



CCR LANDFILL ANNUAL INSPECTION REPORT BYPRODUCT STORAGE AREA DECEMBER 2020

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:

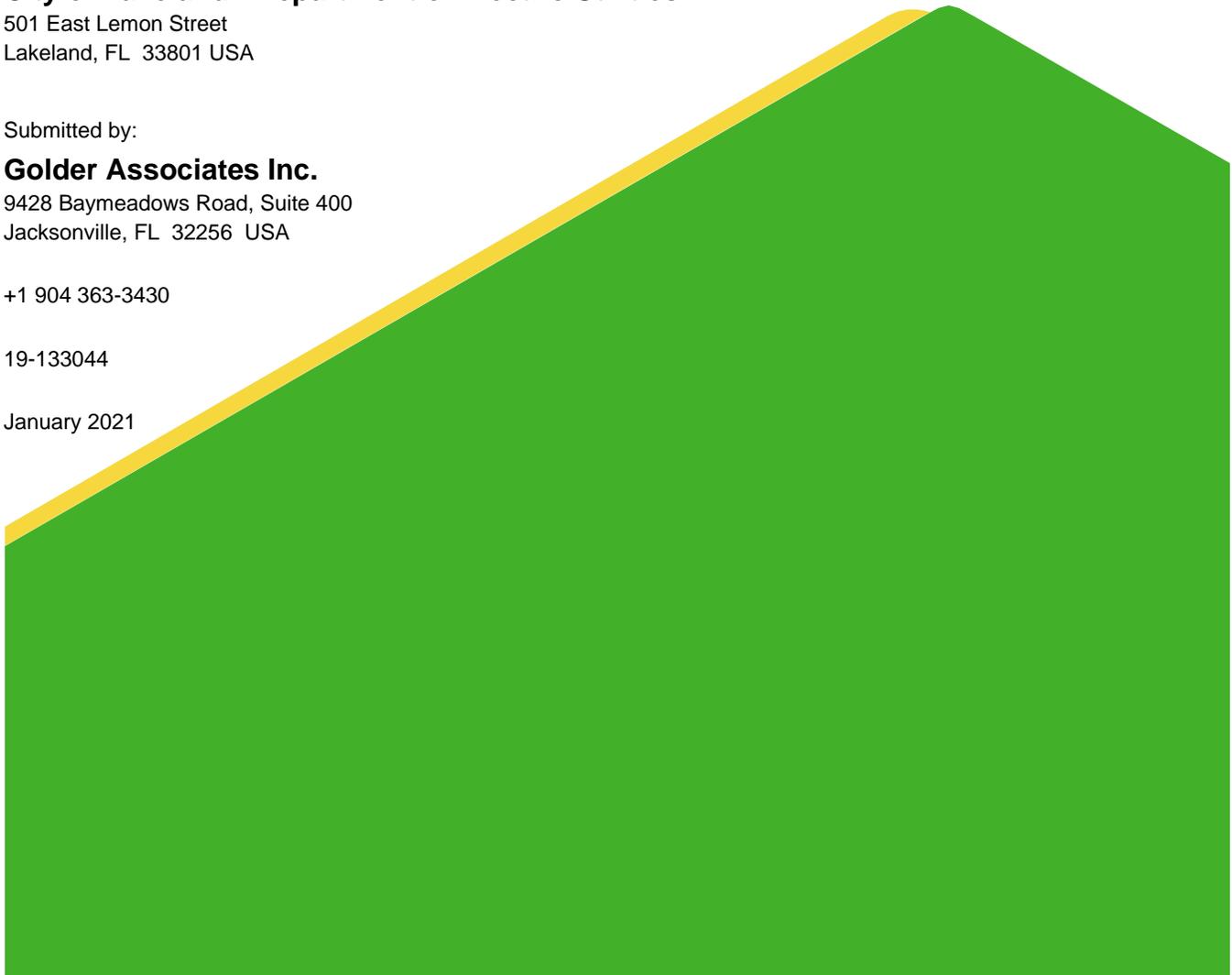
Golder Associates Inc.

