



REPORT

# CLOSURE PLAN ADDENDUM NO. 1

*Oak Grove Steam Electric Station - FGD Ponds  
Robertson County, Texas*

Submitted to:

**Oak Grove Management Company LLC**

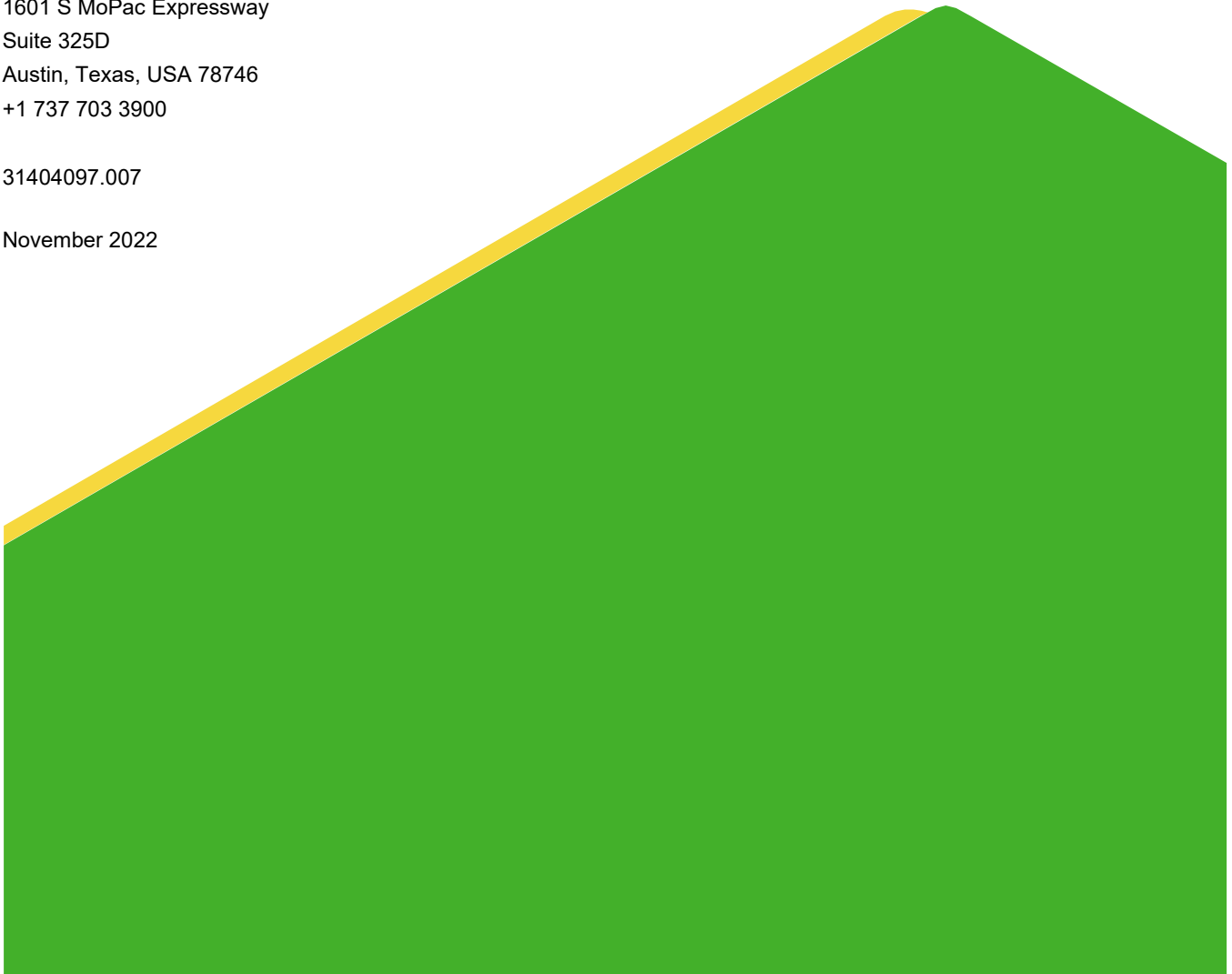
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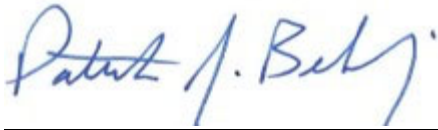
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November 2022



# PROFESSIONAL CERTIFICATION

This document and all attachments were prepared by WSP Golder under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I hereby certify that Addendum No.1 to the Closure Plan for the FGD Ponds at the Oak Grove Steam Electric Station has been prepared in accordance with the requirements of 40 C.F.R. §257.102(b).



