

**POST-CLOSURE CARE PLAN
FLY ASH POND AND BOTTOM ASH POND
MEREDOSIA POWER STATION
800 SOUTH WASHINGTON STREET
MEREDOSIA, ILLINOIS**

Prepared for:

AMERENENERGY MEDINA VALLEY COGEN, LLC
St. Louis, Missouri

Prepared by:

GEOTECHNOLOGY, INC.
St. Louis, Missouri

Project No. J024917.05

March 12, 2018





POST-CLOSURE CARE PLAN
FLY ASH POND AND BOTTOM ASH POND
MEREDOSIA POWER STATION
800 SOUTH WASHINGTON STREET
MEREDOSIA, ILLINOIS

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
2.0 SITE LAYOUT.....	1
3.0 POST-CLOSURE MAINTENANCE PROGRAM	1
3.1 Frequency of Inspections	2
3.2 Erosion Control Maintenance	2
3.3 Drainage Channel Maintenance	2
3.4 Final Cover Maintenance	3
3.5 Vegetative Repair and Mowing	3
3.6 Miscellaneous Repairs	3
4.0 GROUNDWATER MONITORING SYSTEM.....	3
5.0 OPERATION & MAINTENANCE PLAN FOR STRUCTURES AND DEVICES	3
6.0 REFERENCES	3
7.0 LICENSED PROFESSIONAL SIGNATURE/SEAL	4

ILLUSTRATIONS

	<u>Plate</u>
Site Location and Topography.....	1
Site Plan and Monitoring Well Locations.....	2

POST-CLOSURE CARE PLAN
FLY ASH POND AND BOTTOM ASH POND
MEREDOSIA POWER STATION
800 SOUTH WASHINGTON STREET
MEREDOSIA, ILLINOIS

1.0 INTRODUCTION

This Post-Closure Care Plan for the AmerenEnergy Medina Valley Cogen, LLC, Meredosia Power Station Fly Ash and Bottom Ash Ponds Coal Combustion Waste Surface Impoundments (Meredosia) has been prepared in general accordance with the requirements of the site-specific rule in 35 Illinois Administrative Code (IAC) Part 840. Supporting documents are listed in Section 6.0 of this report and are being submitted concurrently with the Post-Closure Care Plan.

A written record of monitoring will be made and retained at the main office of the owner since the site will be decommissioned and demolished. This written record typically includes completed standard inspection forms and photographs. The inspector will assess the condition and need for repair of cover components, embankments, monitoring wells, and surface water control features. The inspections will be included in each of the annual groundwater reports.

2.0 SITE LAYOUT

The Meredosia Power Station is located at 800 South Washington Street, Meredosia, Illinois. The facility will be decommissioned and will be demolished. The Fly Ash and Bottom Ash Ponds are located southwest of the coal pile and plant facilities. The site location and topography are shown on Plate 1. The structures and ash ponds are shown on Plate 2.

3.0 POST-CLOSURE MAINTENANCE PROGRAM

The post-closure operation and maintenance program includes site inspections of surface disturbances, failures, adequacy of sand infill, storm water drainage channel maintenance, and repairs as required. This Post-Closure Plan applies the Fly Ash Pond, the Bottom Ash Berm, groundwater monitoring wells associated with the former ash ponds, and surface water drainage from the former ash ponds.

Site monitoring and repair records will be created and retained at the main office of the owner until the Illinois Environmental Protection Agency (IEPA) approves a certified Post-Closure Completion Report. The Post-Closure Completion Report will be submitted after 30 years of post-closure care activities.

3.1 Frequency of Inspections

For the first year after completion of closure activities and submittal of the Construction Quality Assurance (CQA) Acceptance Report, monthly site inspections of the Fly Ash Pond, the Bottom Ash Berm, and associated features will be performed. After the first year, the frequency may be changed to quarterly site inspections if the ClosureTurf® system is performing according to the design. After the five year period, site inspections will be performed at the same rate as groundwater sampling (Groundwater Monitoring Plan, Geotechnology, 2016), with a minimum frequency of once per year. Site inspections will occur until the IEPA approves a Post-Closure Completion Report.

3.2 Erosion Control Maintenance

The embankments for both ash ponds will be capped with ClosureTurf® and ArmorFill®, which do not require vegetation. Ash pond embankments below the 100-year flood elevation will also have rip-rap protection. Some areas that are currently vegetated near the ash ponds may be impacted during construction activities. These areas will be regraded and vegetated.