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19-133044

January 2021



Distribution List

Lakeland Electric

INTRODUCTION

Golder Associates Inc. (Golder) 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 10, 2020. 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 receives CCRs generated by Unit 3, which is 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. 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 10, 2020, by traversing the BSA on foot in order 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 geometry of the BSA were evaluated by comparing recent aerial photographs, past inspection results, past topography and the December 5, 2019 visual inspection. The primary changes in geometry are due to material reclamation in the southern portion of the BSA and regrading of the top of the northern portion of the BSA.

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 2.92 million cubic yards based on past topographic survey information, updated disposal records, previous capacity analyses, and other information provided by Lakeland Electric.

STRUCTURAL WEAKNESS/DISRUPTING CONDITIONS - §257.84(b)(2)(iii)

No indications of actual or potential structural weakness were noted during the December 10, 2020 inspection or during the review of available information.

CHANGES AFFECTING STABILITY OR OPERATIONS - §257.84(b)(2)(iv)

Based on the December 10, 2020 inspection and review of the available information, no changes from the previous inspection conducted on December 5, 2019 that may affect the operations or stability of the BSA were observed.

CONCLUSION

Based on the review of the available information noted above, the December 10, 2020 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.

Golder Associates Inc.



Samuel F. Stafford, PE
Senior Engineer



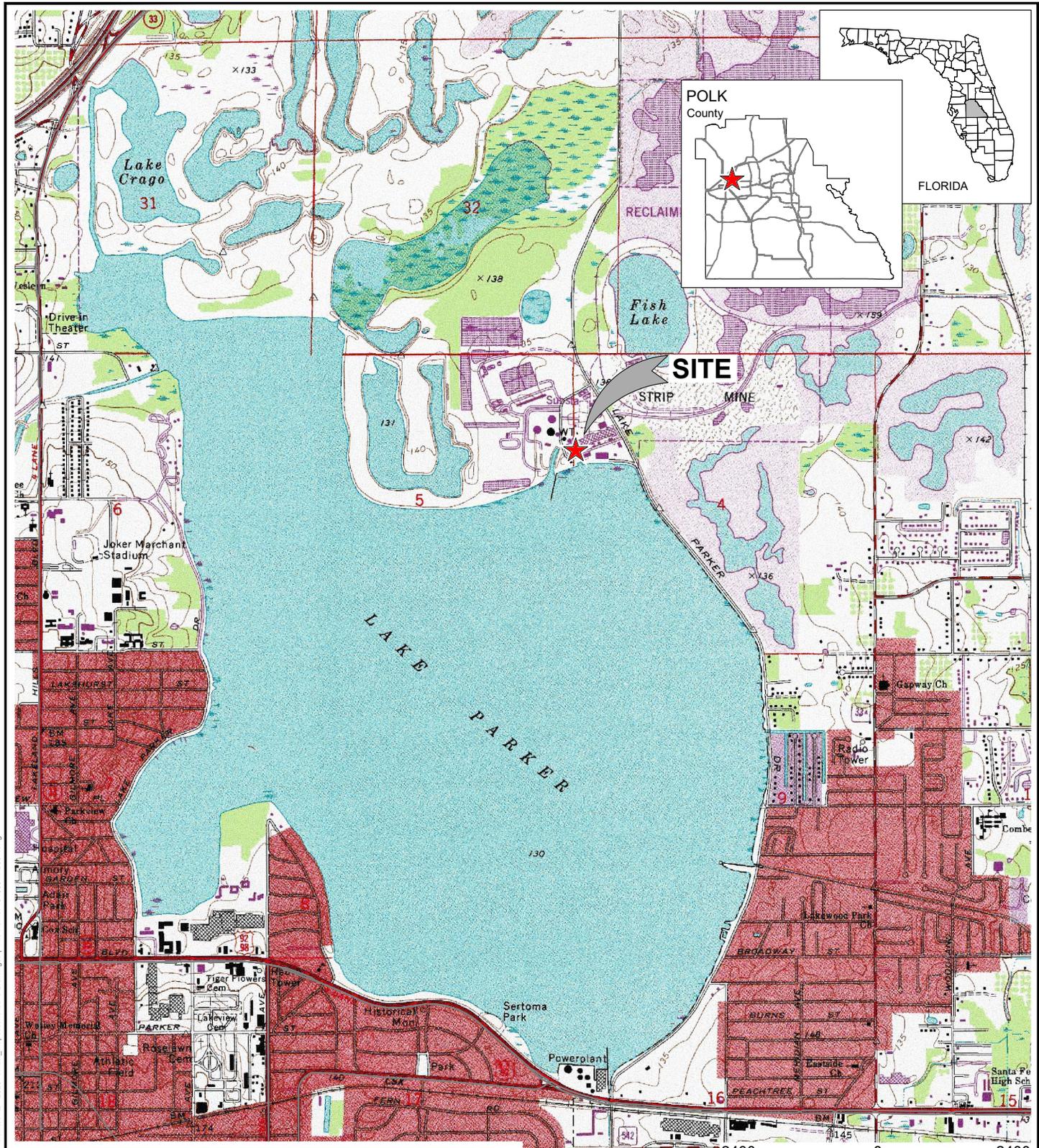
Don E. Grigg, PE
Associate and Group Leader

