



NRG Texas Power LLC
W. A. Parish Station, Units 5, 6, 7, & 8

CCR Surface Impoundment Closure Plan

Prepared by



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S&L Project No. 12661-054

Rev. 0
Issue Date: September 30, 2016
Issue Purpose: Use

1 INTRODUCTION & PURPOSE

Federal CCR Rule Reference: 40 CFR 257.102(b)

Pursuant to 40 CFR 257.102(b), this document provides the written closure plan for the following existing coal combustion residual (CCR) surface impoundments at NRG Texas Power LLC's (NRG) W. A. Parish Station:

- FGD Emergency Pond, and
- Air Preheater Pond.

NRG intends to close these existing CCR surface impoundments by removing any CCR contained therein at the time of closure and subsequently decontaminating all affected areas pursuant to the requirements of 40 CFR 257.102(c). This closure plan does not differentiate between the individual impoundments.

2 CLOSURE PLAN NARRATIVE DESCRIPTION

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

NRG plans to execute the closure of each existing CCR surface impoundment by performing the following steps in succession:

1. Diversion of CCR, low volume waste, and/or storm water streams to the appropriate Station facilities,
2. Removal of process piping,
3. Dewatering of each CCR surface impoundment and the *in situ* CCR sufficiently to allow for removal of the CCR,
4. Removal of CCR from each CCR surface impoundment for transportation to and disposal in a permitted landfill or for beneficial use,
5. Removal of protective cover layers (e.g., riprap) along the bottom of and/or side slopes of each CCR surface impoundment,
6. Stripping, as required, of portions of the *in situ* material at the bottom of and/or side slopes of each CCR surface impoundment that became intermixed with CCR,
7. Sampling of the groundwater near the former CCR surface impoundments (upgradient and downgradient) to verify that the groundwater monitoring concentrations do not exceed the groundwater protection standards established for constituents listed in Appendix IV to 40 CFR Part 257.
8. Certification by a qualified professional engineer that closure has been completed in accordance with the closure plan in effect at the time of closure, and
9. Restoration of the areas formerly occupied by the CCR surface impoundments.

Restoring the areas formerly occupied by the CCR surface impoundments will be contingent upon NRG's intended use for those areas after closure. NRG will select a final restoration method for each surface impoundment at its time of closure, and this plan will be subsequently amended as appropriate.

3 REMOVAL & DECONTAMINATION PROCEDURES

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

This section further expands on the clean closure sequence outlined in Section 2.

After ceasing flow into the surface impoundments, NRG will dewater each CCR surface impoundment and the CCR stored therein. The free liquid may be reused in plant operations or possibly discharged into the Coal Pile Run-Off Pond. Best management practices (BMPs) will be deployed. Perimeter drainage ditches may be cut through the *in situ* CCR within the surface impoundments to accelerate the dewatering process via gravity. CCR may be piled within the surface impoundments to further promote dewatering.

Once the CCR has been sufficiently dewatered for transportation and disposal purposes, mechanical excavators will remove the CCR, any protective layers (e.g., riprap), and any *in situ* materials that became intermixed with the CCR within the impoundments. Excavated material will be deposited into haul trucks for disposal at a permitted landfill or a beneficial use project. At the time of closure, the Station may elect to dispose the excavated material into the on-site landfill, Solid Waste Management Unit 001. Excavation will advance until federal and state regulations for clean closure in effect at the time of closure are met.

The ongoing groundwater monitoring program will continue throughout the active life of each CCR surface impoundment. Following the removal of CCR and any materials intermixed with CCR, an appropriate number of groundwater samples will be taken to ensure compliance with the groundwater protection standard established in 40 CFR 257.95(h). In order for clean closure to be declared complete, the concentrations of the constituents listed in Appendix IV to 40 CFR 257 may not exceed the limits prescribed in the specified groundwater protection standard. If required, appropriate groundwater remedial actions will be taken.

4 ESTIMATED MAXIMUM INVENTORY OF CCR

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

A conservative estimate of the maximum inventory of CCR that may be contained within each CCR surface impoundment at W. A. Parish Station may be taken as each impoundment's capacity. Based on this assumption, the following Table 1 lists the estimated maximum inventories of CCR within the FGD Emergency Pond and the Air Preheater Pond at any one time during their active lives.

Table 1: Estimated Maximum Inventory of CCR that May Be Stored Within Each CCR Surface Impoundment

CCR Surface Impoundment	Estimated Maximum Inventory of CCR (cy)
FGD Emergency Pond	5,700
Air Preheater Pond	11,500

5 CLOSURE SCHEDULE

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

Table 2 lists the major milestones necessary to close the existing CCR surface impoundments with an estimated duration and year of completion for each milestone. NRG anticipates that all closure activities for the existing CCR surface impoundments at W. A. Parish Station will be completed by the year 2050.

Table 2: Planning Level Schedule for Closure of Existing CCR Surface Impoundments

Task Description	Estimated Duration	Estimated Completion Year
Place Closure Plan into Station's Operating Record	1 Day	2016
Send Notification of the Availability of Closure Plan to the Texas Commission of Environmental Quality (TCEQ) and Post the Closure Plan to NRG's CCR Website	1 Month	2016
Final Engineering / State Closure Permit Application	6 Months	2048
Termination of CCR, Low Volume Waste, and Storm Water Streams	1 Month	2048
Dewatering of CCR Surface Impoundments & <i>In Situ</i> CCR	3 Months	2048
Removal of CCR, Protective Cover Layer, and Materials Intermixed with CCR (If Applicable)	9 Months	2049
Monitoring and Sampling of Groundwater	1 Month	2050
Certification of Completion of Closure by a Qualified Professional Engineer	1 Month	2050
Restoration of Former CCR Surface Impoundment Areas	5 Months	2050
Place Notification of Closure Completion into Station's Operating Record	1 Month	2050
Send Notification of Completion of Closure to TCEQ and Post Notification of Completion of Closure to NRG's CCR Website	1 Month	2050

6 AMENDMENTS TO CLOSURE PLAN

Federal CCR Rule Reference: 40 CFR 257.102(b)(3)

NRG will amend this plan prior to a change in the operation of any of the existing CCR surface impoundments that would substantially affect the written closure plan in effect or after an unanticipated event necessitates a revision to the written closure plan. If this written closure plan is revised, NRG will retain a qualified professional engineer licensed in the State of Texas to provide written certification that amendments to this plan meet the requirements of 40 CFR 257.102(b).

7 COMPLETION OF CLOSURE ACTIVITIES

Federal CCR Rule Reference: 40 CFR 257.102(f)(3)

Upon completion of closure for each CCR surface impoundment, NRG will obtain a certification from a qualified professional engineer licensed in the State of Texas verifying that the CCR surface impoundment has been closed in accordance with the closure plan in effect at the time of closure.

8 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).

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 Texas.

This document is released for use under the authority of James H. Staehlin, Texas PE #87527 on September 30, 2016. Sargent & Lundy LLC Texas Registered Engineering Firm #F-2202.

Certified By: JAMES H. STAEHLIN Date: 9-30-2016

Seal:

