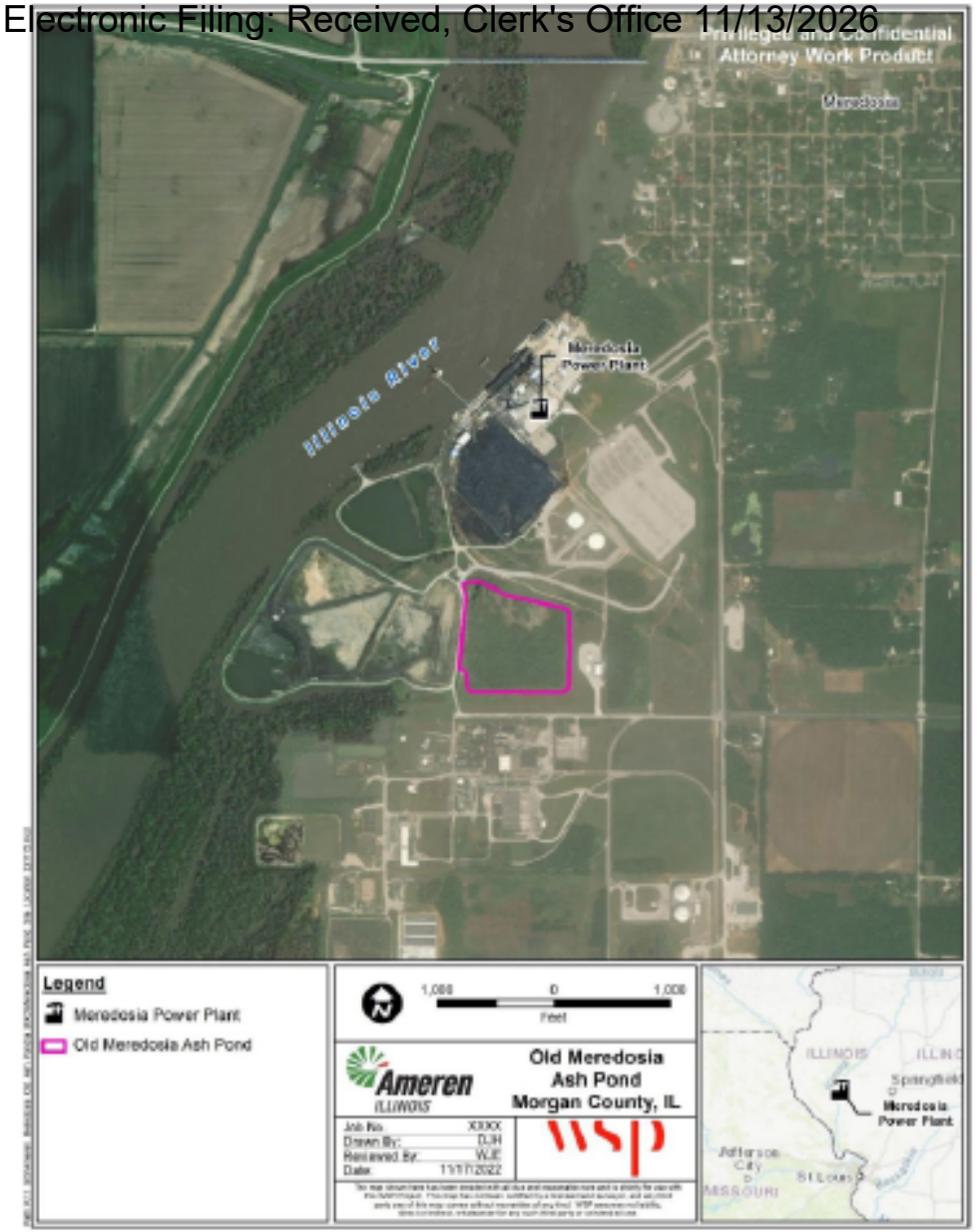


Figure 1-1 Old Meredosia Location

2026 WSP Updated Report

Information Updates from August 2026 Old Meredosia Site Visit

October 1, 2026

WSP USA, Inc. (WSP) conducted field reconnaissance within Old Meredosia on August 5, 2026. The visit in August 2026 provided updated information from the November 2022 site visit and associated October 2023 Site Investigation Report. Field reconnaissance further identified ecological resources present in Old Meredosia and was conducted by WSP personnel with expertise in the identification and management of key resource issues such as aquatic resources, waters of the U.S., and terrestrial and aquatic ecology.