3.3 Drainage Channel Maintenance

Drainage channels on the cover and along the ash pond embankments will be lined with ArmorFill®, which minimizes erosion and sedimentation issues. Drainage channels outside of the ash pond will be natural or rock-lined. Metal culverts will be installed under roads as needed. However, soil or sand at the connections from the ArmorFill® to the drainage channels outside the ash ponds may erode due to the sudden change in gradient at connections with other drainage ways. Repair of energy dissipaters at the connections or localized material infill may be required. The repair material will consist of material similar to the infill and will be capped with a liner material or vegetated.

Storm water from the cap will exit the surface water control system into existing waterways onsite. These waterways will be monitored and repaired as necessary to reduce pooling and erosion. Eroded areas will be infilled with material similar to that which was eroded and capped with like material or vegetated.

3.4 Final Cover Maintenance

The ash in the Fly Ash Pond and the Bottom Ash Pond has consolidated for a minimum of five years. The ClosureTurf® and ArmorFill® systems are not sensitive to settlement, but if post-closure cover settlement occurs, localized repairs to maintain the integrity of the cover may be needed.

3.5 Vegetative Repair and Mowing

Vegetation and mowing is not required on the capped areas due to the use of ClosureTurf® and ArmorFill® to cover the ash ponds instead of vegetative cover.

3.6 Miscellaneous Repairs

Minor repairs may be required to maintain the integrity and proper function of fencing, surface water drainage structures, monitoring points, and groundwater monitoring wells. Repairs will be made as warranted.

4.0 GROUNDWATER MONITORING SYSTEM

The groundwater monitoring well locations, system, maintenance program, and monitoring program are provided under a separate cover titled the Groundwater Monitoring Plan (Geotechnology, 2016). Groundwater trend statistical analysis and mitigation of statistically significant increasing trends are addressed in the Groundwater Monitoring Plan. Two years after the ash ponds have been closed, the groundwater monitoring network will be re-evaluated based on the changes in the groundwater impacts.

5.0 OPERATION AND MAINTENANCE PLAN FOR STRUCTURES AND DEVICES

Operation and maintenance plans for currently planned structures are addressed in the associated sections of this report and the referenced reports. Operation and maintenance plans for future structures, if needed, will be prepared at the time those structures are installed.

6.0 REFERENCES

Geotechnology, 2016. "Groundwater Monitoring Plan, Fly Ash and Bottom Ash Ponds, Meredosia Power Station." Geotechnology, Inc., St. Louis, Missouri.