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## DOCUMENT REVISION RECORD

<b>Issue No.</b>	<b>Date</b>	<b>Details of Revisions</b>
<b>Revision 0</b>	October 2016	Original Document
<b>Addendum 1</b>	November 2022	Revised configuration of final cap/cover system for FGD-A and added confirmation that cap slope stability will be modeled using site-specific geotechnical data during final closure design

## 1.0 INTRODUCTION

On behalf of Oak Grove Management Company LLC (Luminant), WSP Golder (Golder) has prepared this Addendum No. 1 to the Closure Plan for FGD-A Pond, FGD-B Pond, and FGD-C Pond (collectively referred to as the “FGD Ponds”) located at the Oak Grove Steam Electric Station (OGSES) in Robertson County, Texas (hereafter, the “Site”). Coal Combustion Residuals (CCR) including flue gas desulfurization (FGD) wastewater and bottom ash generated as part of OGSES operation are managed in the FGD Ponds. The FGD Ponds are regulated as Existing CCR Impoundments under 40 C.F.R. § 257, Subpart D (the “CCR Rule”).

The original Closure Plan for the FGD Ponds was prepared in October 2016 in accordance with 40 C.F.R. §257.102(b) and placed in the OGSES operating record in accordance with 40 C.F.R. §257.105(h)(10) (Golder, 2016). This Addendum No. 1 updates the Closure Plan to reflect the following:

- Revisions to the configuration of the final cap/cover system for FGD-A due to a retrofit of the FGD-A liner system; and
- Confirmation that the slope stability of FGD Pond cap/cover systems will be modeled using site-specific geotechnical data during design of the final closure of the impoundments.

## 2.0 FGD POND CAP/COVER SYSTEMS AND SLOPE STABILITY MODELING

The FGD Ponds are constructed above grade and are surrounded by engineered earthen dikes that extend to approximately 25 feet above surrounding ground level. A final cap/cover system will be constructed over the CCR in the FGD Ponds as part of unit closure as described in the 2016 Closure Plan (Golder, 2016).

The final cover system for FGD-B and FGD-C described in the 2016 Closure Plan consisted of the following (from bottom to top):

- 18-inch thick soil infiltration layer with a permeability of  $1 \times 10^{-5}$  cm/sec or less;
- 40-mil linear low-density polyethylene (LLDPE) textured geomembrane;
- Geosynthetic drainage layer; and
- 18-inch erosion layer consisting of 12 inches of general fill overlain with 6 inches of soil capable of supporting native vegetation.

A different final cover system configuration was proposed for FGD-A in the 2016 Closure Plan. The final cap/cover system for FGD-A has been revised to be similar to the cap/cover systems for FGD-B and FGD-C due to a retrofit of the FGD-A liner system. The final cap/cover system for FGD-A will now consist of the following (from bottom to top):

- 18-inch thick soil infiltration layer with a permeability of  $1 \times 10^{-5}$  cm/sec or less;
- 40-mil LLDPE textured geomembrane;
- Geosynthetic drainage layer; and
- 18-inch erosion layer consisting of 12 inches of general fill overlain with 6 inches of soil capable of supporting native vegetation.

The proposed final cap/cover systems for FGD-A, FGD-B and FGD-C comply with the requirements of 40 C.F.R. §257.102(d)(3)(i)(A) through (D):

- (A) Have a permeability less than or equal to the permeability of bottom liner system or natural subsoils or no greater than  $1 \times 10^{-5}$  cm/sec, whichever is less;
- (B) Include an infiltration layer with a minimum 18 inches of earthen material;
- (C) Include an erosion layer containing a minimum 6 inches of earthen material and capable of sustaining native plant growth; and
- (D) Accommodate settling and subsidence.

The FGD Pond Closure Plan will be updated to include cap/cover system slope stability modeling using site-specific geotechnical data during design of the final cap/closure systems for the FGD Ponds.

### 3.0 REFERENCES

Golder Associates (Golder), 2016. Closure Plans – FGD Ponds, Oak Grove Steam Electric Station. October.