



PROVIDENCE

April 4, 2022

Louisiana Department of Environmental Quality OES -Waste Permits Division  
Post Office Box 4313  
Baton Rouge, LA 70821-4313  
Attn: Ms. Yolunda Righteous J.D., Administrator

original to Jo-SW  
copy to SW Jackson  
PAAR

PER20220001

LDEQ RECEIPT  
2022 APR -4 PM 2:57

Re: Notice of Deficiencies #1 – Closure Plan Modification  
Cleco Power, LLC  
Brame Energy Center  
Fly Ash Pond  
D-079-0390/P-0005-R1-M1  
Agency Interest No. 2922

Dear Ms. Righteous:

Providence Engineering and Environmental Group LLC (Providence) on behalf of Cleco Power LLC (Cleco) Brame Energy Center (BEC) hereby submits five copies of a Solid Waste Closure Plan Modification for the Type I surface impoundment (Fly Ash Pond) at the Brame Energy Center. This modification is being submitted to satisfy the Louisiana Department of Environmental Quality's (LDEQ) NOD requesting the closure plan be submitted as a minor permit modification. Also included is the \$1,650 permit review fee.

Should you have any questions or need any additional information, please do not hesitate to contact me at (225) 766-7400 or Samuel Wise at (318) 484-7739.

Sincerely,

Gary Leonards, P.E.  
Engineering Services Director  
Providence Engineering and Environmental Group LLC

RECEIVED  
APR - 4 2022  
By \_\_\_\_\_

Tuesday, April 5, 2022

7:26:19 AM

# RECEIPT OF CHECK

Master AI #: 2922  
Name on Check: Providence Engineering and Environmental Group  
Master File Name: CLECO Power LLC - Brame Energy Center  
Check Received Date: 4/4/2022  
Check Date: 4/4/2022  
Check Number: 20772  
Check Amount (\$): \$1,650.00  
Staff Entry: P00333122  
Date data entered: 4/5/2022  
Media: SOLID WASTE  
Comments: Closure Plan Modification

**CLECO POWER LLC**  
**BRAME ENERGY CENTER**  
**ASH MANAGEMENT AREA**  
**LENA, RAPIDES PARISH, LOUISIANA**



**RESPONSE TO NOTICE OF**  
**DEFICIENCIES #1**  
**CLOSURE PLAN MODIFICATION**

**D-079-0390/P-0005-R1-M1**

**AGENCY INTEREST NO. 2922**

**APRIL 2022**

Providence Engineering and Environmental Group LLC  
1201 Main Street  
Baton Rouge, LA 70802  
(225) 766-7400  
[www.providenceeng.com](http://www.providenceeng.com)  
Providence Project No: 002-286



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SOLID WASTE PERMIT APPLICATION**

**LIST OF ATTACHMENTS**

**Attachment**

- 3 Zoning Documentation
- 4 Certificate of Registration and/or Certificate of Good Standing from the Secretary of State
- 41 Closure Plan and Drawing of Final Contours (If Applicable)

## INTRODUCTION

Cleco Power LLC (Cleco) – Brame Energy Center is an electric utility power station located near Boyce in Rapides Parish, Louisiana. This closure plan modification is being submitted to update the final closure methodology for the Type I surface impoundment, Fly Ash Pond, to comply with federal regulations for the disposal of coal combustion residual (CCR) material.

## RESPONSES

### Environmental Scientist Comment

**General** Due to this submittal being a minor modification, please complete and submit the appropriate Application Form for the facility.

**The completed Type I/Type II Surface Impoundments Application Form has been provided for review.**

### Geology Comments

**Section 4.0** *Closure Plan Narrative Description* states that groundwater concentrations will be verified using groundwater protection standards established per 40 CFR 257.95 for the constituents listed in Appendix IV to 40 CFR Part 257 and that these parameters will be continued to be monitored during the closure period. This is incorrect, as the facility is in Detection monitoring and should be monitoring Appendix III parameters. Update this statement to reference the parameters in Appendix III and the current groundwater monitoring parameters in this permit.

**The closure plan has been revised to only address requirements for the Louisiana Solid Waste regulations. While CCR regulations will be addressed, they will be handled separately with EPA. Please see the revised Closure Plan included as Attachment 41.**

Under *Closure Plan Narrative Description*, bullet point five states that groundwater concentrations will be verified using groundwater protection standards established per 40 CFR 257.95 and bullet point six states that samples of the clay liner will be compared to LDEQ Risk Evaluation/Corrective Action Program (RECAP) screening standards. Please clarify whether samples will be held to 40 CFR 257.95 protection standards or RECAP screening standards.

**All analytical data will be compared to applicable RECAP standards. The closure plan has been revised to only address requirements for the Louisiana Solid Waste regulations. While CCR regulations will be addressed, they will be handled**

**separately with EPA. Please see the revised Closure Plan included as Attachment 41.**

**Section 9.0** *Groundwater Sampling beneath the Fly Ash Pond*, and Figure 3, *Groundwater Sampling Locations*, suggest two locations for sampling beneath the Fly Ash Pond. The Department requests a third sampling location in the middle of the Fly Ash Pond.

**Section 9.0 and Figure 3 have been revised to include a third sampling location for the Fly Ash Pond as requested by LDEQ.**

**Section 10.0** *Analytical Testing* references oil samples and this should be revised to state groundwater samples. Additionally, current groundwater monitoring constituents are listed as the analytical parameters. Please clarify if Appendix III and IV for 40 CFR 257 will be sampled.

**The closure plan has been revised to only address requirements for the Louisiana Solid Waste regulations. While CCR regulations will be addressed, they will be handled separately with EPA. Please see the revised Closure Plan included as Attachment 41.**

**Section 14.0** *Data Evaluation and Reporting* references soil samples and this should be revised to state groundwater samples. Additionally, this section states that groundwater samples will be compared to RECAP standards and groundwater protection standards established per 40 CFR 257.95 are not mentioned. Please clarify whether samples will be held to 40 CFR 257.95 protection standards or RECAP screening standards.

**Section 12.0 has been revised to address data evaluation and reporting for groundwater and soil. Section 14.0 has been removed as it was duplicate information.**

**SOLID WASTE PERMIT MODIFICATION APPLICATION**

Department of Environmental Quality  
Office of Environmental Services  
Waste Permits Division  
P.O. Box 4313  
Baton Rouge, LA 70821-4313  
(225) 219-3181

# LOUISIANA

## Solid Waste Permit Application Type I / Type II Surface Impoundments



**NOTE: A *Guidance* document has been prepared by the Louisiana Department of Environmental Quality (LDEQ) to assist the permit applicant in completing this Louisiana Solid Waste Permit Application for Type I/Type II Surface Impoundments. The *Guidance* should be consulted and utilized prior to providing responses to the information required to be contained in this application.**

**ALL** facility plans, specifications, and operations represented and described in this application shall be prepared under the supervision of and certified by a **professional engineer licensed in the State of Louisiana**.

Site geology and groundwater conditions at facilities shall be characterized by a **geologist** or a **professional engineer licensed in the State of Louisiana** with **expertise** in geotechnical engineering and hydrogeology.

PLEASE TYPE OR PRINT

### 1. Facility and Permit Applicant Information

<b>A. Facility Name</b> Cleco Brame Energy Center – Fly Ash Pond		<b>B. Agency Interest (AI) Number</b> 2922		<b>C. SIC code</b> 4911	
<b>D. Mailing Address</b> 2030 Donahue Ferry Rd.		<b>City</b> Pineville	<b>State</b> LA	<b>Zip</b> 71360	
<b>E. Type of Application:</b> <input type="checkbox"/> New application <input type="checkbox"/> Renewal application <input type="checkbox"/> Major Modification <input checked="" type="checkbox"/> Minor Modification		<b>F. Attach in <b>Attachment 1</b> proof of publication of the notice regarding the submittal of the permit application for <i>new</i>, <i>renewal</i>, and <i>major modification</i> applications <i>only</i>.</b>			
<b>G. Type of Operation (check each applicable box)</b> <input checked="" type="checkbox"/> Type I industrial <input type="checkbox"/> Type II residential/commercial		<b>H. Operational Status of:</b> Site <input checked="" type="checkbox"/> Existing <input type="checkbox"/> Proposed Facility <input checked="" type="checkbox"/> Existing <input type="checkbox"/> Proposed			
<b>I. Individual/Company - Name of Owner</b> Cleco Power LLC		<input checked="" type="checkbox"/> Permittee/Permit Holder			
<b>J. Individual/Company - Name of Operator (if different from Owner)</b>		<input type="checkbox"/> Permittee/Permit Holder			
<b>K. Parent Company (if applicable)</b>		<input type="checkbox"/> Permittee/Permit Holder			
<b>L. Ownership Status (if leased, attach a copy of lease in <b>Attachment 2</b>)</b> <input checked="" type="checkbox"/> Owned by Applicant <input type="checkbox"/> Leased ____ yrs. of lease		<b>M. Ownership (Check the appropriate box.)</b> <input checked="" type="checkbox"/> corporation, partnership, or sole proprietorship <input type="checkbox"/> regulated utility <input type="checkbox"/> municipal government <input type="checkbox"/> state government <input type="checkbox"/> federal government <input type="checkbox"/> other, specify			
<b>N. Solid Waste Permit or Order to Upgrade Number</b> P-0005R1					
<b>O. Solid Waste Facility Number</b> GD-079-0390					
<b>P. Total site acreage</b> 6,000		<b>Q. Acreage to be used for disposal</b> 68.5			
<b>R. Anticipated proposed remaining life:</b> ____ mos. >30 yrs.		<b>S. Maximum proposed capacity:</b> 1,970,441.42 yds <sup>3</sup> and 3,127,162.6 wet tons			
<b>T. Provide a brief history of solid waste permitting actions for the surface impoundment(s), including, but not limited to, permits, modifications, and closure activities.</b> P-0005 was originally issued in 1981 and most recently renewed in 2016.					
<b>U. List the name of all units of the facility that are included in the application.</b> Unit 2 Metal Cleaning Waste Pond, the Bottom Ash Pond, and the Fly Ash Pond are included in Standard Permit P-0005-R1. This modification is applicable to only the Fly Ash Pond.					



**V. List of all environmental permits issued to this site (include dates of issuance, permit numbers).**  
**Solid Waste:**  
P-0379R1 (05/02/2016)  
P-0005R1 (11/18/2016)  
P-0027R1 (11/18/2016)  
P-0062R1 (11/18/2016)  
**Beneficial Use Plan** (07/17/2019)  
**Air:**  
Units 1&2 2360-00030-V4 (02/20/2019),  
PSD-LA-728 (05/08/2008),  
Acid Rain Permit No. 2360-00030-IV5 (2/20/2019),  
Unit 3 2927-V6 (05/27/2020),  
PSD-LA-711 (M-3) (02/22/2013),  
Acid Rain Permit No. 2927-IV5 (2019),  
CAIR Permit No. 2927-IV2 (05/27/2020)  
**Water:**  
LPDES LA008036 (2014) - Renewal submitted 03/13/2019

**W. List of all environmental permits for which the applicant has applied or intends to apply for, related to this site.**  
NA

**2. Facility Physical Location and Process Description**

**A. Nearest Town (in same parish as the facility)** Boyce **B. Parish(es)** Rapides

**C. Geographic Location:** Section 80 Township 5N Range 4W

**D. GPS coordinates**

Location	Latitude	Longitude
Centerpoint of the site	<u>31.397628</u> decimal degrees	<u>92.719419</u> decimal degrees
Centerpoint of unit <b>Fly Ash Pond</b>	<u>31.397086</u> decimal degrees	<u>92.704736</u> decimal degrees
Centerpoint of unit <b>Bottom Ash Pond</b>	<u>31.397086</u> decimal degrees	<u>92.704736</u> decimal degrees
Centerpoint of unit <b>Unit 2 Metal Cleaning Waste Pond</b>	<u>31.399342</u> decimal degrees	<u>92.725106</u> decimal degrees
Centerpoint of unit	_____ decimal degrees	_____ decimal degrees
Centerpoint of unit	_____ decimal degrees	_____ decimal degrees
Centerpoint of unit	_____ decimal degrees	_____ decimal degrees
Centerpoint of unit	_____ decimal degrees	_____ decimal degrees
Centerpoint of unit	_____ decimal degrees	_____ decimal degrees
Front gate of the site	_____ decimal degrees	_____ decimal degrees

**E. Physical Location (identify by street number, by intersection of roads, or by mileage and direction from an intersection.)**  
275 Rodemacher Rd, Lena, LA 71447

**F. Provide a brief description of the site operations.**  
Cleco Brame is an electric utility power station that produces electricity by combustion of coal.

**G. Provide a description of the modifications/changes proposed in this application.**  
Update the final closure methodology for the Fly Ash Pond to comply with federal regulations for the disposal of coal combustion residual material..

**3. Local Zoning** (updated zoning is not required unless facility is new or expanding, however we recommend providing a copy of most recent zoning if the permit application will be going on public notice)

**A. Facility Zoning Classification of the Facility at Time of Application Submittal** NA **B. Local Zoning Authority** Rapides Parish Zoning Commission

**C. Local Zoning Authority Contact** Theodore Fontaine, Jr. **Address (Including Suite, Mail Drop, or Division)** 5610 E. Coliseum Blvd.

**City** Alexandria **Zip** 71303 **Business Phone** 318-487-5401

**D. Attach zoning in Attachment 3**  Zoning affidavit  Zoning confirmation (if required by LAC 33:VII.513.B.2)  
 Other

#### 4. Confidentiality

Is confidentiality being requested for any information contained in the application?  Yes  No

- If "yes," list the sections for which confidentiality is requested below. Confidentiality requests require a submittal that is separate from this application. Information for which confidentiality is requested should not be submitted with this application. Consult Guidance document for instructions.

#### 5. Fee Information

Has the required fee been paid in accordance with LAC 33:VII.1501?  Yes  No

#### 6. LAC 33:I.1701 Requirements

A. Does the applicant have federal or state environmental permits (other than the ones listed in Section 1) identical to, or of a similar nature to, the permit for which this application is being submitted? (This requirement applies to all individuals, partnerships, corporations, or other entities who own a controlling interest of 50% or more in your company, or who participate in the environmental management of the facility for an entity applying for the permit or an ownership interest in the permit.)

Yes  No

If "yes," list permits in Louisiana:

- Cleco Dolet Hills Power Station - P-0037, P-0038, P-0039, P-0040, P-0041, P-0064R1, Title V 2660-00007-V2, Acid Rain Permit 2660-00007-V3, CAIR Permit 0760-00001-IR; LPDES permit LA:0062600
- Cleco Teche Power-Station Title V Permit 2660-00007V2, Acid Rain Permit 2660-00007-IV3, CAIR permit 2660-00007-IR; LPDES permit LA0002887
- Cleco Coughlin Power Station – Title V Permit 0920-00002-V3, PSD-LA-635 (MI, Acid Rain Permit 0920-00002-IV2, CAIR permit 0920-00002-IT; LPDES permit LA:0002879
- Cleco Acadia Power Station – Title V Permit 0040-00105-V2, PSD-LA-645 (M2), Acid Rain Permit 0040-00105-IV1, CAIR permit 0040-00105-IR

list states in which permits are held: Louisiana

B. Does the applicant owe any outstanding fees or final penalties to the LDEQ?  Yes  No

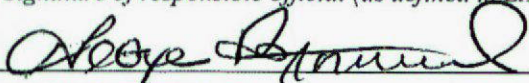
If "yes", provide an explanation.

C. Is the applicant a corporation or limited liability company?  Yes  No

If "yes," attach a copy of the Certificate of Registration and/or Certificate of Good Standing from the Secretary of State. Attach the appropriate certificate(s) in Attachment 4.

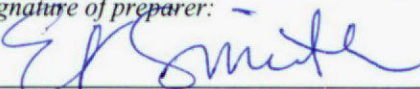
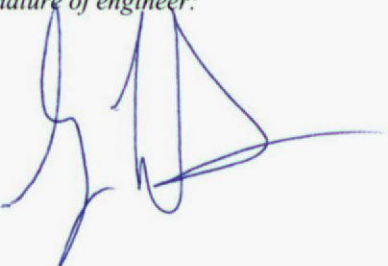

#### 7. Certification and Signatures

**CERTIFICATION OF RESPONSIBLE OFFICIAL:** "I have personally examined and am familiar with the information submitted in the attached document, and I hereby certify under penalty of law that this information is true, accurate, and complete to the best of my knowledge, information, and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and/or imprisonment."

Name George Broussard		Title Director – Brame Energy Center	
Company Cleco Power LLC		Suite, mail drop, or division	Street or P.O. Box 275 Rodemacher Road
City Lena	State LA	Zip 71447	Business Phone 318-793-1200
Signature of responsible official (as defined in LAC 33:VII.115): 			Date: 4/4/2022

**CERTIFICATION OF APPLICATION PREPARER:** "I certify under penalty of law that I have personally examined and I am familiar with the information submitted in this permit application and that the facility as described in this permit application meets the requirements of LAC 33:VII.Subpart 1. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment."

Name Elizabeth Smith	Title Waste Services Director
-------------------------	----------------------------------

Company Providence Engineering and Environmental Group LLC		Suite, mail drop, or division	
Street or P.O. Box 1201 Main Street		City Baton Rouge	State LA
Zip 70802			
Business phone 225-766-7400	Cell Phone (Optional)	Email (optional) Elizabethsmith@providenceeng.com	
Signature of preparer: 		Date: 4.4.2022	
<b>CERTIFICATION OF ENGINEER:</b> "I certify that the facility plans, specifications, and operations represented and described in the permit application were prepared under my supervision and are true and accurate to the best of my knowledge, information, and belief in accordance with LAC 33:VII.713.B.1."			
Name Gary Leonards, PE		Title Engineer Services Manager	
Company Providence Engineering and Environmental Group LLC		Suite, mail drop, or division	
Street or P.O. Box 1201 Main Street			
City Baton Rouge	State LA	Zip 70802	Business Phone 225-766-7400
Signature of engineer: 		Date: 4/4/22	Louisiana Registration Number and Seal 

### 8. Facility Contact Information/Personnel

Select the primary contact by checking the box after the person whom will be the primary contact for questions regarding this application. Only *one* primary contact should be selected.

#### a. Manager of Facility who is located at site

Name George Broussard		<input type="checkbox"/> Primary Contact	
Title Director – Brame Energy Center	Company Cleco Power LLC		
Suite, Mail Drop, or Division	Street or P.O. Box 275 Rodemacher Rd		
City Lena	State LA	Zip 71447	
Business Phone 318-793-1194	Cell Phone (Optional)	E-mail (Optional) George.broussard@cleco.com	

#### b. On-site contact regarding waste permit

Name Elizabeth Lee		<input checked="" type="checkbox"/> Primary Contact	
Title Environmental Coordinator	Company Cleco Power LLC		
Suite, Mail Drop, or Division	Street or P.O. Box 275 Rodemacher Rd.		
City Lena	State LA	Zip 71447	

<i>Business Phone</i> 318-793-1194	<i>Cell Phone (Optional)</i>	<i>E-mail (Optional)</i> Elizabeth.lee@cleco.com
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**c. Person to whom written correspondence should be directed**

<i>Name</i> Samuel Wise		<input checked="" type="checkbox"/> Primary Contact
<i>Title</i> Waste and Water Quality Manager	<i>Company</i> Cleco Power LLC	
<i>Suite, Mail Drop, or Division</i>	<i>Street or P.O. Box</i> P.O. Box 5000.	
<i>City</i> Pineville	<i>State</i> LA	<i>Zip</i> 71367
<i>Business Phone</i> 318-484-7739	<i>Cell Phone (Optional)</i>	<i>E-mail (Optional)</i> Samuel.wise@cleco.com

**d. Person to contact regarding Annual Maintenance Fees**       a    b    c    other (specify below)

<i>Name</i>		<input type="checkbox"/> Primary Contact
<i>Title</i>	<i>Company</i>	
<i>Suite, Mail Drop, or Division</i>	<i>Street or P.O. Box</i>	
<i>City</i>	<i>State</i>	<i>Zip</i>
<i>Business Phone</i>	<i>Cell Phone (Optional)</i>	<i>E-mail (Optional)</i>

**9. Waste Description and Service Areas**

**A. Maximum quantities of waste disposed:**

*If 'Other' is filled out, provide a brief description of the waste here:*

Waste Type	Wet tons/week		Wet tons/year	
	On-Site	Off-Site	On-Site	Off-Site
Residential				
Industrial	2,554		132,822	
Commercial				
Other				

**Unit 2 MCW Pond:**

Boiler cleaning waste (maximum 625,000 gallons every 3 to 5 years)

Air heater waste (500,000 gallons/year, 1 to 4 times/year)

Turbine cleaning waste (20,000 gallons as needed)

Misc. water plant metal cleaning (2,000 gallons/year)

Boiler blowdown (0-150,000 gallons as needed)

**Fly Ash Pond:** 85,309 tons/year / Abrasives (6 tons/year) / Sodium carbonate (6 tons/year) / Neutralized wastes (2 tons/year), spent activated carbon/Trona (25,000 tons/year)

**Bottom Ash Pond:** 21,331 tons/year / Pyrites (1,160 tons/year) / Neutralized wastes (2 tons/year) / Resin beads (30 cubic yds/year) . .