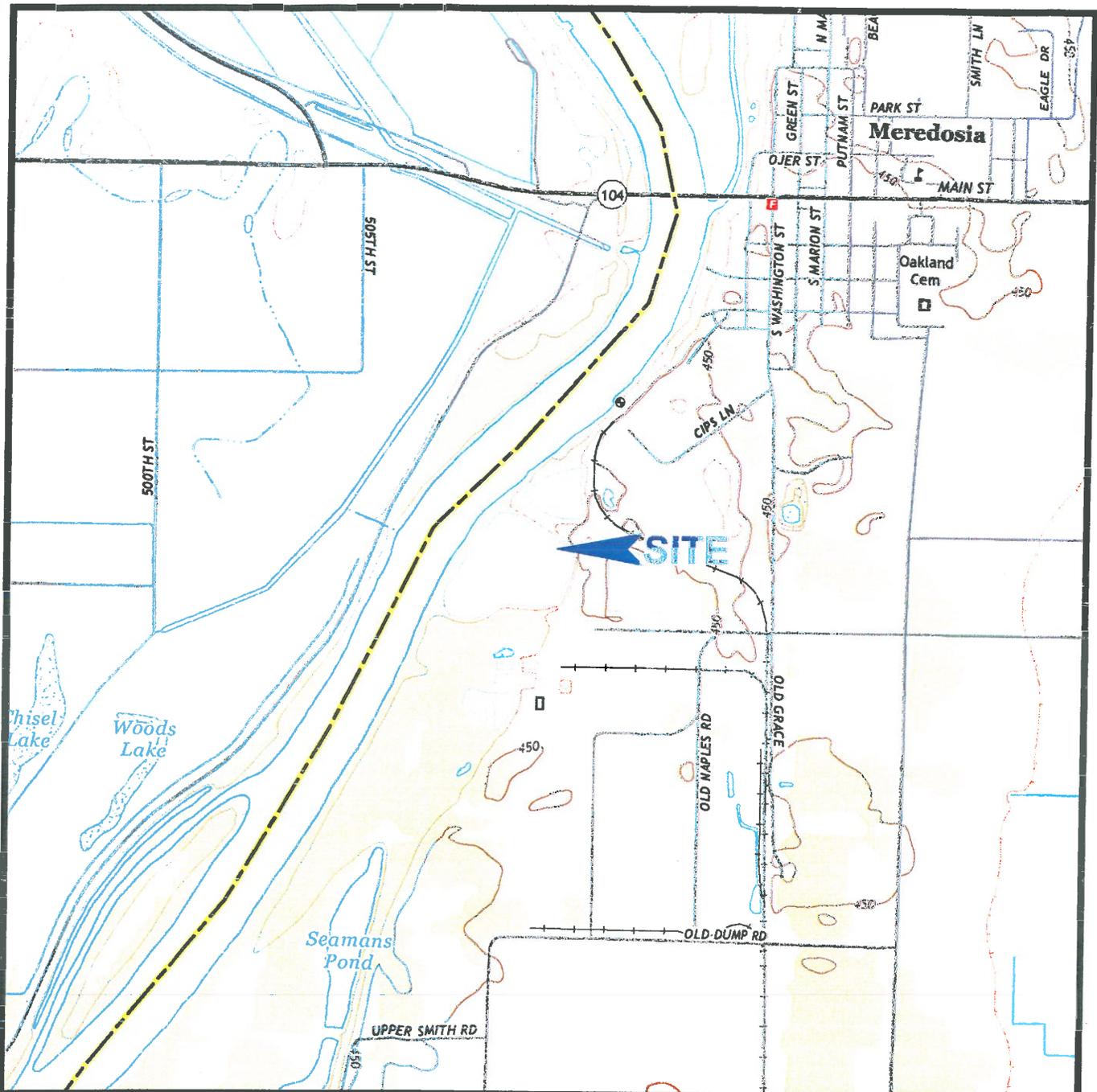
7.0 LICENSED PROFESSIONAL SIGNATURE/SEAL

I hereby affirm that the information contained in this Post-Closure Care Plan is true and accurate to the best of my knowledge and professional opinion.



Rosanna M. Saindon, P.E., Ph.D.
Illinois Licensed Professional Engineer
Project Manager
Geotechnology, Inc.





NOTES

1. Plan adapted from a 7.5 minute U.S.G.S. map for Meredosia, Illinois quadrangle, last revised in 2015.

0 2,000 4,000



SCALE IN FEET

Drawn By: WAH	Ck'd By: <i>AMS</i>	App'vd By: <i>DTK</i>
Date: 2-26-16	Date: <i>7/1/16</i>	Date: <i>7/5/16</i>



Meredosia Power Plant
Meredosia, Illinois

**SITE LOCATION
AND TOPOGRAPHY**

Project Number
J024917.01

PLATE 1



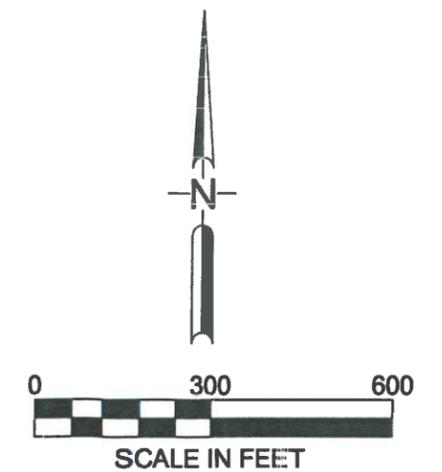


NOTES

1. Plan adapted from drawings based on topography obtained by AeroView in October 2015 and supplied by the client.
2. Monitoring wells were located by the project surveyor.
3. Monitoring Well APW-1 is located beyond the limits of this map and is approximately 2000-feet east of Monitoring Well APW-5.

LEGEND

 Monitoring Well Location



Drawn By: WAH	Ck'd By: <i>AMS</i>	App'vd By: <i>OTK</i>
Date: 5-26-16	Date: 7/1/16	Date: 7/5/16



Meredosia Power Station
Meredosia, Illinois

**SITE PLAN AND
MONITORING WELL LOCATIONS**

Project Number
J024917.01

PLATE 2