



RETROFIT PLAN FOR ASH POND AREA - EAST ASH POND, WEST ASH POND AND NEW SCRUBBER POND

**Martin Lake Steam Electric Station –
Ash Pond Area**
Rusk County, Texas

Submitted to:
Luminant Generation Company LLC

Submitted by:
HDR

February 28, 2020



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Certifications

Pursuant to 40 C.F.R. § 257.102(k)(2)(iv), I hereby certify that this Retrofit Plan for the East Ash Pond, the West Ash Pond and the New Scrubber Pond CCR Units at the Martin Lake Steam Electric Station meets the requirements of the Coal Combustion Residuals Rule 40 C.F.R. § 257.102(k) for retrofit activities.



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Section 1 - Introduction

Luminant Generation Company, LLC owns and operates the Martin Lake Steam Electric Station (Martin Lake). Operation of Martin Lake results in production of coal combustion residuals (CCR) that must be managed in accordance with the requirements of 40 C.F.R. Part 257, Subpart D, Standards for Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments (CCR Rule).

This Retrofit Plan describes the activities associated with the retrofit of the East Pond, West Ash Pond and the New Scrubber Pond, collectively referred to as the Ash Pond Area, to meet the requirements of 40 C.F.R. § 257.102(k)(2). Luminant intends to retrofit these three impoundments sequentially with liner systems that comply with 40 C.F.R. § 257.72 beginning in mid-to-late 2020. There is an additional pond located outside the Ash Pond Area, known as PDP-5, which will also be retrofitted and is referenced in a separate document.

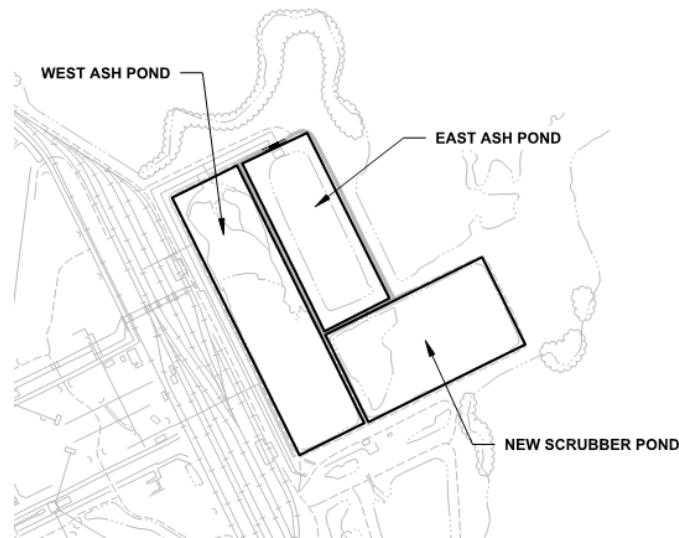
1.1 Regulatory Background

In addition to the CCR rule, the impoundments are regulated by the Texas Commission on Environmental Quality (TCEQ) under Title 30 Texas Administrative Code § 335 – Industrial Solid Waste and Municipal Hazardous Waste rules. The retrofit of the impoundments is being conducted in accordance with 40 C.F.R. § 257.102(k) and 40 C.F.R. § 257.72 along with any applicable state requirements.

1.2 Site Information

Martin Lake is located southwest of Tatum, Texas, in Rusk County, Texas at approximately latitude 32°15'42"N, longitude 94°33'53"W. Martin Lake has three coal-fired units that produce CCRs, including bottom ash, fly ash, and flue gas desulfurization (FGD) solids. There are three existing impoundments located in the Ash Pond Area of Martin Lake that are planned to be retrofitted. These ponds cover a total of 38 acres. Individually, the East Ash Pond is approximately 10 acres, the West Ash Pond is 15 acres, and the New Scrubber Pond is 13 acres. There is a fourth pond of greater than 40 acres (approximately 40.5 acres) located outside the Ash Pond Area, known as PDP-5, which will also be retrofitted and is referenced in a separate document.

The three impoundments that make up the Ash Pond Area are located on the eastern side of facility property. Each impoundment currently is lined with a double liner system consisting of, from top to bottom, a 4-inch thick concrete revetment, 60-mil HDPE geomembrane, geonet, 60 mil HDPE geomembrane and a 1.5-foot thick compacted clay liner with a permeability less than of 1×10^{-5} cm/s. A gravel-surface road extends around the perimeter of each impoundment for access.



