



Notice of Intent to Close (Revision 1)

Bottom Ash Landfill - Stanton Station

Submitted to:

Great River Energy

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1.0 INTRODUCTION

The purpose of this document is to comply with the notification and certification requirements for coal combustion residual (CCR) facility closure in accordance with the federal CCR rule, 40 CFR Part 257. Section §257.102(g) of the EPA CCR Rule requires that a notification of intent to close a CCR unit be placed in the facility's operating record upon initiation of closure activities. This notification must also include a certification by a qualified professional engineer that the design of the final cover system meets the requirements of the federal CCR rule as required by section §257.102(d)(3)(iii), if applicable.

This document serves as a revised notice of intent to close the Bottom Ash Landfill at Great River Energy's Stanton Station located near Stanton, North Dakota. Per the original notification of intent to close (dated September 5, 2019), the Bottom Ash Landfill was anticipated to receive CCR and non-CCR waste streams until September 30, 2019, directly followed by closure. Due to weather constraints, receipt of CCR and non-CCR waste streams was not completed in the fall of 2019 and the date of facility closure was moved to 2020. Included with this document is a certification by a qualified professional engineer that the design of the final cover system to be used for the Bottom Ash Landfill meets the requirements of the federal CCR rule.

2.0 NOTICE OF INTENT TO CLOSE

Pursuant to §257.102(e)(1)(i):

The owner or operator must commence closure of the CCR unit no later than 30 days after the date on which the CCR unit receives the known final receipt of waste, either CCR or any non-CCR waste stream.

The Bottom Ash Landfill was anticipated to receive CCR and non-CCR waste streams until September 30, 2019 associated with closure of the nearby Bottom Ash Impoundment and restoration of the closed Stanton Station Power Plant Site. Due to extremely wet construction conditions in late 2019 and the onset of freezing conditions, closure of the Bottom Ash Impoundment and restoration of the closed Stanton Station Power Plant Site were not completed in 2019. As a result, the Bottom Ash Landfill will continue to receive CCR and non-CCR waste in 2020 once site restoration construction resumes after the spring thaw. The current estimate is for the Bottom Ash Landfill to receive CCR and non-CCR waste streams until May 30, 2020.

In accordance with §257.102(e)(3)(ii):

Closure of the CCR unit has commenced if the owner or operator has ceased placing waste and ...has submitted a completed application for any required state or agency permit or permit modification.

A permit modification document including a revised Closure Plan for the Bottom Ash Landfill was submitted to the North Dakota Department of Environmental Quality (NDDEQ) December 26, 2018. Because the state permit modification document has already been completed, the final receipt of waste represents initiation of closure activities.

§257.102(g) requires the following:

No later than the date the owner or operator initiates closure of a CCR unit, the owner or operator must prepare a notification of intent to close a CCR unit. The notification must include the certification by a qualified professional engineer for the design of the final cover system as required by §257.102(d)(3)(iii), if applicable. The owner or operator has completed the notification when it has been placed in the facility's operating record as required by §257.105(i)(7).

The purpose of this document is to serve as the revised Notice of Intent to Close the Bottom Ash Landfill at Stanton Station. The above-referenced certification by a qualified professional engineer for the design of the final cover system is provided in Section 4.0.

3.0 CONSTRUCTION SCHEDULE

Pursuant to §257.102(f)(1)(i):

Except as provided for in paragraph (f)(2) of this section, the owner or operator must complete closure...for existing and new CCR landfills and any lateral expansion of a CCR landfill, within six months of commencing closure activities.

Final closure of the Bottom Ash Landfill at Stanton Station will be completed by November 30, 2020, in accordance with the above requirement, or as allowed through a closure extension demonstration in accordance with 257.102(f)(2)(i).

4.0 FINAL COVER SYSTEM DESIGN CERTIFICATION

4.1 Design Requirements

Pursuant to §257.102(d)(3):

If a CCR unit is closed by leaving CCR in place, the owner or operator must install a final cover system that is designed to minimize infiltration and erosion, and at a minimum, meets the requirements of paragraph (d)(3)(i) of this section, or the requirements of the alternative final cover system specified in paragraph (d)(3)(ii) of this section.

The prescriptive final cover system outlined in §257.102(d)(3)(i) requires the following:

- The permeability of the final cover system must be less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less.
- The infiltration of liquids through the closed CCR unit must be minimized by the use of an infiltration layer that contains a minimum of 18 inches of earthen material.
- The erosion of the final cover system must be minimized by the use of an erosion layer that contains a minimum of six inches of earthen material that is capable of sustaining native plant growth.
- The disruption of the integrity of the final cover system must be minimized through a design that accommodates settling and subsidence.

The liner system for the Bottom Ash Landfill consists of regraded native soil material. This material is predominantly a silty sand (SM). Hydraulic conductivity of these materials varies from 2.8×10^{-5} cm/sec to 7.6×10^{-4} cm/sec (geometric mean hydraulic conductivity of 2.0×10^{-4} cm/sec) based on testing conducted on samples collected between 2011 and 2019. Therefore, the hydraulic conductivity of the final cover system infiltration layer as described below (1×10^{-5} cm/sec) will be less than the hydraulic conductivity of the natural subsoils.

4.2 Final Cover Design

The final cover system for the Bottom Ash Landfill at Stanton Station meets the prescriptive final cover system requirements with the following components (from bottom to top):

- A minimum 18-inch infiltration layer with a hydraulic conductivity no greater than 1×10^{-5} cm/sec; and
- A minimum 6-inch erosion layer that is capable of sustaining native plant growth.

Disruption of the integrity of the final cover system will be inhibited by compacting the underlying CCRs to establish a firm and unyielding subgrade prior to installation of the final cover system and by establishing maximum slopes of 15% and minimum slopes of 3% to provide positive drainage off the facility, limit ponding, and mitigate the potential effects of settling and subsidence.

5.0 CERTIFICATION

The undersigned attest to the completeness and accuracy of this notice of intent to close the Bottom Ash Landfill at Stanton Station, and certify that the final cover system design meets the requirements of 40 CFR §257.102(d)(3)(i).

Golder Associates Inc.



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