



Cardinal Power Plant Units 1-3

Retrofitted South Pond Closure Plan



Revision 0
October 19, 2020
Issue Purpose: Use
Project No.: 13770-005

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1.0 INTRODUCTION & PURPOSE

Federal CCR Rule Reference: 40 CFR 257.102(b)

The Cardinal Operating Company, who operates the Cardinal Power Plant, has decided to initiate a retrofit for the South Pond of Bottom Ash Pond Complex, which is documented in a separate written retrofit plan. Pursuant to 40 CFR 257.102(b), this document is the written closure plan for the proposed Retrofitted South Pond at the Cardinal Power Plant.

2.0 NARRATIVE DESCRIPTION

Federal CCR Rule Reference: 40 CFR 257.102(b)(1)(i)

Pursuant to the requirements of 40 CFR 257.102(c), the Cardinal Operating Company has elected to clean-close the retrofitted South Pond by removing all CCR materials in this pond at the time of closure and decontaminating all areas affected by releases from this pond (if any). Cardinal Operating Company will ensure groundwater monitoring concentrations of controlled constituents do not exceed the groundwater protection standard established pursuant to 257.95(h).

3.0 CCR REMOVAL & DECONTAMINATION PROCESS

Federal CCR Rule Reference: 40 CFR 257.102(b)(1)(ii)

The key procedures of the clean closure operation for the South Pond are outlined below:

- Stop CCR sluicing and receipt of all waste streams (CCR).
- Dewater the Retrofitted South Pond to facilitate removal of the CCR stored therein. All water discharge will meet the requirements of the applicable National Pollutant Discharge Elimination System (NPDES) permit.
- Remove all CCR material and transport it to the Cardinal Power Plant's on-site CCR landfill, FAR I Landfill, for final disposal. Conventional excavation and earthmoving equipment will be used.

- Any contaminated soils and sediments will also be removed. Inspections of the clean subgrade will be performed and certified by a professional engineer.
- The pump house, pumps, piping, and related components will be either removed or decontaminated. All areas affected by CCR releases will be decontaminated.
- Groundwater sampling and testing to verify the groundwater monitoring concentrations of controlled constituents do not exceed the groundwater protection standards established pursuant to 40 CFR 257.95(h).

Upon completion of all required procedures, a certification will be prepared by a qualified professional engineer to certify the clean closure of the South Pond.

4.0 ESTIMATED MAXIMUM AMOUNT OF CCR

Federal CCR Rule Reference: 40 CFR 257.102(b)(1)(iv)

The estimated maximum inventory of CCR ever on-site over the active life of the Retrofitted South Pond is conservatively assumed to be the pond's capacity: approximately 78 acre-ft.

5.0 CLOSURE SCHEDULE

Federal CCR Rule Reference: 40 CFR 257.102(b)(1)(vi)

Table 1 lists the major milestone activities with their estimated schedule necessary to complete the closure operation of the South Pond.

Table 1 – Planning Level Schedule for Closure of South Pond

Milestone Activity	Estimated Duration	Estimated Completion Year ¹
Complete Engineering/Design	6 Months	2044
Obtain Ohio EPA Closure Permit to Install (PTI)	6 Months	2044
Cease Sluicing CCR to Retrofitted South Pond	1 Day	2044
Dewater South Pond	3 months	2045
Remove all CCR Material and Any Contaminated Soils and Sediments	2 Months	2045
Decontaminate All Areas, Structures, and Components Affected by CCR Releases	2 Months	2045
Sample and Analyze Groundwater	1 Month	2045
Obtain Certification of Completion of Closure by a Qualified Professional Engineer	1 Month	2045

1. These dates are based on a preliminary schedule for demonstrative purposes and are subject to change.

6.0 CERTIFICATION

Federal CCR Rule Reference: 40 CFR 257.102(b)(4)

This document meets the requirements for a written closure plan pursuant to 40 CFR 257.102(b)(4).

I certify that this document was prepared by me or under my supervision and that I am a registered professional engineer under the laws of the State of Ohio.

Certified By: Joseph P. Charles

Date: October 19, 2020

Seal:

