

**Coal Combustion Residuals (CCR)
Surface Impoundment Unit**

CLOSURE AND POST-CLOSURE PLAN

COOPERATIVE ENERGY
Formerly South Mississippi Electric Power Association
R.D. Morrow, Sr. Generating Station
Purvis, Lamar County, Mississippi
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Prepared by:



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Revision Record

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Figure 1 – Site Location Map

Figure 2 – CCR Surface Impoundments Plan – Sections

1.0 Introduction

The Cooperative Energy (formerly South Mississippi Electric Power Association (SMEPA)) R.D. Morrow, Sr. Generating Station operates a Surface Impoundment Unit that consists of two adjacent existing coal combustion residual (CCR) surface impoundments (the CCR Impoundment Unit) as defined in 40 CFR § 257.53 and 40 CFR § 257.71. The Surface Impoundment Unit includes the Emergency Scrubber Surge Pond and the Scrubber Supply Pond.

Environmental Management Services, Inc. (EMS) prepared this Closure/Post-Closure Plan to provide technical information in support of Cooperative Energy's compliance with the CCR rule. Specifically, this report has been prepared to comply with 40 CFR 257, Subpart D.

2.0 Existing Site Conditions

The Surface Impoundment Unit was designed and constructed in the 1970s with procedures typical at that time, using primarily native underlying clay soils. As-built construction documents are not available to document that the existing soils meet the requirements set forth in § 257.71. Therefore, the Surface Impoundment Unit is being classified as an existing, unlined CCR surface impoundment pursuant to §257.71(a)(3)(i). A site location map is presented as **Figure 1**. Details of the current Surface Impoundment Unit configuration are shown along with plan and profile details in **Figure 2**. The Emergency Scrubber Surge Pond occupies a footprint of approximately 0.5 acre, while the Scrubber Supply Pond occupies a footprint of approximately 1.4 acres.

3.0 Closure Plan

CCR units can be closed in one of two ways based on the closure criteria in 40 CFR § 257.102.

3.1 Selected Closure Method

Cooperative Energy has elected to close by removal of CCR. The closure process will involve dewatering the Surface Impoundment Unit by draining and allowing any remaining CCR to decant by a combination of exposure to sun and wind, along with the gravitational effects of the sloping land surface at the impoundments. All liquids draining from the Surface Impoundment Unit will be discharged through the permitted NPDES outfall.

Once all CCR and CCR residues have been removed Cooperative Energy will collect samples for laboratory analyses to verify that CCR and CCR residues have been removed. The bottom configuration of the impoundments will be surveyed by a Registered Land Surveyor to document the location and bottom elevation configurations of the closed impoundments. Then the impoundments will be regraded to match the surrounding grade. On-site soils, such as soils comprising the impoundment berms, which have not been in contact with CCR materials, may be used for fill soil as needed.

3.2 Maximum Inventory of CCR On-site

The Emergency Scrubber Surge Pond has a footprint of slightly less than 0.5 acre, and a maximum operating depth of about 7 feet (see profiles on Figure 2). If we conservatively assume that the entire depth was full of CCR at the time that closure begins, the maximum potential inventory of CCR on-site in the Emergency Scrubber Surge Pond is calculated to be 5,650 cubic yards.

The Scrubber Supply Pond has a footprint of slightly less than 1.4 acres. If we conservatively assume that a 5-foot thick deposit of CCR (out of a 9-foot total working depth) were in the bottom of the pond at the time that closure begins, the maximum potential inventory of CCR onsite in the Scrubber Supply Pond is calculated to be 11,300 cubic yards.

