



**REPORT**

**CCR Landfill Annual Inspection  
Byproduct Storage Area  
December 2023**

*Lakeland Electric*

*C.D. McIntosh Power Plant*

Submitted to:

**City of Lakeland - Department of Electric Utilities**

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Submitted by:

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# Distribution List

Lakeland Electric

## INTRODUCTION

WSP USA Inc. (WSP), conducted the annual coal combustion residual (CCR) landfill inspection of the Byproduct Storage Area (BSA) at Lakeland Electric's C.D. McIntosh Power Plant (MPP) on December 12, 2023. This report is intended to comply with the requirements of 40 CFR Section (§) 257.84(b).

The MPP, located in Lakeland, Florida (see Figure 1) is owned and operated by Lakeland Electric (City of Lakeland, Department of Electric Utilities). The main entrance of the facility is located at 3030 East Lake Parker Drive, Lakeland, Florida. The BSA is located in the southeast portion of the property and received CCRs generated by Unit 3, which was the only coal-fired electrical generating unit at MPP. Unit 3 ceased generation in 2021 and is currently undergoing decommissioning. The BSA is scheduled for closure in 2024.

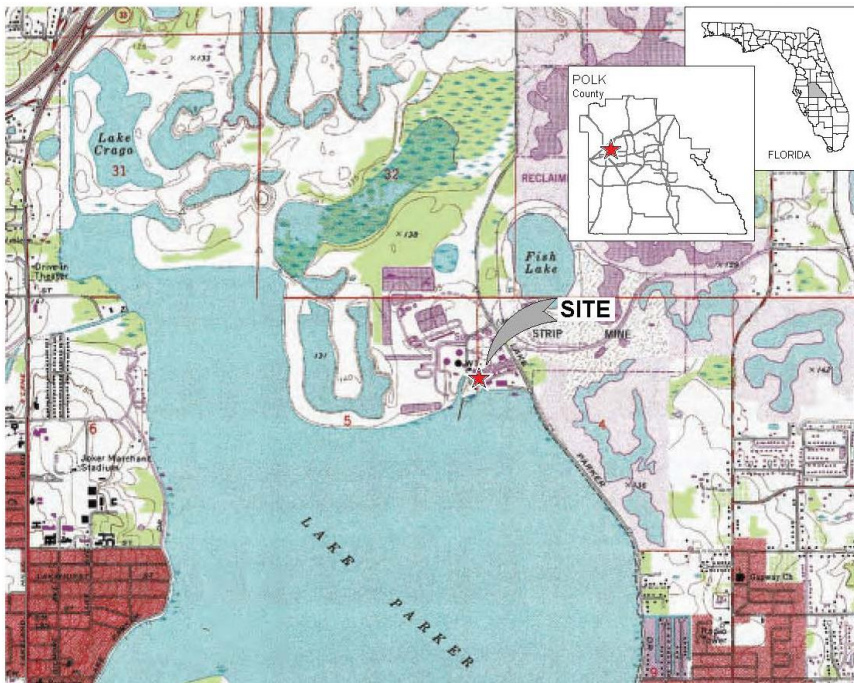


Figure 1: Site Location Map<sup>1</sup>

## REVIEW OF AVAILABLE INFORMATION - §257.84(B)(1)(I)

WSP's inspection team reviewed the available information regarding the status and condition of the BSA. The documents reviewed included:

- Operations Manual, Combustion By-Product Storage Facility, Shaw Stone & Webster, Inc., January 3, 2006;
- Closure and Post-Closure Care Plan, Byproduct Storage Area, C.D. McIntosh Power Plant, Geosyntec Consultants, September 1, 2022;
- Design Report – Vertical Expansion, Existing Combustion By-Products Storage Facility, Black & Veatch, February 20, 2004;

<sup>1</sup> USGS Topographic Map, 7.5 Min. Quadrangle Map Series, Lakeland Quadrangle, Polk County, Florida.

- C.D. McIntosh Power Plant, Solid Waste Closure Permit – Coal Combustion Residuals Landfill, Permit No. 0425997-001-CP-01, Florida Department of Environmental Protection, August 18, 2023;
- C.D. McIntosh Jr Power Plant Units 3 and 5 Conditions of Certification, PA 74-06R, Florida Department of Environmental Protection, March 6, 2013;
- Run-On and Run-Off Plan Report, Byproduct Storage Area, Geosyntec Consultants, October 2021; and
- Operating records, including inspection results.

## **INSPECTION SUMMARY - §257.84(B)(1)(II)**

WSP conducted the visual inspection of the BSA on December 12, 2023, by traversing the BSA on foot to observe cover conditions, exterior slope conditions, the presence of any erosional issues, vegetative conditions, placement of CCRs, stormwater management features, the presence of potential slope stability issues, and the presence of other signs of distress or malfunction.

## **CHANGES IN GEOMETRY - §257.84(B)(2)(I)**

Changes in the geometry of the BSA were evaluated by comparing recent aerial photographs, past inspection results, past topography, and the December 14, 2022 visual inspection. The primary changes in geometry are due to material regrading and temporary capping of the BSA. Soil material stockpiles on the top of the northern portion were reclaimed and placed over CCRs in the southern portion of the BSA. A recent aerial photograph of the BSA is provided on Figure 2 (dated April 2023).



**Figure 2: Aerial Photograph (Google Earth<sup>2</sup>)**

<sup>2</sup> Google Earth Pro, 28°05'00.0"N, 81°55'00.0"W, imaged dated April 2023, <http://www.google.com/earth/index.html>, assessed December 26, 2023.

## **APPROXIMATE CCR VOLUME - §257.84(B)(2)(II)**

The volume of materials in the BSA at the time of the inspection is estimated to be approximately 2.91 million cubic yards according to the current Closure and Post-Closure Care Plan (Geosyntec, September 2022).

## **STRUCTURAL WEAKNESS/DISRUPTING CONDITIONS - §257.84(B)(2)(III)**

No indications of actual or potential structural weakness were noted during the December 12, 2023 inspection or during the review of available information.

## **CHANGES AFFECTING STABILITY OR OPERATIONS - §257.84(B)(2)(IV)**

Based on the December 12, 2023 inspection and review of the available information, no changes from the previous inspection (conducted on December 14, 2022) that may affect the operations or stability of the BSA were observed. An area of saturated cover soils was observed at the toe of the BSA slope on the northwest side of the BSA. Lakeland Electric will monitor the area and it will be address during closure construction activities scheduled for 2024.

## **CONCLUSION**

Based on the review of the available information noted above, the December 12, 2023 field observations, and subsequent discussions with Lakeland Electric, the BSA's design, construction, operation, and maintenance appear to be consistent with recognized and generally accepted good engineering standards. If you have any questions or comments about this report, please do not hesitate to contact us.

### **WSP USA Inc.**



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