

SEPTEMBER 2018

# CLECO POWER LLC BRAME ENERGY CENTER



## FAULT AREAS ASSESSMENT

## BOTTOM ASH POND

**Prepared By:**

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Project Number 002-213



**TABLE OF CONTENTS**

<b><u>Section</u></b>	<b><u>Page</u></b>
1.0 INTRODUCTION .....	1
2.0 FAULT AREAS ASSESSMENT.....	1
3.0 CONCLUSION .....	1

**LIST OF FIGURES**

<b><u>Figure</u></b>	
1	Site Location Map
2	Site Map
3	Fault Location Map

**LIST OF APPENDICES**

<b><u>Appendix</u></b>	
A	P.E. Certification

## 1.0 INTRODUCTION

Providence was contracted by Cleco Power LLC (Cleco) to conduct a fault areas assessment of the Bottom Ash Pond at Cleco's Brame Energy Center. Recent Coal Combustion Residual (CCR) regulations at 40 CFR 257.62 established requirements for owners and operators to conduct a fault areas assessment by a qualified professional engineer.

40 CFR 257.62 (a) states:

*New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must not be located within 60 meters (200 feet) of the outermost damage zone of a fault that has had displacement in Holocene time unless the owner or operator demonstrates by the dates specified in paragraph (c) of this section that an alternative setback distance of less than 60 meters (200 feet) will prevent damage to the structural integrity of the CCR unit.*

The Cleco Brame Energy Center is located near Lena in Rapides Parish, Louisiana. A site location map showing the Brame Energy Center is included as **Figure 1**.

This fault areas assessment pertains to the Bottom Ash surface impoundment (Pond) utilized for the Unit 2 coal-fired generation unit. A site map for the Bottom Ash Pond is included as **Figure 2**. For an existing CCR surface impoundment, the fault areas assessment must be completed no later than October 17, 2018.

## 2.0 FAULT AREAS ASSESSMENT

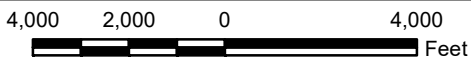
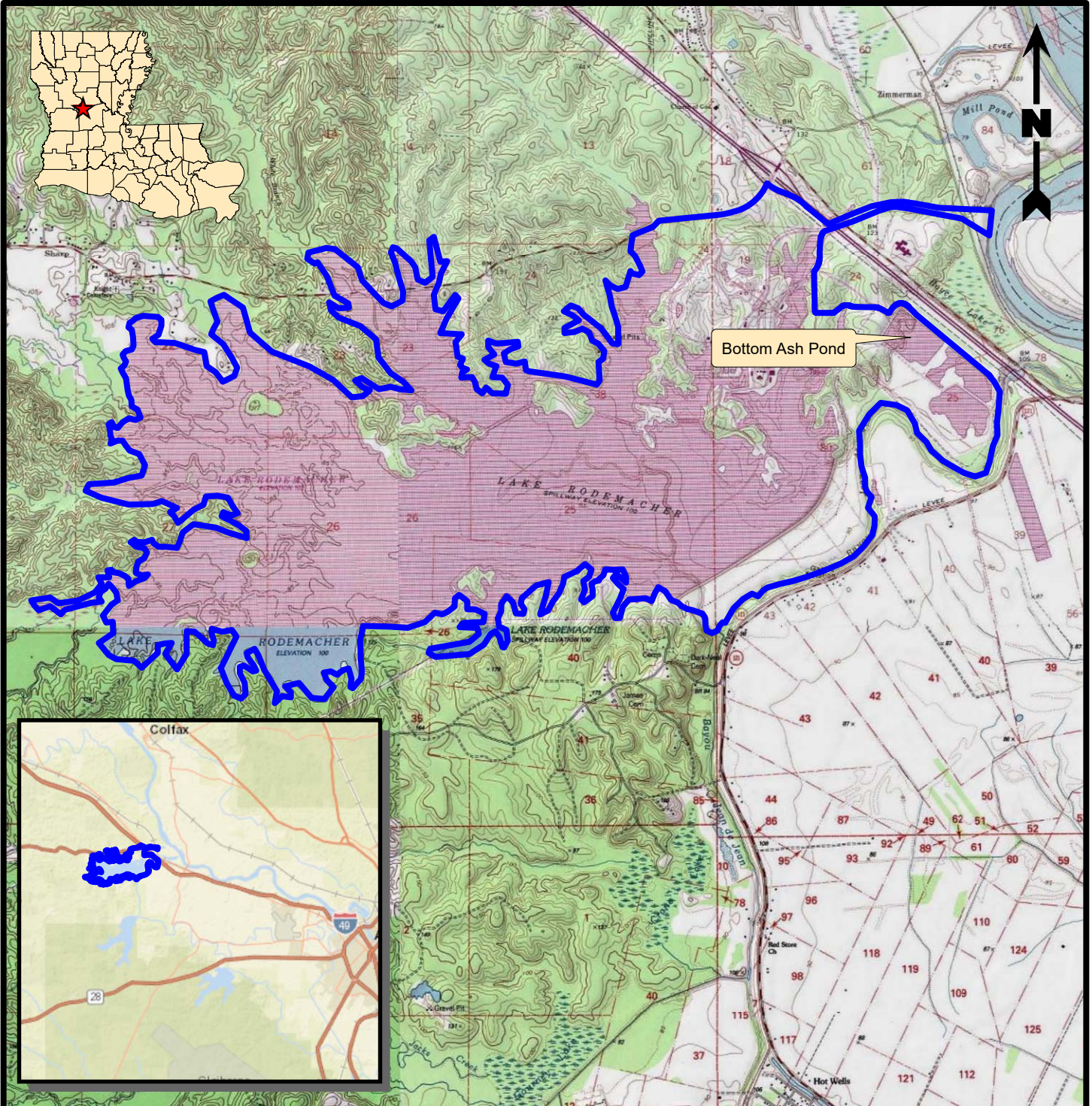
40 CFR 257.53 states that a fault is a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side. It also states that Holocene means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch, at 11,700 years before present, to present.

