CCR LANDFILL ANNUAL INSPECTION REPORT
BYPRODUCT STORAGE AREA
DECEMBER 2015

Lakeland Electric
C.D. McIntosh Power Plant
3030 East Lake Parker Drive
Lakeland, Florida

Submitted to:  City of Lakeland
Department of Electric Utilities
501 East Lemon Street
Lakeland, FL 33801 USA

Submitted by:  Golder Associates Inc.
9428 Baymeadows Road, Suite 400
Jacksonville, FL 32256 USA

January 2016
INTRODUCTION
Golder Associates Inc. (Golder) conducted the first annual coal combustion residual (CCR) landfill inspection of the Byproduct Storage Area (BSA) at Lakeland Electric’s C.D. McIntosh Power Plant (MPP). The annual inspection conducted on December 29, 2015, and this report are intended to comply with the requirements of 40 CFR Section (§) 257.84(b). Golder’s inspection team consisted of Samuel Stafford, PE and Jeremy Brown, PE.

The MPP, owned and operated by Lakeland Electric (City of Lakeland, Department of Electric Utilities), is located in Lakeland, Florida (see Figure 1). 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 receives CCRs generated by Unit 3, the only coal-fired electrical generating unit at MPP (see Figure 2).

REVIEW OF AVAILABLE INFORMATION - §257.84(b)(1)(i)
Golder’s inspection team reviewed available information regarding the status and condition of the BSA including available operating records. The documents reviewed included:

- Operations Manual, Combustion By-Product Storage Facility, Shaw Stone & Webster, Inc., January 3, 2006;
- Design Report – Vertical Expansion, Existing Combustion By-Products Storage Facility, Black & Veatch, February 20, 2004;
- C.D. McIntosh, Jr Power Plant Units 3 and 5 Conditions of Certification, PA 74-06R, Florida Department of Environmental Protection, March 6, 2013; and
- Operating records, including weekly inspection results.

INSPECTION SUMMARY - §257.84(b)(1)(ii)
Golder conducted the visual inspection of the BSA on December 29, 2015, by traversing the BSA on foot in an effort 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)
This inspection was the first annual inspection performed on the BSA; therefore, changes in geometry of the structure from previous annual inspections cannot be evaluated.

APPROXIMATE CCR VOLUME - §257.84(b)(2)(ii)
The volume of CCR materials in the BSA at the time of the inspection is estimated to be approximately 1,294,000 cubic yards based on disposal records, previous capacity analysis, and other information provided by Lakeland Electric.
STRUCTURAL WEAKNESS AND DISRUPTING CONDITIONS - §257.84(b)(2)(iii)
Based on the December 29, 2015, observations and review of the available information, indications of structural weakness were noted in the over-steepened exposed gypsum temporary slopes located in the upper active portion of the BSA. Lakeland Electric plans to re-grade and recompact the slopes.

Conditions identified during the inspection that could have the potential to disrupt the operations of the BSA include: erosion of exposed CCRs on exterior slopes, obstructed stormwater management features and over-steepened temporary slopes. Lakeland Electric has a work order in place to implement repairs necessary to remedy the conditions.

CHANGES AFFECTING THE STABILITY OR OPERATIONS - §257.84(b)(2)(iv)
This inspection was the first comprehensive annual inspection performed on the BSA; therefore, no comparisons to previous annual inspections can be made.

CONCLUSION
Based on the review of the available information noted above, the December 29, 2015 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.

Sincerely,

GOLDER ASSOCIATES INC.

Samuel F. Stafford, PE
Project Engineer

Jeremy J. Brown, PE
Senior Project Engineer

Manitia L. Moultrie
Practice Leader and Principal

SFS/JJB/MLM/ams

Attachments: Figure 1 Site Vicinity Map
Figure 2 McIntosh Power Plan Site Plan
Figure 3 Byproduct Storage Area Grid Location Map

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FIGURES
REFERENCE(S)
1) USGS TOPOGRAPHIC MAP, 7.5 MIN. QUADRANGLE MAP SERIES: LAKELAND QUADRANGLE, POLK COUNTY, FLORIDA.

CONSULTANT

PROJECT
2015 ANNUAL INSPECTION
C.D. McIntosh POWER PLANT
LAKELAND, POLK COUNTY, FLORIDA

SITE VICINITY MAP

CLIENT
LAKELAND ELECTRIC

CONSULTANT

2016-01-15

DESIGNED
SFS

PREPARED
BCL

REVIEWED
SFS

APPROVED
JJB

PROJECT NO.
15-45454

Phase
REV.
FIGURE

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