SFS/DEG/ams

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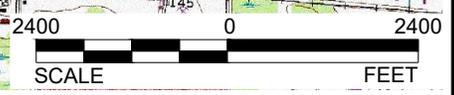
[https://golderassociates.sharepoint.com/sites/117718/Project Files/6 Deliverables/2020 Annual Inspection/2020 BSA Inspection Report.docx](https://golderassociates.sharepoint.com/sites/117718/Project%20Files/6%20Deliverables/2020%20Annual%20Inspection/2020%20BSA%20Inspection%20Report.docx)

FIGURES



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



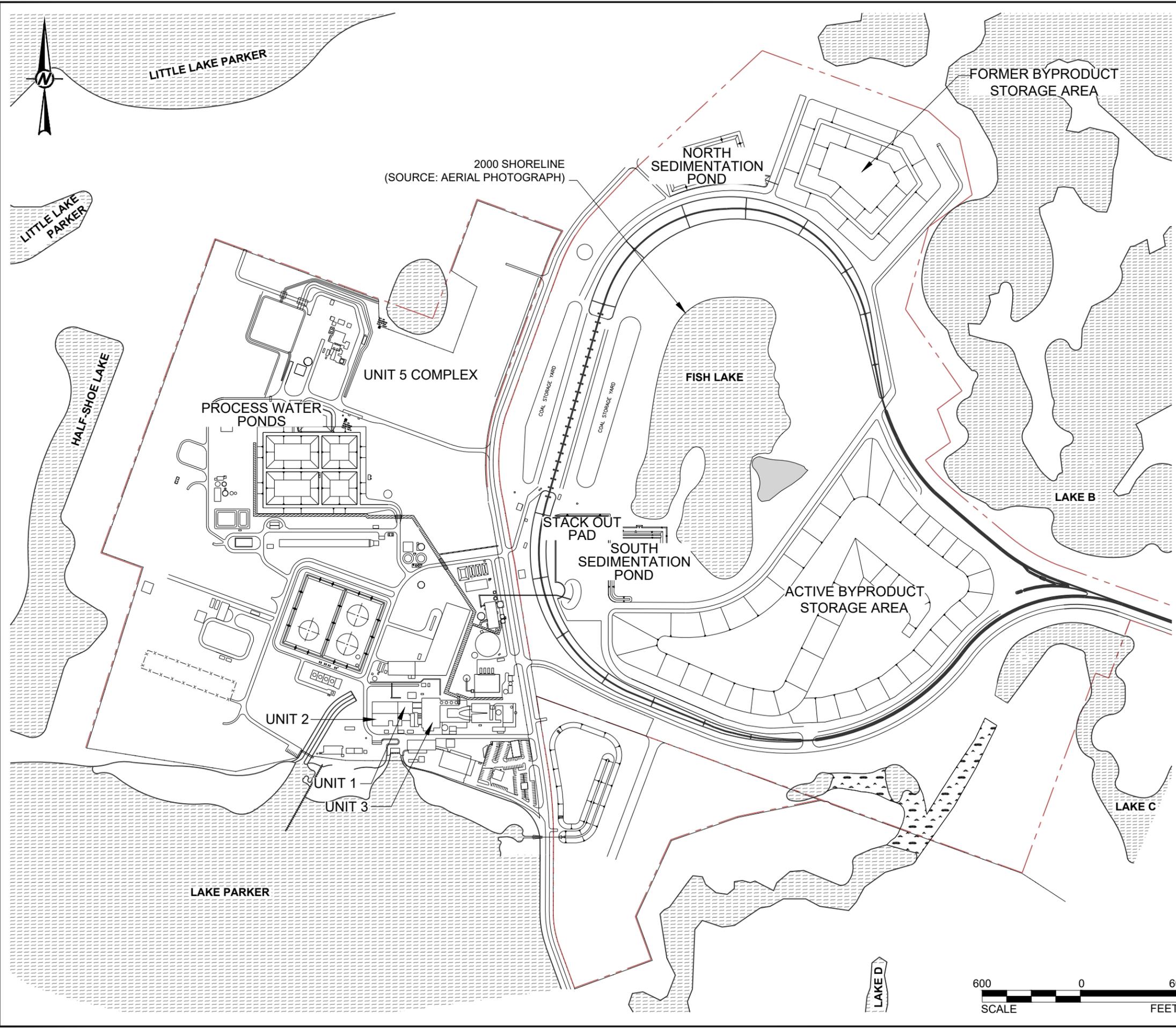
CLIENT
 LAKELAND ELECTRIC

PROJECT
 2020 ANNUAL INSPECTION
 C.D. McINTOSH POWER PLANT
 LAKELAND, POLK COUNTY, FLORIDA

CONSULTANT	YYYY-MM-DD	2021-01-06
	DESIGNED	SFS
	PREPARED	BCL
	REVIEWED	SFS
	APPROVED	DEG

TITLE	PROJECT NO.	Control No.	REV.	FIGURE
SITE VICINITY MAP	19-133044	19133044-B001	.	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A



LEGEND

	SURFACE WATER
	PROPERTY BOUNDARY
	FENCE
	WET AREA

REFERENCE(S)

1. BASE MAP MODIFIED FROM SITE PLAN PROVIDED BY LAKELAND ELECTRIC.

CLIENT LAKELAND ELECTRIC		