The fault locator map created on the USGS website, Mineral Resources, Online Spatial Data, By State (<https://mrdata.usgs.gov/geology/state/state.php?state=LA>) indicates no faults located within 60 meters (200 feet). This 200-foot buffer is shown in **Figure 3**.

## 3.0 CONCLUSION

Based on the results from the fault areas assessment for the Bottom Ash Pond, Providence concludes that the surface impoundment is not located within 60 meters (200 feet) of the outermost damage zone of a fault that has had displacement in Holocene time. The Bottom Ash Pond meets the requirements at 257.62 of the CCR regulations. **Appendix A** contains a P.E. Certification that attests to this assessment.

**FIGURE 1**  
**SITE LOCATION MAP**



**Legend**

Property Boundary

**Reference**

Base map comprised of U.S.G.S. 7.5 minute topographic maps, "Lena, LA", "Boyce, LA", "Jericho, LA", and "Gardner, LA".

**Site Location Map**

**Fault Areas Assessment - Bottom Ash Pond**  
Boyce, Rapides Parish, Louisiana

**Cleco Power LLC**  
Brame Energy Center





Drawn By	LMM	06/21/17
Checked By	LMH	06/21/17
Approved By	CVH	06/21/17

Project Number	002-213	<b>1</b> Figure
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**FIGURE 2**  
**SITE MAP**

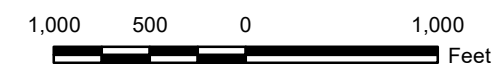


**Legend**

-  Property Boundary
-  Bottom Ash Pond

**Reference**

Base map comprised of Google Earth aerial imagery from 10/03/14.