**B. Approximate percentage of waste received from onsite: 100**

*offsite from generators within Louisiana: 0*

*offsite from generators outside of Louisiana: 0*

**C. Areas serviced by the facility:**

Only waste generated by the facility

All parishes  
 Out-of-state

- Acadia
- Allen
- Ascension
- Assumption
- Avoyelles
- Beauregard
- Bienville
- Bossier
- Caddo
- Calcasieu
- Caldwell
- Cameron
- Catahoula

- Claiborne
- Concordia
- De Soto
- East Baton Rouge
- East Carroll
- East Feliciana
- Evangeline
- Franklin
- Grant
- Iberia
- Iberville
- Jackson
- Jefferson Davis
- Jefferson
- La Salle
- Lafayette
- Lafourche
- Lincoln

- Livingston
- Madison
- Morehouse
- Natchitoches
- Orleans
- Ouachita
- Plaquemines
- Pointe Coupee
- Rapides
- Red River
- Richland
- Sabine
- St. Bernard
- St. Charles
- St. Helena
- St. James
- St. John the Baptist
- St. Landry

- St. Martin
- St. Mary
- St. Tammany
- Tangipahoa
- Tensas
- Terrebonne
- Union
- Vermilion
- Vernon
- Washington
- Webster
- West Baton Rouge
- West Carroll
- West Feliciana
- Winn
- Other

**D. Provide the *maximum* days of operation per week and hours per facility operating day (maximum hours of operation within a 24-hour period).** 7 days/week 24 hrs/day

Provide the *normal* days of operation per week and hours per facility operating day (within a 24-hour period).  
7 days/week 24 hrs/day

List the hours of operation during *normal* operating hours:

Monday	<u>7</u> am to	<u>7</u> pm	Tuesday	<u>7</u> am to	<u>7</u> pm	Sunday	<u>7</u> am to	<u>7</u> pm
Thursday	<u>7</u> am to	<u>7</u> pm	Friday	<u>7</u> am to	<u>7</u> pm	Wednesday	<u>7</u> am to	<u>7</u> pm
						Saturday	<u>7</u> am to	<u>7</u> pm

**10. Enforcement Actions**

Does the facility presently have any current requirements, conditions, or limitations that have been imposed upon the facility pursuant to any enforcement actions, settlement agreements, and consent decrees?  Yes  No

- If "yes," attach a list of all such enforcement actions, settlement agreements, and consent decrees from the federal government or LDEQ issued to the facility and/or entered into between the federal government and/or LDEQ. For each action, list the type of action, its tracking number, and the date that the action was issued. Summarize the conditions imposed by the enforcement action, settlement agreement, and/or consent decree in **Attachment 5**. It is not necessary to submit a copy of the referenced action.
- If "no," has the facility been issued any enforcement actions and/or entered into any settlement agreements, and/or consent decrees within the last three (3) years?  Yes  No
  - If "yes," attach a summary as described above in **Attachment 5**.

**11. Location Area Information**

<b>Airports</b>
<b>A.</b> List the distance from the facility to the nearest airport.
<b>B.</b> Does the facility dispose of putrescible waste? <input type="checkbox"/> Yes <input type="checkbox"/> No <ul style="list-style-type: none"> <li>• If "yes," is the facility within:                 <ul style="list-style-type: none"> <li>➢ 10,000 ft of the end of the runway for any public-use airport used by turbojet aircraft? <input type="checkbox"/> Yes <input type="checkbox"/> No</li> <li>➢ 5,000 ft of the end of the runway for any public-use airport used by only piston-type aircraft? <input type="checkbox"/> Yes <input type="checkbox"/> No</li> </ul> </li> </ul>
<b>C.</b> For Type II facilities only, is the facility located within a 5-mile radius of any airport runway? <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>D.</b> If "yes" to 11.B or 11.C, attach copies of the notifications to the affected airport(s) and the Federal Aviation Administration (FAA) in <b>Attachment 6</b> .
<b>Master Plan</b>