Specific field reconnaissance elements from the August 2026 site visit at Old Meredosia included the identification and location of:

- Plant communities
- Bald eagle or other raptor nests
- Observations of encountered flora and fauna via direct observations or indirect observations (calls, tracks, feathers, scat)
- Observations of flora or fauna listed on IPaC and/or EcoCAT reviews
- Habitats supporting communities exhibiting functional value

Opinions and conclusions provided from the October 2023 Site Investigation Report regarding ecological resources and potential implications and effects of ash pond closure remain unchanged. Below are additional information updates and related opinions from the August 2026 site visit.

Table 1 Protected Species Potentially Occurring within or near the Old Meredosia Project Site

Common Name	Scientific Name	Status		
		Federal		State
		ESA	BGEPA	
Mammals				
Indiana bat[1]	*Myotis sodalis*	Endangered		
Northern Long-eared bat[1,2]	*Myotis septentrionalis*	Threatened		
Tricolored bat[1,2]	*Perimyotis subflavus*	Proposed Endangered		
Birds				
Bald eagle[3]	*Haliaeetus leucocephalus*		X	
Northern harrier	*Circus cyaneus*			Endangered, Imperiled
Amphibians				
Illinois chorus frog	*Pseudacris illinoensis*			Threatened, Imperiled
Insects				
Monarch butterfly	*Danaus plexippus*	Proposed Threatened		
Regal fritillary	*Speyeria idalia*	Proposed Threatened		Threatened, Imperiled
Plants				
Decurrent false aster[1]	*Boltonia decurrens*	Threatened		

Source: USFWS 2026; IDNR 2026
1-ESA, 2-Species may occur within 5-mi vicinity, 3-BGEPA

Table 2 Migratory Birds of Conservation Concern that have the Potential to be in the Vicinity of the Old Meredosia Project Area

Common Name	Scientific Name	Breeding Season
American golden-plover	*Pluvialis dominica*	Breeds elsewhere
* Bald eagle	*Haliaeetus leucocephalus*	Breeds Oct 15 to Aug 31
Black-billed cuckoo	*Coccyzus erythropthalmus*	Breeds May 15 to Oct 10
Chimney swift	*Chaetura pelagica*	Breeds Mar 15 to Aug 25
Eastern whip-poor-will	*Antrostomus vociferus*	Breeds May 1 to Aug 20
Golden eagle	*Aquila chrysaetos*	Breeds elsewhere
Grasshopper sparrow	*Ammodramus savannarum perpallidus*	Breeds June1 to Aug 20
Kentucky warbler	*Geothlypis formosus*	Breeds Apr 20 to Aug 20
Lesser yellowlegs	*Tringa flavipes*	Breeds elsewhere
Pectoral sandpiper	*Calidris melaotos*	Breeds elsewhere
Prothonotary warbler	*Protonotaria citrea*	Breeds Apr 1 to Jul 31
* Red-headed woodpecker	*Melanerpes erythrocephalus*	Breeds May 10 to Sep 10
Rusty blackbird	*Euphagus carolinus*	Breeds elsewhere
Semipalmated sandpiper	*Calidris pusilla*	Breeds elsewhere
Short-billed dowitcher	*Limnodromus griseus*	Breeds elsewhere
Wood thrush	*Hylocichla mustelina*	Breeds May 10 to Aug 31

Source: USFWS, 2026

* Observed onsite

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Figure 3-1 Old Meredosia Land Cover



Dominant forested community representative of the majority of the Old Meredosia site. 08/05/26



Sand prairie within north portion of Old Meredosia site. DOV is northeast. 08/05/2026.

2022 and 2026 Plants Observed

Table 3 Observed Plants within the Old Meredosia Site

Botanical Name	Common Name	Native Status	C
Abutilon theophrasti	Velvetleaf	Non-native	*
Acer negundo	Box elder	Native	1
Ageratina altissima	White snakeroot	Native	2
Alliaria petiolata	Garlic mustard	Non-native	*
Allium vineale	Field garlic	Non-native	*
Ambrosia artemisiifolia	Common ragweed	Native	0
Ambrosia psilostachya	Perennial ragweed	Native	2
Andropogon gerardi	Big bluestem	Native	5
Asclepias syriaca	Common milkweed	Native	0
Bidens bipinnata	Spanish needles	Non-native	*
Boehmeria cylindrica	False nettle	Native	3
Bouteloua curtipendula	Side-oats grama	Native	7
Bromus inermis	Smooth brome	Non-native	*
Carduus nutans	Musk thistle	Non-native	*
Carex davisii	Awned graceful sedge	Native	3
Carex frankii	Frank's sedge	Native	4
Celtis occidentalis	Hackberry	Native	3
Chamaecrista fasciculata	Partridge pea	Native	1
Chenopodium album	Lamb's quarters	Non-native	*
Cirsium discolor	Field thistle	Native	5
Commelina erecta var. erecta	Day flower	Native	5
Croton glandulosus var. septentrionalis	Sand croton	Native	1
Daucus carota	Queen Anne's lace	Non-native	*
Desmodium paniculatum	Panicled tick trefoil	Native	2
Diospyros virginiana	Persimmon	Native	2
Eragrostis trichodes var. trichodes	Sandthread lovegrass	Native	5
Erigeron canadense	Horseweed	Native	1
Erigeron strigosus	Daisy fleabane	Native	2
Euonymus fortunei	Wintercreeper	Non-native	*
Eupatorium serotinum	Late thoroghwort	Native	1
Euphorbia dentata	Toothed spurge	Native	0
Fraxinus pennsylvanica	Green ash	Native	5
Geum canadense	White avens	Native	2
Gleditsia triacanthos	Honey locust	Native	2
Hackelia virginiana	Virginia stickseed	Native	1
Helianthus sp.	Sunflower	Native	*
Helianthus hirsutus	Bristly sunflower	Native	5
Helianthus petiolaris	Petioled sunflower	Non-native	*
Heterotheca camporum	Golden aster	Native	5
Heterotheca subaxillaris	Camphorweed	Native	2
Juniperus virginiana	Eastern red cedar	Native	1
Lonicera maackii	Amur honeysuckle	Non-native	*
Melilotus alba	White sweet clover	Non-native	*
Monarda punctata var. villicaulis	Spotted beebalm	Native	5
Morus alba	White mulberry	Non-native	*
Oenothera clelandi	Sand primrose	Native	5
Opuntia cespitosa	Eastern prickly pear	Native	5
Oxalis dillenii	Wood sorrel	Native	0
Panicum flexile	Slender panic grass	Native	7
Panicum philadelphicum	Philadelphia panicgrass	Native	5
Parthenocissus quinquefolia	Virginina creeper	Native	2
Paspaulum setaceum var. muhlenbergii	Downy lense grass	Native	3
Persicaria virginiana	Jumpseed	Native	3
Phytolacca americana	Pokeweed	Native	1
Platanus occidentalis	Sycamore	Native	3
Poa pratensis	Kentucky bluegrass	Non-native	*
Populus deltoides	Eastern cottonwood	Native	2
Quercus velutina	Black oak	Native	5
Rhus aromatica	Fragrant sumac	Native	4
Rhus glabra	Smooth sumac	Native	1
Ribes missouriense	Missouri gooseberry	Native	2
Robinia pseudoacacia	Black locust	Native	1
Rubus flagellaris	Northern dewberry	Native	4
Rubus occidentalis	Black raspberry	Native	2
Salix nigra	Black willow	Native	3
Sanicula canadensis	Canadian black snakeroot	Native	4
Saponaria officinalis	Soapwort	Non-native	*
Schizachyrium scoparium	Little bluestem	Native	4
Setaria pumila	Pigeon grass	Non-native	*
Setaria viridis	Green foxtail	Non-native	*
Sida spinosa	Prickly sida	Non-native	*
Smilax hispida	Bristly greenbriar	Native	3
Solanum carolinense	Horsenettle	Native	0
Solanum ptychanthum	Eastern black nightshade	Native	0
Solidago altissima	Tall goldenrod	Native	1
Sporobolus cryptandrus	Sand dropseed	Native	4
Stellaria media	Common chickweed	Non-native	*
Strophostyles helvola	Annual sand bean	Native	3
Swida drummondii	Roughleaf dogwood	Native	2
Teucrium canadense	Teucrium canadense	Native	3
Toxicodendron radicans	Poison ivy	Native	1
Tridens flavus	Tridens flavus	Native	5
Triodanis perfoliata	Venus's looking glass	Native	2
Urtica dioica	Urtica dioica	Native	2
Verbascum thapsus	Verbascum thapsus	Non-native	*
Verbena stricta	Hoary vervain	Native	2
Verbena urticifolia	White vervain	Native	3
Vitis sp.	Grape	Native	*
Xanthium chinense	Cocklebur	Native	0
Yucca flaccida	Weakleaf yucca	Non-native	*