CONSULTANT	YYYY-MM-DD	2021-01-06
	DESIGNED	SFS
	PREPARED	BCL
	REVIEWED	SFS
	APPROVED	DEG

PROJECT
 2020 ANNUAL INSPECTION
 C.D. McINTOSH POWER PLANT
 LAKELAND, POLK COUNTY, FLORIDA

TITLE
McINTOSH POWER PLANT SITE PLAN



PROJECT NO. 19-133044	Control No. 19133044-B002	REV. .	FIGURE 2
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1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



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1" = 100' IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSIB

CLIENT LAKELAND ELECTRIC		
CONSULTANT	YYYY-MM-DD	2021-01-06
	DESIGNED	SFS
	PREPARED	BCL
	REVIEWED	SFS
	APPROVED	DEG

PROJECT
 2020 ANNUAL INSPECTION
 C.D. McINTOSH POWER PLANT
 LAKELAND, POLK COUNTY, FLORIDA

TITLE
BYPRODUCT STORAGE AREA GRID LOCATION MAP

REFERENCE(S)
 1. AERIAL IMAGERY SOURCE: GOOGLE EARTH® PRO 2010, IMAGE DATED 12.11.18. IMAGE GEOREFERENCED BY GOLDER AND INTENDED FOR INDICATIVE PURPOSES ONLY.



PROJECT NO. 19-133044	Control No. 19133044-B003	REV. .	FIGURE 3
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