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GREDELL Engineering Resources, Inc.

**Sikeston Board of Municipal Utilities
Sikeston Power Station
Bottom Ash Pond
Post-Closure Plan**

Prepared for:



**Sikeston Power Station
1551 West Wakefield Avenue
Sikeston, MO 63801**

October 17, 2016

**Sikeston Board of Municipal Utilities
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Bottom Ash Pond
Post-Closure Plan**

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PROFESSIONAL ENGINEER'S CERTIFICATION

40 CFR 257.104(d) Written Post-Closure Plan.

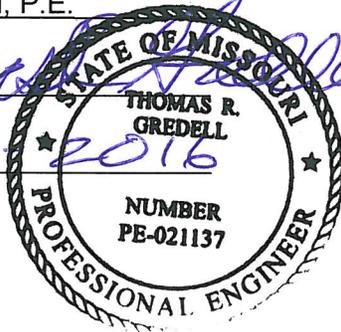
I, Thomas R. Gredell, P.E., a professional engineer licensed in the State of Missouri, hereby certify in accordance with 40 CFR 257.104(d)(4) that the post-closure plan for the Sikeston Board of Municipal Utilities, Sikeston Power Station, Bottom Ash Pond meets the requirements of 40 CFR 257.104(d)(1) as found in federal regulation 40 CFR 257, Subpart D – Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments and has been prepared using good engineering and environmental practices.

Name: Thomas R. Gredell, P.E.

Signature: _____

Date: _____

Registration Number: PE-021137
State of Registration: Missouri



1.0 INTRODUCTION

Pursuant to 40 CFR 257.104, the owner or operator of a Coal Combustion Residual (CCR) unit must prepare a post-closure plan identifying the maintenance, monitoring, planned use, contact person, and care period with respect to the performance criteria set forth in the CCR Rule.

There are two CCR surface impoundments at Sikeston Board of Municipal Utilities' (SBMU) Sikeston Power Station (SPS); one active and one inactive. The Fly Ash Pond is an inactive CCR surface impoundment and ceased receiving CCR and CCR transport water prior to October 19, 2015. The Bottom Ash Pond is an active CCR surface impoundment. A map showing the location of the two CCR surface impoundments is provided in Appendix A as Figure 1.

A site plan for the Bottom Ash Pond is provided in Appendix A as Figure 2. The Bottom Ash Pond currently receives direct precipitation, CCR transport water, and other low volume wastewaters. The Bottom Ash Pond discharges to the Process Waste Pond, a non-CCR surface Impoundment. The Process Waste Pond discharges through NPDES Outfall #003 to Richland Drainage Ditch #4. This post-closure plan focuses on the Bottom Ash Pond.

2.0 CCR UNIT INFORMATION

Primary activities common to impoundment post-closures are listed below.

2.1 Post-Closure Care Contact

The SBMU contact for the post-closure care will be:

Name: Mark McGill
Title: Results Engineer/Plant Chemist
Address: 1551 W. Wakefield Ave., Sikeston, MO, 63801
Phone Number: 1-573-475-3131
Email: mark@sbmu.net

In the event the identified care contact is not available, or there is an emergency, an alternate SBMU contact that is available 24/7 can be reached at:

Name: Don Miller
Title: Plant Manager
Phone Numbers: 1-573-471-5000

2.2 Closed CCR Surface Impoundment Planned Use

The closure of the Bottom Ash Pond will include either grass turf, locally available hardy grasses, or a synthetic alternative erosion control layer. SBMU's current intent is to maintain the closed Bottom Ash Pond as a passive, open area. If the Bottom Ash Pond includes an erosion layer consisting of hardy grasses, the open area could be utilized for hay production. If the Bottom Ash Pond includes a synthetic, alternative erosion control layer, the closed surface impoundment will also remain a passive, open area, but may not be subject to agronomic practices. Other potential uses for the Bottom Ash Pond can be evaluated that will maintain the final cover and do not increase the potential threat to human health or the environment.

2.3 Post-Closure Care Period

The care period of the closed surface impoundment will be 30 years. The post-closure care period will begin when the certification from a professional engineer that the entire surface impoundment is properly closed is placed in the operating record.

The post-closure care period ends only after post-closure care has been maintained for 30 years and if the groundwater monitoring program is in the detection phase of monitoring, in accordance with Section 257.104(c)(2) and Section 3.3 of this plan.