4.0 Closure Schedule

Section 257.102(b)(vi) requires that the Plan include a schedule for completing all activities necessary to satisfy the closure criteria. Cooperative Energy provides the following schedule:

CCR Impoundments Closure Schedule	
Activity	Day
Stop placing CCR flows into the impoundments	0
Drain CCR Impoundment by decanting water from above the settled CCR	0-60
Stabilization of CCR – (Not Applicable)	N/A
Excavate CCR	61-120
Subsoil testing	121-180
Survey bottom grade to document empty configuration	180
Fill and re-grade soil	181-270
Survey final grade and boundaries; survey report	271-300
Prepare closure certification report	361-420

Based on the project schedule, Cooperative Energy anticipates that the completion of closure for the Surface Impoundment Unit is technically feasible within the timeframes shown above using existing equipment and resources available to Cooperative Energy. This closure schedule complies with and is achievable under the requirements of 40 CFR 257.102. All closure activities for the Surface Impoundment Unit are anticipated to be complete no later than 2021; however, should unanticipated circumstances arise, a deadline extension can be obtained as outlined in 40 CFR 257.102(f)(2) if completion of closure is not feasible (e.g., shortened construction season, significant weather delays, time required for dewatering CCR, delays due to state or local permitting or approval, etc.)

5.0 Post-Closure Plan

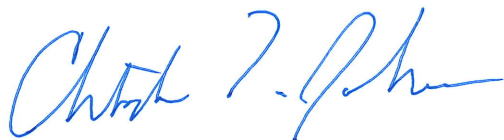
Based on Cooperative Energy's intent to close the Surface Impoundment Unit by removal in accordance with 40 CFR 257.102(c), no post-closure care requirements are applicable to the closed Unit in accordance with 40 CFR § 257.104(a)(2).

6.0 Qualified Professional Engineer's Certification

This CCR Closure Plan for the CCR Surface Impoundment Unit at the Cooperative Energy, R.D. Morrow, Sr. Generating Station located in Purvis, Mississippi, was prepared by Environmental Management Services, Inc. (EMS) and authorized by Cooperative Energy. This Statement of Professional Opinion is based on information available to EMS at the time the CCR Closure Plan was prepared and EMS's technical understanding of the United States Environmental Protection Agency's "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments," published in the Federal Register on April 17, 2015 with an effective date of October 19, 2015 and subsequent amendments (CCR Rule) and associated public guidance and/or interpretation provided by the U.S. EPA and obtained by EMS as of the date of the CCR Closure and Post-Closure Plan.

On the basis of and subject to the foregoing it is my opinion as a Professional Engineer licensed in the State of Mississippi that the CCR Closure and Post-Closure Plan has been prepared in accordance with good and accepted engineering practices exercised by other engineers practicing in the same discipline(s) under similar circumstances and at the time and locale the CCR Closure and Post-Closure Plan was prepared. It is my professional opinion based on my understanding of the technical requirements of the CCR Rule and good and accepted engineering practices that the Closure and Post-Closure Plan meets the technical requirements and/or intent of the CCR Rule (40 CFR 257.100 through 104). This Statement of Professional Opinion is not and shall not be interpreted or construed as a guarantee, warranty or legal opinion.

Environmental Management Services, Inc.



Christopher T. Johnson, P.E., P.S.
Engineering Manager/Vice President



Date: 6/3/2020

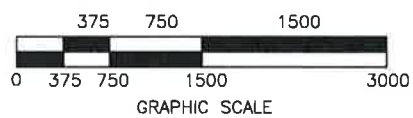
Seal

Figures



LEGEND

- SMEPA PROPERTY BOUNDARY
- CAP BOUNDARY



REFERENCE: 7.5 MIN. SERIES TOPOGRAPHIC MAP
PURVIS, MISSISSIPPI

SITE LOCATION

SOUTH MISSISSIPPI POWER ASSOCIATION
R.D. MORROW SR. GENERATING PLANT
PURVIS, MISSISSIPPI

DATE:	10-10-2016	APPROVED:	DRAWN BY:
SCALE:	AS SHOWN	BY:	KRK
		DATE:	CAD NO.
			SOU2-16-002

ENVIRONMENTAL
MANAGEMENT SERVICES, INC.



FIGURE

1

