CLECO POWER LLC

BRAME ENERGY CENTER

CCR ANNUAL INSPECTION

BOTTOM ASH POND

JANUARY 2025

Providence Engineering and Environmental Group LLC
1201 Main Street
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Providence Project No: 002-336

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SECTION 1.0

GENERAL INFORMATION

ANNUAL CCR SURFACE IMPOUNDMENT INSPECTION			
Facility Name:		Cleco Brame Energy Center	
Address:		275 Rodemacher Rd. Lena, LA	
Surface Impoundment Name :	Bottom Ash Pond	**Owner:**	Cleco Power LLC
Surface Impoundment ID:	P-0005-R1	**Operator:**	Cleco Power LLC
Nearest City:	Boyce	**Parish:**	Rapides
Inspector:		Gary J. Leonards, P.E.	
Company:		Providence Engineering & Environmental Group LLC	
Date of Inspection:		12/16/2024	
Weather at Time of Inspection:		Mostly Cloudy, Cool	

DESCRIPTION OF THE OPERATION OF THE SURFACE IMPOUNDMENTS:

The Brame Energy Center's Bottom Ash surface impoundment is designed to accept the coal combustion residual (CCR) byproducts derived from burning of the Unit 2 coal for the generation of electricity. The Bottom Ash pond is classified by the Louisiana Department of Environmental Quality (LDEQ) as Type I Surface Impoundment. Stormwater and sluice water accumulated in the Bottom Ash Pond is discharged by means of three pumps that discharge the wastewater through the outlet pipe on the western end of the pond. This water discharges into Lake Rodemacher via LPDES outfall 401, thence to Bayou Jean de Jean via LPDES outfall 001, then to the Red River. The minimum levee elevation for the Bottom Ash impoundment is 106 feet NAVD 88. To determine the maximum storage capacity, Providence assumed a freeboard of three feet to the top of the impoundment. The bottom elevation of the Bottom Ash Pond as noted in the solid waste permit application is 85 feet MSL. The maximum capacity of this impoundment, with a freeboard of three feet, is approximately 760.5 acre-feet.

1.0 GENERAL INFORMATION			
Owner Contact:	Kasey Moore	**Phone:**	318-793-1194
Director-Brame Energy Center:	Chris Estes	**Phone:**	318-793-1200
Dam Status:	Operational	**Year Built:**	1982
Latitude:	31° 23.83' N	**Longitude:**	92° 42.27' W
Dam Size:	760.5 Acre-Feet (3' Freeboard)		
Bottom of Pond Elevation Information:	85 ft. MSL	**Top of Dike Elevation:**	106 ft. NAVD 88
Low Operating Level Elevation:	90 ft. NAVD 88	**High Operating Level Elevation:**	96 ft. NAVD 88
High Operating Level Storage:	464.75 acre-feet @ elevation 96.0 ft. NAVD 88		
Maximum Storage:	760.5 acre feet @ elevation 103.0 ft. NAVD 88		
Maximum Surface Impoundment Area:	45.80 Acres		
Offsite Drainage Area:	Discharges to Lake Rodemacher via LPDES Outfall 401		
Spillway Type:	None, Pumped through HDPE discharge pipe		

SECTION 2.0

QUESTIONS FOR OWNER'S REPRESENTATIVE

2.0 QUESTIONS FOR OWNER'S REPRESENTATIVE	
Construction Plans Available?	☑ Yes ☐ No
Site Facility Map Available?	☑ Yes ☐ No
Operations and Maintenance Manual Available?	☑ Yes ☐ No
Emergency Action Plan Available?	☑ Yes ☐ No
Recent Modification or Improvements?	N/A
Are Routine Inspections Completed?	☑ Yes ☐ No
Is Routine Maintenance Completed?	☑ Yes ☐ No
Is There Vehicle Access to the Pond?	☑ Yes ☐ No
Is Access Available During Heavy Rains?	☑ Yes ☐ No
Are Routine Inspection Logs Kept On-site?	☑ Yes ☐ No
Offsite Drainage Area:	Discharges to Lake Rodemacher via LPDES Outfall 401.
Spillway Type:	None, Pumped through discharge pipe.

