

# UPDATED CLOSURE PLAN

## Bottom Ash Ponds

*Former Big Brown Steam Electric Station*  
*Freestone County, Texas*  
*TCEQ SWR #39099*

Prepared for:  
**FALCON DEVELOPMENT LLC**

Prepared by:  
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August 2020

On behalf of Falcon Development, LLC (Falcon), ATON, LLC (ATON) has prepared this Updated Closure Plan (30 TAC 352.1221/40 CFR 257.102(b)) for the Bottom Ash Ponds (BAPs) (Figure 1) at the Big Brown Steam Electric Station (BBSES). This plan is an update to the closure plan submitted in October 2016 by Luminant Generation Company, LLC (PBW, 2016). As discussed with TCEQ in January 2020, the ponds have been dewatered and the bottom ash material from the ponds is in the process of being moved to the Ash Disposal Area 2.

## **1.0 BOTTOM ASH PONDS**

The site contains two BAPs, North Bottom Ash Pond (WMU 008) and the South Bottom Ash Pond (WMU 009), that comprise of approximately 18-acres (Figure 1). The BAPs were built in the 1960's; however, they were relined in the 1980's with 3-foot clay liners.

Recovered sluice water, process waters, and storm water runoff from the ash-water system were pumped to each pond through a series of above-grade pipes located on the east end of the BAPs. Wastes managed in the BAPs include bottom ash, metal cleaning wastes, and water treatment wastes. The ponds also acted as a surge basin for various water streams in the ash-water system and periodically received non-hazardous metal cleaning wastes delivered by truck from other Luminant facilities under TCEQ Industrial Solid Waste Permit No. 39099. The current TCEQ permit expires on February 24, 2022.

## **2.0 BOTTOM ASH PONDS CLOSURE - CLOSURE BY REMOVAL OF CCR**

### **2.1 Closure by Removal**

The purpose of this Updated Closure Plan is to describe the steps required to close the BAPs at BBSES consistent with recognized and generally accepted good engineering practices. Closure of the BAPS will be designed to reduce the need for long-term maintenance and control the post-closure release of constituents into environmental pathways. The BAPS will be closed through the removal of CCR, and the closure will be performed pursuant to 40 CFR 257.102(c). CCR will be removed as described in the following section.

The ash material from the BAPs has been dewatered of free liquids via pumping to the Operating Pond (WMU 013) or evaporation and the bottom ash material from the ponds is in the process of being hauled to the Ash Disposal Area 2 (WMU 005) for disposal. A minimum of 6-inches of the interior embankment and bottom clay liner will also be removed along with the bottom ash. The bottom and embankments will be visually inspected to ensure all bottom ash has been removed. Upon closure completion, certification from a qualified Texas professional engineer will be provided verifying that closure has been completed in accordance with the closure plan. The ash is anticipated to be removed in early September 2020.

Following closure certification, the embankments will be breached to promote free drainage of stormwater from the closed area. At a later date the embankment material may be used in the closure of Ash Area 2 and the BAP area will be regraded. Pipelines that are above be removed from the around the impoundments. Underground pipelines entering the impoundments will be excavated and removed or closed in place as necessary for future grading.

### **2.3 Closure Schedule**

- Bottom Ash Removal                      September 2020
- Closure Certification                      September 2020
- BAPs Embankment Breaches              September – October 2020
- BAP Area Re-Grading                      2021

### **3.0 POST-CLOSURE MONITORING & MAINTENACE**

Falcon currently conducts groundwater sampling in the BAP area on a semi-annual basis per Industrial Solid Waste Permit (ISW) permit 39099, Assessment Monitoring in accordance with 40 CFR 257.94(e)(2), and voluntary groundwater monitoring. Pursuant to 40 CFR 257.102(c), closure will be complete when groundwater monitoring concentrations do not exceed the applicable groundwater protection standard established. Groundwater monitoring will continue following closure of the BAPs and the formerly permitted wells will be managed under the CCR program and CCR Assessment phase of the CCR rule. The groundwater monitoring of the BAPs will be further discussed in an updated post-closure plan.

#### 4.0 CERTIFICATION STATEMENT

This closure plan and all attachments were prepared by ATON LLC under my direction and supervision. This closure plans meets the requirements of 30 TAC 352.1221/40 CFR 257.102 and been prepared in a manner consistent with recognized and generally accepted good engineering practices.



Adam J. Kaiser, PE

8/21/2020



## 5.0 REFERENCES

Golder, 2019. *Semi-Annual Groundwater Monitoring Report, Monticello Steam Electric Station*. September 13.

Pastor, Behling & Wheeler, LLC (PBW), 2016. *CCR Closure Plan, Big Brown Steam Electric Station, North and South Bottom Ash Ponds*. October.

Pastor, Behling & Wheeler, LLC (PBW), 2016. *CCR Post-Closure Plan, Big Brown Steam Electric Station, North and South Bottom Ash Ponds*. October.

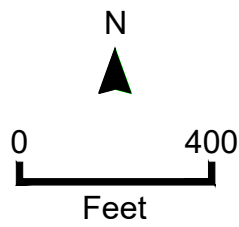
Pastor, Behling & Wheeler, LLC (PBW), 2009A. *Supplemental Assessment of the B-Area Landfill, Monticello Steam Electric Station*. October 16.

Pastor, Behling & Wheeler, LLC (PBW), 2009B. *Conceptual Design Report B-Area Landfill Dike, Monticello Steam Electric Station*. December 21.

Pastor, Behling & Wheeler, LLC (PBW), 2010. *TCEQ Registration Package, Monticello Steam Electric Station: B-Area Decant Basins*. December 2.

Pastor, Behling & Wheeler, LLC (PBW), 2011. *Affected Property Assessment Report, Monticello Steam Electric Station*. November 14.

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Figure 1  
Bottom Ash Ponds  
Project: BAP Closure  
Site: Big Brown Power Plant

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Drawn:	EFC
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Scale:	As Shown