2.4 Notification of Completion of the Post-Closure Care Period.

No later than 60 days following completion of the post-closure care period, SBMU must prepare a notification that post-closure care has been completed. This notification must include a certification by a professional engineer verifying that post-closure care has been completed in accordance with the post-closure plan. The notice is complete when these documents are placed in the SPS facility operating record, as required by Section 257.105(i)(13).

3.0 POST-CLOSURE PLAN

The Bottom Ash Pond will be maintained during the post-closure period as outlined below.

3.1 Final Closure Cap Monitoring and Maintenance

The closed Bottom Ash Pond final cover cap will be inspected to ensure the integrity and effectiveness of the system is maintained. Maintenance items include repairs to the final cover as necessary to correct the effects of settlement, subsidence, erosion, or other events. If repairs are implemented, surrounding areas will also be evaluated to mitigate run-on and run-off from eroding or damaging the final cover.

Settling and subsidence of the final cover system is expected to be minimal. Settlement on the impoundment occurs during consolidation of the CCR material, general fill material, or underlying natural subsoils under new loads from grading activities. Saturated CCR material may settle under the additional loading. This settlement, however, may occur for the duration of grading activities and is expected to be minimized once the final cover system is installed. General fill will be placed in a controlled manner to minimize post-cover system installation settlement.

Routine annual inspections will be conducted by a professional engineer or designee. A report of these inspections will be placed in the SPS facility operating record. Corrections recommended by the engineer will be evaluated following implementation and a follow-up report will be prepared and placed in the SPS facility operating record.

3.2 Stormwater Control System Maintenance

The closed Bottom Ash Pond stormwater control system will convey water from the CCR unit cap via sheet flow or to a discharge point. The conveyance system for the cap will be designed by a professional engineer. An evaluation of the constructed stormwater conveyance system will be included in the annual inspection reports. This evaluation will also include the underground stormwater culverts that will remain beneath the CCR unit following the completion of closure operations (see Appendix 1, Figure 2). Corrections recommended by the engineer will be evaluated following implementation and a follow-up report will be prepared and placed in the SPS facility operating record.

3.3 Groundwater Monitoring and System Maintenance

The groundwater monitoring system will be maintained in accordance with the requirements of Sections 257.90 through 257.98. The installed groundwater monitoring wells must be certified by a professional engineer. Groundwater sampling and analysis will be conducted in accordance with Sections 257.93 through 257.98. Monitoring wells will be inspected during both sampling events and the annual inspection and their condition will be recorded in field notes and in the

annual report. Corrections or repairs will be implemented, evaluated, and a follow-up report will be prepared and placed in the SPS facility operating record.

If at the end of the post-closure care period the Bottom Ash Pond is under assessment monitoring in accordance with Section 257.95, the unit must continue to conduct post-closure care until the unit returns to detection monitoring.

4.0 AMENDMENTS

Section 257.104(d)(3) addresses amendment of written post-closure plans. SBMU may amend this post-closure plan at any time. However, the post-closure plan must be amended when there is a change in the Bottom Ash Pond maintenance that would substantially affect the written plan.

After post-closure care activities have commenced, unanticipated events may necessitate a revision to the written plan.

Amendments must be completed at least 60 days prior to a planned change in the operation of the facility or the Bottom Ash Pond, or no later than 60 days after an unanticipated event requires the need to revise the plan. For written plans that are revised after post-closure care has commenced for the Bottom Ash Pond, SBMU must amend the plan no later than 30 days after the triggering event.

Each amendment must be certified by a professional engineer that the amended plan meets the requirements of 40 CFR 257.104(d)(1).

5.0 MISCELLANEOUS REQUIREMENTS

Section 257.104(f) states that SBMU must comply with:

- The recordkeeping requirements specified in 257.105(i);
- The notification requirements specified in 257.106(i); and,
- The Internet requirements specified in 257.107(i).

APPENDIX A

Figures



SCALE: 1" = 1500'
 0 750 1500

**CCR SURFACE IMPOUNDMENT
 POST-CLOSURE MAINTENANCE
 SIKESTON BOARD OF
 MUNICIPAL UTILITIES**

GREDELL Engineering Resources, Inc.

ENVIRONMENTAL ENGINEERING LAND - AIR - WATER

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 Jefferson City, Missouri

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MO CORP. ENGINEERING LICENSE NO. E-2001001669-D

FIGURE 1 - AERIAL VIEW

DATE
 10/2016

SCALE
 AS NOTED

PROJECT NAME
 SIKESTON

REVISION

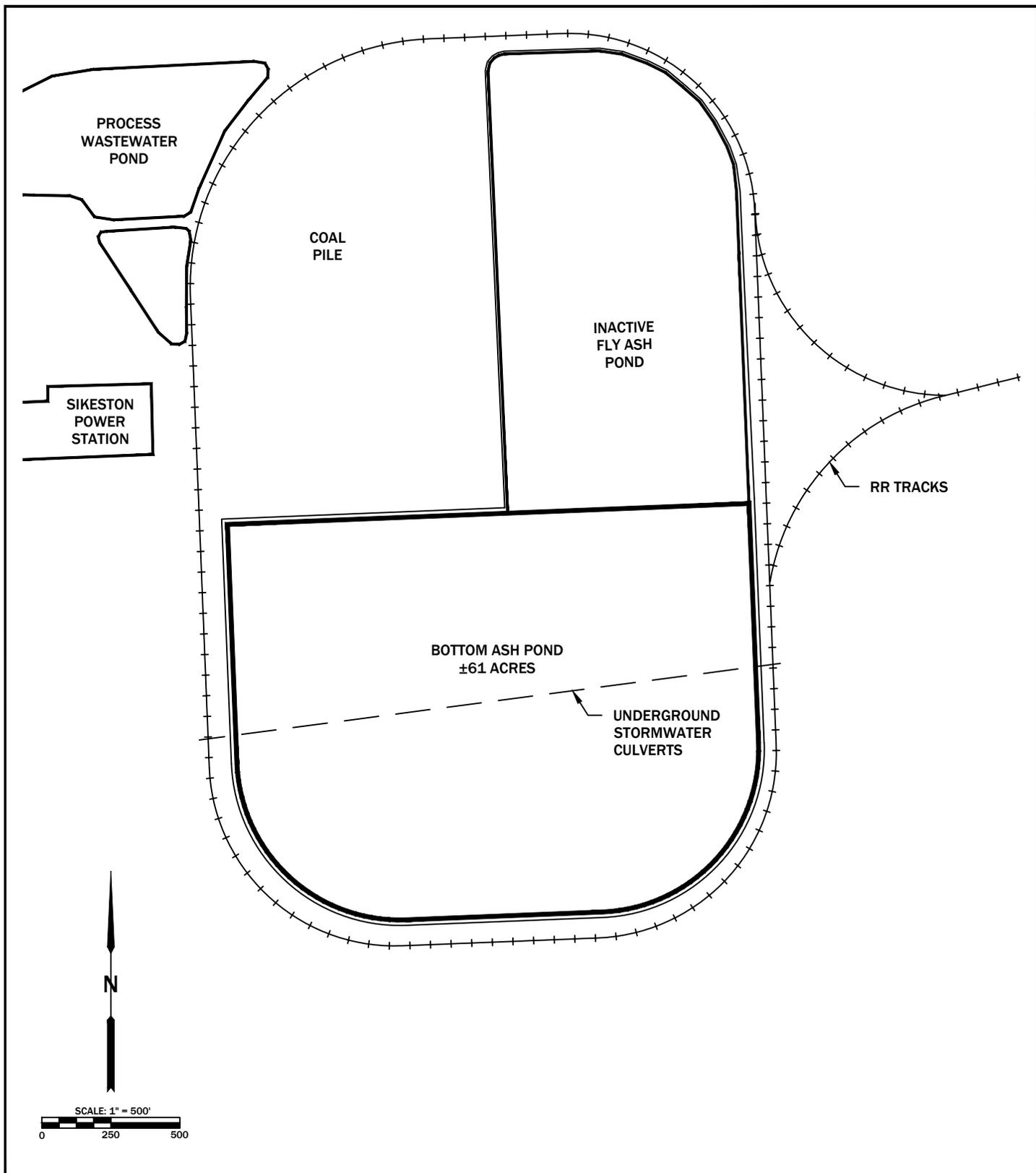
DRAWN
 AJK

APPROVED
 TG

FILE NAME
 POST CLOSURE PLAN

SHEET #
 1 OF 1

M:\Share\CADDFiles\SIKESTON\POUND CLOSURE\POST CLOSURE PLAN.dwg, FIGURE 2 - SITE PLAN, 10/13/2016 4:10:52 PM



**CCR SURFACE IMPOUNDMENT
POST-CLOSURE MAINTENANCE
SIKESTON BOARD OF
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FIGURE 2 - SITE PLAN

DATE 10/2016	SCALE AS NOTED	PROJECT NAME SIKESTON	REVISION
DRAWN AJK	APPROVED TG	FILE NAME POST CLOSURE PLAN	SHEET # 1 OF 1