SECTION 3.0

PHYSICAL DAM FEATURES - RESERVOIR

3.0 PHYSICAL DAM FEATURES – RESERVOIR:	
Staff Gauge Type:	Level Gauge Indicator
Staff Gauge Elevation at Time of Inspection:	Not observed
Normal Operating Elevation:	92.0 ft. NAVD 88
Typical Operation:	Discharges to Lake Rodemacher via LPDES Outfall 401.
Are there any visible swirls?	☐ Yes ☑ No
If yes, describe (size, location, etc.)	
Is there excessive CCR buildup in the surface impoundment?	☐ Yes ☑ No
If yes, describe (size of area, location, severity, etc.)	
Approximate volume of Impounded water at time of inspection:	485 acre-feet
Approximate volume of CCR at time of inspection:	150,000 cubic yards
Findings:	The reservoir was inspected and appeared to be in satisfactory condition.
Other observations on the reservoir:	None

SECTION 4.0

PHYSICAL DAM FEATURES - INTAKE WORKS

4.0 PHYSICAL DAM FEATURES – INTAKE WORKS:	
Number of Intakes:	Five
Description (1):	Primary Bottom Ash Sluice Pipe
Size and Type:	12 Inch Steel Pipe
Control:	Controlled by Pumps at Plant
Can Flow be Shutoff or Bypassed:	☑ Yes ☐ No
Description (2):	Secondary Bottom Ash Sluice Pipe
Size and Type:	12 Inch HDPE Pipe
Control:	Controlled by Pumps at Plant
Can Flow be Shutoff or Bypassed:	☑ Yes ☐ No
Description (3):	Boiler Area Storm water Sump Pipe
Size and Type:	12 Inch Steel Pipe
Control:	Controlled by Pumps at Plant
Can Flow be Shutoff or Bypassed:	☑ Yes ☐ No
Description (4):	Fly Ash Discharge Pipe into Bottom Ash Pond
Size and Type:	6 inch HDPE Pipe
Control:	Controlled by Pump from Fly Ash Pond
Can Flow be Shutoff or Bypassed:	☑ Yes ☐ No
Description (5):	Bottom Ash Sluice Trench Stormwater Pipe
Size and Type:	24 inch corrugated metal pipe
Control:	None
Can Flow be Shutoff or Bypassed:	☐ Yes ☑ No
Is the in-flow piping free of debris and otherwise unobstructed?	☑ Yes ☐ No
If no, describe (type of debris, reason for obstruction, etc.)	
Describe the quality of discharge from hydraulic structure (turbidity, depth, etc.)	The inflowing water contains bottom ash which is sluiced out of solution.
Findings:	The intake works were inspected and appeared to be in satisfactory condition. No corrective actions are required at this time.
Other observations on the intake works:	None

SECTION 5.0

PHYSICAL DAM FEATURES - OUTLET WORKS

5.0 PHYSICAL DAM FEATURES – OUTLET WORKS:	
Number of Outlets:	One
Outlets/Culvert Pipe Sizes:	12 Inches
Type of Pipes:	HDPE Pipe that runs through 24 inch CMP
Control:	Pump level controls
Can Flow be Shutoff or Bypassed:	☑ Yes ☐ No
Describe the overall condition of the hydraulic structure: (Check all that apply)	☑ Functioning Normally ☐ Not Functional ☐ Deteriorated ☐ Damaged ☐ Adequate ☐ Inadequate Other:(describe)
Is there evidence of erosion around the hydraulic structure?	☐ Yes ☑ No
If yes, describe (size of area, location, severity, etc.)	
Is the hydraulic structure outlet flowing freely and unobstructed?	☑ Yes ☐ No
If no, describe (type of debris, reason for obstruction, etc.)	
Describe the quality of discharge from the hydraulic structure (turbidity, depth, etc.)	The outflowing water is relatively clear and discharges to Lake Rodemacher via LPDES Outfall 401 which cycles back to the plant.
Findings:	The outlet works were inspected and appeared to be in satisfactory condition. No corrective actions are required at this time.
Other observations on the outlet works:	None