Section 2 - Retrofit Construction Plan

2.1 Narrative of Measures Taken to Retrofit – § 257.102(k)(2)(i)(A)

The three current impoundments in the Ash Pond Area (the East Ash Pond, the West Ash Pond, and the New Scrubber Pond) will be retrofitted in compliance with 40 C.F.R. § 257.102(k)(1). Prior to retrofitting the impoundments, they will be dewatered. Retrofitting will first begin by removing all remaining CCR, including any contaminated soils and sediments from the impoundments if present. Subsequently, a new composite liner system compliant with 40 C.F.R. § 257.72 will be installed. Retrofitting will be initiated in 2020, and the three impoundments must be retrofitted sequentially to support continued plant operations. During the retrofit activities, two of the impoundments will remain in operation while one is taken out of service for retrofitting. The East Ash Pond will be the first to undergo retrofit, followed by the West Ash Pond, and finally the New Scrubber Pond. The work will include dewatering the impoundment, removing CCR and any contaminated soils and sediments (if present) from the impoundment followed by the placement of a 6-inch soil buffer/grading layer and construction of a new composite liner system.

The new composite liner system will be constructed on the newly placed soil buffer/grading layer and will be composed of a geosynthetic clay liner (GCL) with a maximum hydraulic conductivity of 1×10^{-9} cm/sec, overlain with a 60-mil HDPE geomembrane. This composite liner system meets the liner criteria set forth in 40 C.F.R. § 257.70(c).

2.2 Removal Procedure for CCR and Contaminated Soil and Sediment - § 257.102(k)(2)(i)(B)

Prior to the removal of CCR and any contaminated soil and sediment in the impoundment, the liquids from a pond will be transferred to the remaining in-service ponds for settlement and holding. Once the pond has been dewatered the CCR materials and any contaminated soil and sediment will be removed while maintaining operations in the other two ponds. The CCR materials and contaminated soil and sediment will be mechanically excavated with standard earthmoving equipment. The excavated materials will be hauled by train to the Martin Lake A-1 Area Landfill for disposal. The pond will be visually inspected to verify all CCR materials and any contaminated soils and sediment have been removed from the impoundment prior to placing the 6-inch soil buffer/grading layer and installation of the new liner system. The process will be repeated until CCR materials and any contaminated soil and sediment are removed from the remaining ponds and a new composite liner system has been installed.

2.3 Estimated Quantities of CCR Materials Removed During Retrofit - § 257.102(k)(2)(i)(C)

It is estimated that 250,000 cubic yards of CCR will be removed from the West Ash Pond and 240,000 cubic yards of CCR will be removed from the New Scrubber Pond. The East Ash Pond does not currently contain significant quantities of CCR materials due to routine clean-out, and therefore only a minor amount of CCR will be removed prior to visual confirmation of removal and placement of the 6-inch soil buffer/grading layer and installation of the new lining system.

2.4 Estimate of the Largest Area of the CCR Unit that Will be Affected by the Retrofit - § 257.102(k)(2)(i)(D)

The estimated maximum area disturbed is 10 acres for the East Ash Pond, 15 acres for the West Ash Pond, and 13 acres for the New Scrubber Pond.

2.5 Schedule for Completing All Retrofit Activities - § 257.102(k)(2)(i)(E)

Retrofit activities will begin on the East Ash Pond in mid-to-late 2020, depending on weather conditions and other factors. The retrofit of the West Ash Pond will begin after the retrofit is completed on the East Ash Pond. The retrofit on the New Scrubber Pond will begin after the West Ash Pond is completed. Absent delays caused by weather or other unforeseen factors, it is anticipated that retrofit activities should be completed by the end of 2022.

2.6 Notifications

In accordance with 40 C.F.R. § 257.102(k)(2)(ii)(A), no later than 60 days prior to date of initiating retrofit activities, Luminant will complete and post the Retrofit Plan to the operating record. Luminant will also post an Intent to Initiate Retrofit notice to the operating record no later than the date the retrofit is initiated. See 40 C.F.R. § 257.102(k)(5). In addition, a Notification of Completion of the Retrofit will be signed and sealed by the engineer of record licensed in Texas. This will be posted in the operating record within 30 days of completion of retrofit activities (40 C.F.R. § 257.102(k)(6)). The Retrofit Plan will also be posted to Luminant's CCR web site. See 40 C.F.R. § 257.107(j)(1).

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