Total native species (n)	**69**
Total species (n)	**90**
Mean Native C	**2.6**
Total Mean C	**2.0**
Native FQI	**21.6**
Total FQI	**19.0**

c = conservation value, from 0 (habitat generalist) to 10 (extremely restricted habitat) (Swink and Wilhelm 1994)
* indicates where no value has been assigned to the species
FQI = Floristic Quality Index
Species denoted in red are additional observations from the August 2026 field visit

Sand Prairie Plant Species



Sand prairie plant species, sand primrose observed in north portion of the Old Meredosia site. 8/5/2026.



Sand prairie plant species, spotted beebalm observed in north portion of the Old Meredosia site. 8/5/2026



Sand prairie plant species, prickly pear, observed in north portion of the Old Meredosia site. 8/5/2026

Native Plant Species



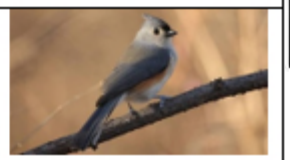
Native plant species, Commelina, observed at Old Meredosia site. 8/5/2026



Federally proposed threatened species, monarch butterfly observed in southeast portion of the Old Meredosia site on a common milkweed (native). 8/5/2026.

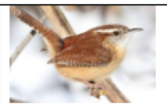
Bird Species Observed 2022 and 2026

Common name	Scientific name	Photo
American Goldfinch	*Spinus tristis*	
Downy woodpecker	*Dryobates pubescens*	
Northern cardinal	*Cardinalis cardinalis*	
Black-capped chickadee	*Poecile atricapillus*	

Common name	Scientific name	Photo
American robin	*Turdus migratorius*	
Yellow-rumped warbler	*Setophaga coronata*	
Mourning dove	*Zenaida macroura*	
Tufted titmouse	*Baeolophus bicolor*	
Turkey vulture	*Cathartes aura*	

Common name	Scientific name	Photo
Blue grosbeak	*Passerina caerulea*	
Killdeer	*Charadrius vociferus*	
White-breasted nuthatch	*Sitta carolinensis*	
Common nighthawk	*Chordeiles minor*	

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Common name	Scientific name	Photo
Barn swallow	*Hirundo rustica*	
Red-headed woodpecker	*Melanerpes erythrocephalus*	
Blue jay	*Cyanocitta cristata*	
Carolina wren	*Thryothorus ludovicianus*	
Yellow-billed cuckoo	*Coccyzus americanus*	

Common name	Scientific name	Photo
Brown thrasher	*Toxostoma rufum*	
Indigo bunting	*Passerina cyanea*	
Northern mockingbird	*Mimus polyglottos*	
Northern bobwhite	*Colinus virginianus*	
Song sparrow	*Melospiza melodia*	



Migratory bird of conservation concern, red-headed woodpecker (juvenile) observed in southeast portion of the Old Meredosia site. 8/5/2026.

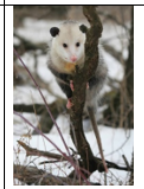
Bird Species Observed 2022 and 2026

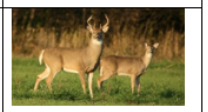
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Mammal and Reptile Species Observed 2022 and 2026



Six-lined racerunner in sand prairie habitat in north portion of the Old Meredosia site. 8/5/2026.

Common name	Scientific name	Photo
Virginia opossum	*Didelphis virginiana*	
Raccoon	*Procyon lotor*	
Eastern mole	*Scalopus aquaticus*	

Common name	Scientific name	Photo
White-tailed deer	*Odocoileus virginianus*	
Eastern cottontail	*Sylvilagus floridanus*	
Eastern gray squirrel	*Sciurus carolinensis*	

Common name	Scientific name	Photo
Six-lined racerunner	*Aspidoscelis sexlineatus*	
Common five-lined skink	*Plestiodon fasciatus*	

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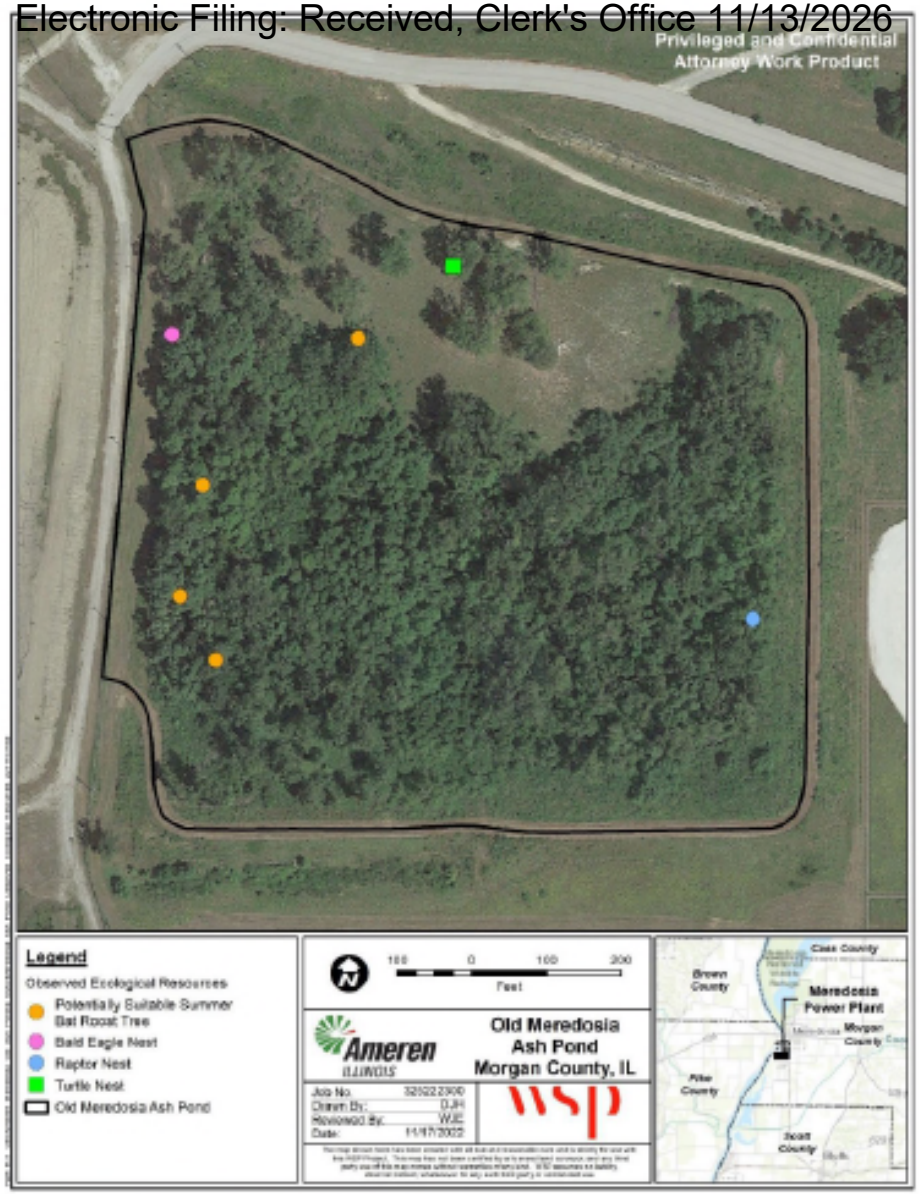


Figure 3-2 Old Meredosia Ash Pond Observed Ecological Resources

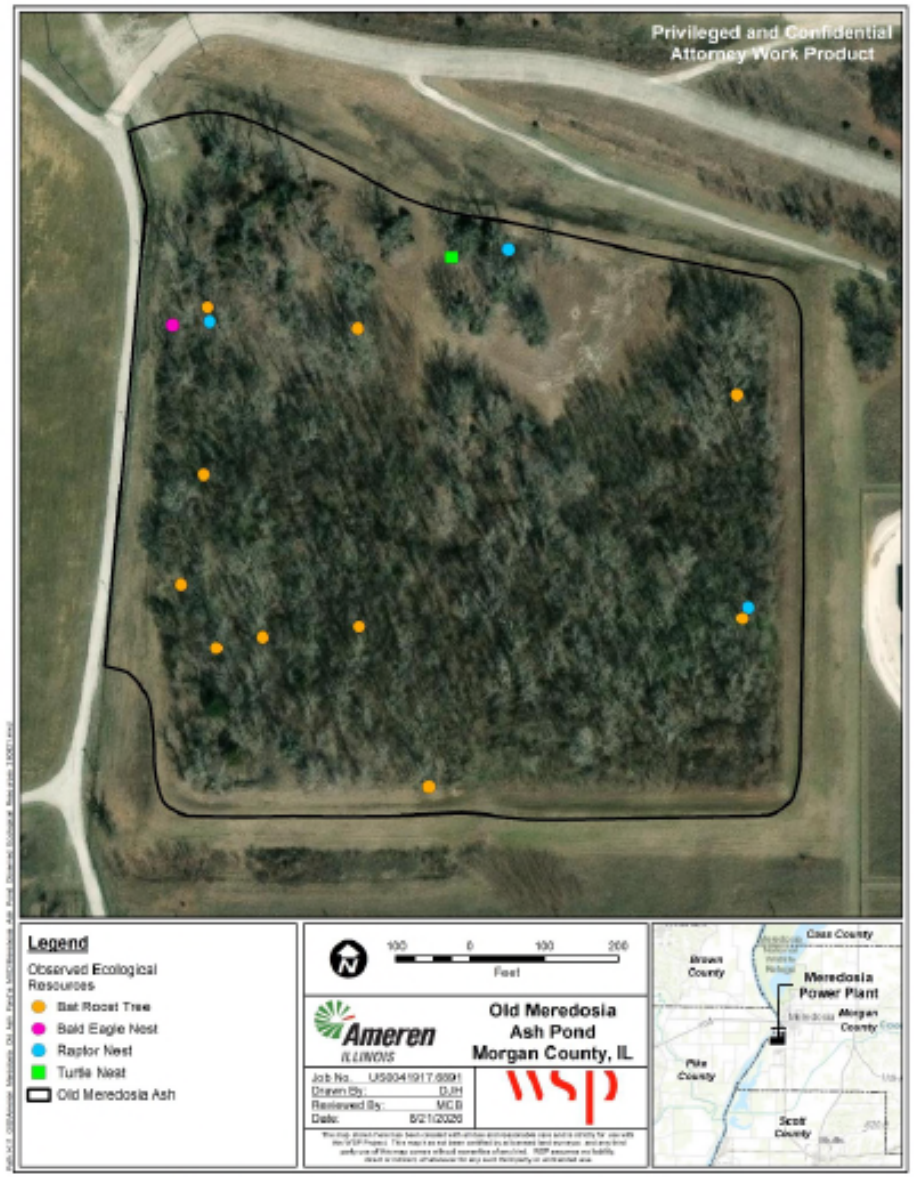


Figure 1 **Old Meredosia Observed Ecological Resources**



Bald eagle nest within northwest portion of Old Meredosia site. Direction of vie
11/11/2022.





Unidentified raptor nest within north portion of Old Meredosia site. DOV is southwest. 8/5/2026.





Potentially suitable summer bat roost tree with exfoliating bark in west portion of Old Meredosia site. 11/11/2022.



Potentially suitable summer bat roost tree with crevices and hollow in west portion of Old Meredosia site. 8/5/2026.



Indiana Bat



Northern Long-Eared Bat



Tri-Colored Bat



Photo 3. Unidentified aquatic turtle nest within northern sand prairie portion of Old Meredosia site. DOV is south. 11/11/2022.



Photo 4. Songbird nest within west portion of Old Meredosia site. DOVis south. 11/11/2022.

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Old Meredosia Sand Prairie Habitat In Relation To Illinois Chorus Frog Breeding Site