SECTION 6.0

SLOPE PROTECTION - EXTERIOR SLOPES

6.0 SLOPE PROTECTION – EXTERIOR SLOPES:	
Describe the vegetation on the exterior slope: (Check all that apply)	☐ Recently Mowed ☑ Good Cover ☐ Sparse ☐ Other: (describe)
Is there any erosion on the exterior slope?	☐ Yes ☑ No
If yes, describe (size of area, location, severity, etc.)	
Is there any erosion protection on the exterior slopes? (e.g. riprap, other)	☐ Yes ☑ No
If yes, describe (riprap - adequate, inadequate, etc.)	
Are there any Crack/Rills Observed?	☐ Yes ☑ No
If yes, describe (size of area, location, severity, etc.)	
Are there any Sinkholes Observed?	☐ Yes ☑ No
If yes, describe (size of area, location, severity, etc.)	
Are there any trees on the slopes?	☐ Yes ☑ No
If yes, describe (type of vegetation, size, location, etc.)	
Findings:	The exterior slope was inspected and appeared to be in satisfactory condition.
Other observations on the exterior slopes:	None

SECTION 7.0

SLOPE PROTECTION - INTERIOR SLOPES

7.0 SLOPE PROTECTION – INTERIOR SLOPES:	
Describe the vegetation on the interior slopes: (Check all that apply)	☐ Recently Mowed ☑ Good Cover ☐ Sparse ☐ Other: (describe)
Is there any erosion on the interior slope?	☐ Yes ☑ No
If yes, describe (size of area, location, severity, etc.)	
Is there any erosion protection on the interior slopes? (e.g. riprap, other)	☑ Yes ☐ No
If yes, describe what type and it's condition (riprap - adequate, inadequate, etc.) Riprap at 24" CMP storm water pipe outlet. Protection is adequate.	
Are there any Crack/Rills Observed?	☐ Yes ☑ No
If yes, describe (size of area, location, severity, etc.)	
Are there any Sinkholes Observed?	☐ Yes ☑ No
If yes, describe (size of area, location, severity, etc.)	
Findings:	The interior slope was inspected and appeared to be in satisfactory condition. There is excessive vegetation on the interior of the west slope adjacent to Cell 4 of the landfill. Also, there is erosion that needs to be addressed on the interior of the west slope near where the sluice lines go under the roadway between the landfill and the Bottom Ash Pond.
Other observations on the interior slopes:	None.

SECTION 8.0

SLOPE PROTECTION - ABUTMENT/TOE

8.0 SLOPE PROTECTION – ABUTMENT/TOE:	
Describe the vegetation on the Abutment/Toe: (Check all that apply)	☐ Recently Mowed ☑ Good Cover ☐ Sparse ☐ Other: (describe)
Is there any erosion on the abutment/toe?	☐ Yes ☑ No
If yes, describe (size of area, location, severity, etc.)	
Is there any erosion protection on the abutment/toe? (e.g. riprap, other)	☐ Yes ☑ No
If yes, describe what type and it's condition (riprap - adequate, inadequate, etc.)	
Are there any Crack/Rills Observed?	☐ Yes ☑ No
If yes, describe (size of area, location, severity, etc.)	
Is there any Seepage Observed:	☐ Yes ☑ No
If yes, describe (size of area, location, severity, etc.)	
Findings:	The abutment/toe was inspected and appeared to be in satisfactory condition. No corrective actions are required at this time.
Other observations on the abutment/toe:	None

SECTION 9.0

SURFACE IMPOUNDMENT CREST

9.0 SURFACE IMPOUNDMENT CREST:	
Describe the vegetation on the crest: (Check all that apply)	☐ Recently Mowed ☑ Good Cover ☐ Sparse ☑ Other: (describe) Gravel
Is there a road or driveway on the crest?	☑ Yes ☐ No
If yes, describe (good condition, numerous cracks, etc.) Good Condition	
Are there any ruts, depressions, or holes on the crest?	☐ Yes ☑ No
If yes, describe (size, location, etc.)	
Are there any cracks on the crest?	☐ Yes ☑ No
If yes, describe (length and width, location and direction of cracking, etc.)	
Are there any trees or other undesired vegetation on the crest?	☐ Yes ☑ No
If yes, describe (size, location, etc.)	
Are there any sinkholes?	☐ Yes ☑ No
If yes, describe (size, location, etc.)	
Findings:	The crest was inspected and appeared to be in satisfactory condition. No corrective actions are required at this time.
Other observations on the crest:	None