**Site Map**

**Fault Areas Assessment - Bottom Ash Pond**  
 Boyce, Rapides Parish, Louisiana

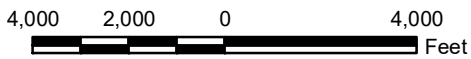
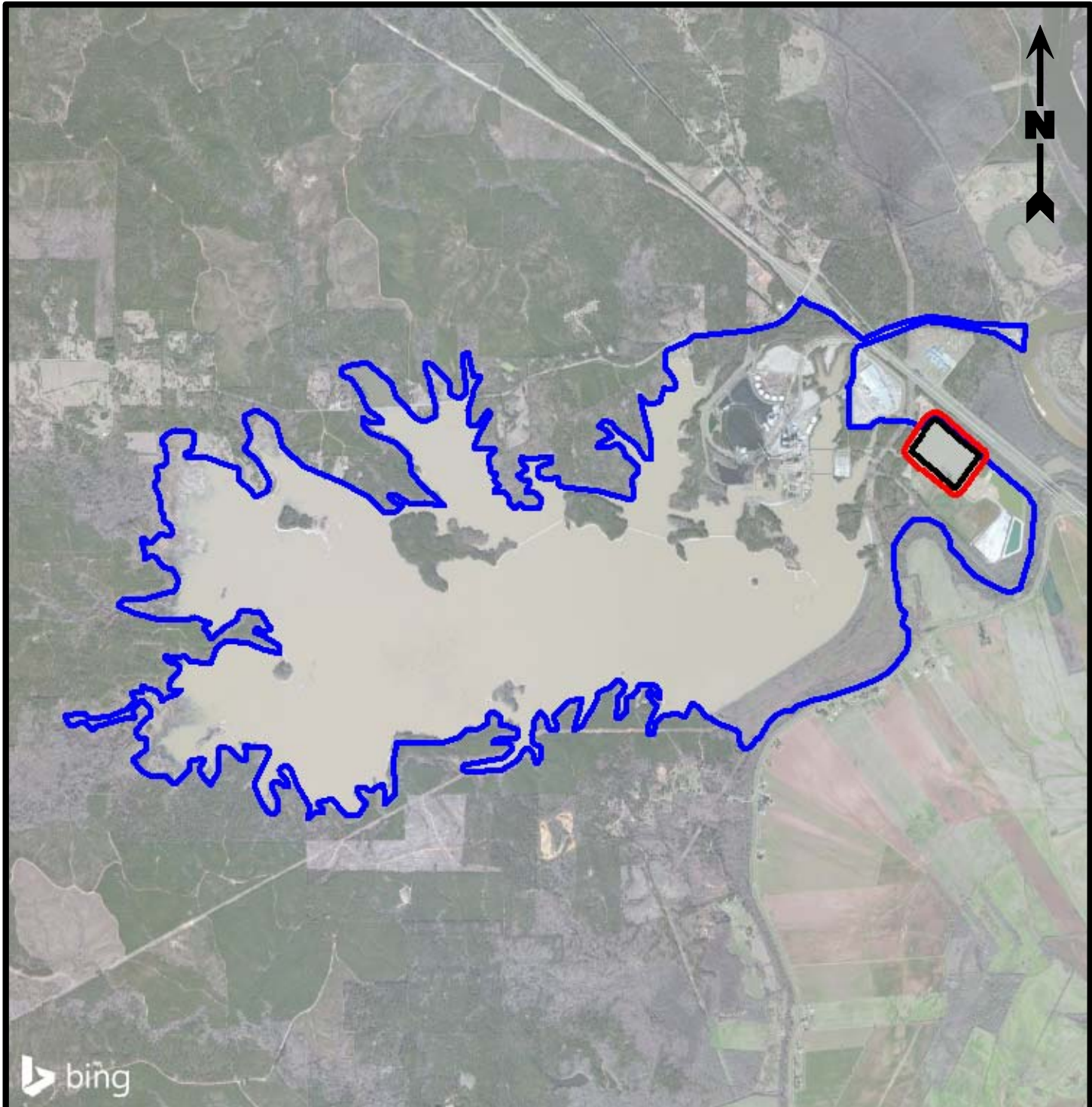
**Cleco Power LLC**  
 Brame Energy Center



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	<b>2</b>	Figure

**FIGURE 3**  
**FAULT LOCATION MAP**





**Legend**

- Property Boundary
- 200' Buffer
- Bottom Ash Pond

**Note**

There are no faults located within a 200' buffer of the Bottom Ash Pond.

**Reference**

Base map comprised of Bing Maps aerial imagery from (c) 2017 Microsoft Corporation and its data suppliers. Fault data obtained from the United States Geological Survey (USGS) database.

**Fault Location Map**

**Fault Areas Assessment - Bottom Ash Pond**  
Boyce, Rapides Parish, Louisiana

**Cleco Power LLC**  
Brame Energy Center



**PROVIDENCE**

Drawn By	LMM	06/23/17
Checked By	LMH	06/23/17
Approved By	CVH	06/23/17

Project Number	002-213	<b>3</b> Figure
Drawing Number	002-213-A013	

**APPENDIX A**  
**P.E. CERTIFICATION**

**CLECO BRAME ENERGY CENTER  
BOTTOM ASH POND  
CCR FAULT AREAS ASSESSMENT**

**PROFESSIONAL ENGINEER CERTIFICATION**

I hereby certify that I have performed a fault areas assessment for Cleco's Brame Energy Center Bottom Ash Pond in accordance with the 40 CFR 257.62 CCR requirements. Based on the results from the fault areas assessment, the Bottom Ash Pond is not located within 60 meters (200 feet) of the outermost damage zone of a fault that has had displacement in Holocene time.

**James C. Van Hoof**

Name

**24630**

Registration No.

**LA**

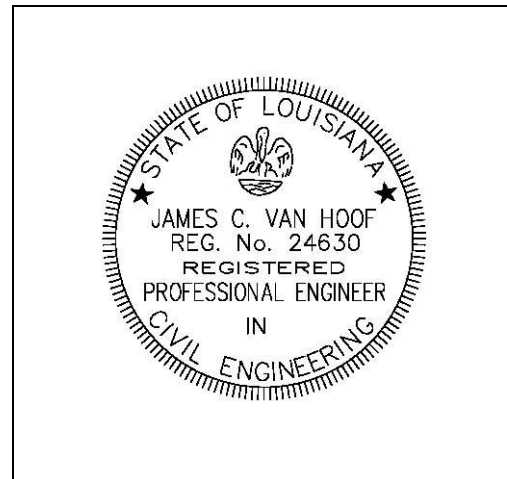
State

*James C. Van Hoof, P.E.*

Signature

9/19/18

Date



(Seal)