SECTION 10.0

PHYSICAL DAM FEATURES - SPILLWAY

10.0 PHYSICAL DAM FEATURES – SPILLWAY:	
Type:	None - Pumped through discharge pipe
Slope Protection:	NA
Approach:	NA
Erosion:	NA
Vegetation:	NA
Findings:	NA
Other observations on the spillway:	NA

SECTION 11.0

DOCUMENTATION REVIEW

11.0 DOCUMENTATION REVIEW:	
Weekly Inspections Reviewed:	☑ Yes ☐ No
Findings: Weekly inspection documentation needs to be organized for ease of review.	
Monthly Instrument Inspections Reviewed:	☑ Yes ☐ No
Findings: No Issues.	
Groundwater Monitoring:	Monitoring wells are in-place for routing monitoring.
Drawings Reviewed:	☑ Yes ☐ No
Are there any changes in the geometry of the surface impoundment structure since the previous inspection?	☐ Yes ☑ No ☑ NA
If yes, describe (size, location, etc.)	
Other observations:	None

APPENDIX A

PHOTOGRAPH LOG

Cleco Power LLC	
Site Name:	Brame Energy Center – Bottom Ash Pond
Site Location:	Lena, Rapides Parish, LA
Date:	December 16, 2024

Bottom Ash Pond **Direction:** South **Comments:** Pond discharge structure	
Bottom Ash Pond **Direction:** Northeasterly **Comments:** North levee slope	

Cleco Power LLC	
Site Name:	Brame Energy Center – Bottom Ash Pond
Site Location:	Lena, Rapides Parish, LA
Date:	December 16, 2024

Bottom Ash Pond **Direction:** Southeasterly **Comments:** Southern facing overview	
Bottom Ash Pond **Direction:** Southeasterly **Comments:** Eastern levee exterior slope	

Cleco Power LLC	
Site Name:	Brame Energy Center – Bottom Ash Pond
Site Location:	Lena, Rapides Parish, LA
Date:	December 16, 2024

Bottom Ash Pond **Direction:** Southeasterly **Comments:** Eastern levee inside slope	
Bottom Ash Pond **Direction:** Northwesterly **Comments:** Eastern levee outside slope	

Cleco Power LLC	
Site Name:	Brame Energy Center – Bottom Ash Pond
Site Location:	Lena, Rapides Parish, LA
Date:	December 16, 2024

Bottom Ash Pond **Direction:** Northwesterly **Comments:** Eastern levee, inside slope	

Bottom Ash Pond **Direction:** Southwesterly **Comments:** South levee, inside slope	

Cleco Power LLC	
Site Name:	Brame Energy Center – Bottom Ash Pond
Site Location:	Lena, Rapides Parish, LA
Date:	December 16, 2024

Bottom Ash Pond **Direction:** Southeasterly **Comments:** Excess vegetation on the west slope of the Botton Ash Pond	
Bottom Ash Pond **Direction:** Northeasterly **Comments:** Erosion on the west slope that needs addressing	

APPENDIX B

P.E. CERTIFICATION

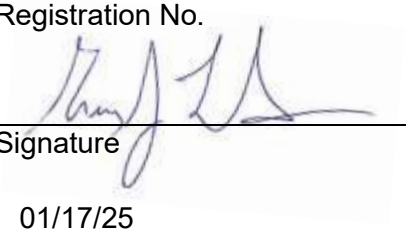
BOTTOM ASH POND
CCR ANNUAL INSPECTION

PROFESSIONAL ENGINEER CERTIFICATION

I hereby certify that I have inspected Cleco's Brame Energy Center Bottom Ash Pond in accordance with the Annual CCR Inspection requirements. This inspection has determined that the design, operation, and maintenance of the Bottom Ash Pond is in accordance with generally accepted engineering standards and are adequate for the facility.

Gary J. Leonards, P. E.
Name

30568 **LA**
Registration No. State


Signature

01/17/25
Date

(Seal)

This inspection was conducted to assess the general overall condition of the reservoir/dam, identify visible deficiencies, and recommend areas for monitoring, and corrective actions. The inspection is based only on visible features/areas of the dam on the day of inspection. The owner should verify the findings of this report and take corrective actions. This inspection does not relieve the owner/operator from their responsibility to conduct routine inspections, maintenance, repairs, modifications, monitoring, and documentation.