<p><b>E.</b> Attach in <b>Attachment 7</b> an area master plan, which shall show the current facility, the road network, major drainage systems, drainage flow patterns, location of closest population centers, nearest public use airport (if disposing of putrescible waste) within a 5-mile radius, the location of the 100-year flood plain, and other pertinent information.</p>
<p><b>F.</b> Describe access to the facility.</p>
<p><b>Traffic and Land Use</b></p>
<p><b>G.</b> For facilities receiving waste from offsite, attach in <b>Attachment 8</b> a copy of a letter from the appropriate agency or agencies stating that the facility will not have a significant negative impact on the traffic flow of area roadways and that the construction, maintenance, or proposed upgrading of such roads is adequate to withstand the weight of the vehicles.</p>
<p><b>H.</b> Describe the existing land use within a three-mile radius of the facility.</p>
<p><b>I.</b> Attach a <u>current</u> aerial photograph representative of current land use within a one-mile radius surrounding the facility in <b>Attachment 9</b>.</p>
<p><b>Population</b></p>
<p><b>J.</b> Describe the estimated population and the population density within a three-mile radius of the facility. (Provide the source of this information.)</p>
<p><b>Environmental Characteristics</b></p>
<p><b>K.</b> Is the facility perimeter located within 1,000 feet of any of the following critical/sensitive environmental sites: wetlands, estuaries, wildlife-hatchery areas, habitats of endangered species, archaeological sites, historic sites, publicly-owned recreation areas, and similar critical environmental areas? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>If "yes," describe the measures the applicant will implement to prevent any impacts to areas from surface impoundment operations and list all known areas within 1,000 feet in <b>Attachment 10</b>.</li> </ul>
<p><b>L.</b> Attach documentation from the appropriate state and federal agencies substantiating the above areas in <b>Attachment 11</b>.</p>
<p><b>M.</b> Has the facility received waste prior to <b>October 9, 1993</b>? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p><b>N.</b> If wetlands are present on site, does the applicant have a 404 permit? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A (<b>NOTE:</b> The wetland determination letter should be attached in <b>Attachment 11</b>.)</p> <ul style="list-style-type: none"> <li>If "yes," attach a copy of the 404 permit in <b>Attachment 12</b>.</li> <li>If "no," has the facility applied for a 404 permit? <input type="checkbox"/> Yes <input type="checkbox"/> No</li> <li>If "yes," attach a copy of the 404 application in <b>Attachment 12</b>.</li> </ul>
<p><b>Wells and Faults</b></p>
<p><b>O.</b> Attach in <b>Attachment 13</b> a scaled map showing the location of all known or recorded shot holes, seismic lines, and wells within the facility and within 2,000 feet of the facility perimeter.</p>
<p><b>P.</b> Attach a scaled map showing the location of all water wells within one mile of the facility perimeter in <b>Attachment 14</b>.</p>
<p><b>Q.</b> Are there any known or recorded shot holes, seismic lines, and/or wells located within the facility? (Provide the source of this information.) <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>If "yes," provide a plan to prevent adverse effects on the environment from the shot holes, seismic lines, and/or wells located within the facility.</li> </ul>
<p><b>R.</b> Attach a scaled map showing the location of all recorded faults within the facility and within one mile of the facility perimeter in <b>Attachment 15</b>.</p>
<p><b>S.</b> Are there any existing faults extending through the facility? (Provide the source of this information.) <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>If "yes," attach in <b>Attachment 16</b> geophysical mapping or stratigraphic correlation of boring logs verifying their presence and provide a discussion of measures that will be taken to mitigate adverse effects on the facility and the environment.</li> </ul>
<p><b>T.</b> For units that have not received waste prior to <b>October 9, 1993</b>, are there any existing faults within 200 feet of the facility that have had displacement in Holocene time? (Provide the source of this information.) <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>If "yes," attach a demonstration that an alternate setback distance of 200 feet will prevent damage to the structural integrity of the unit and will be protective of human health and the environment in <b>Attachment 17</b>.</li> </ul>
<p><b>Seismic Impact</b></p>

<p><b>U. Is the facility located within a seismic impact zone? (Provide the source of this information.)</b> <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>If "yes," attach in <b>Attachment 18</b> a demonstration that the facility will be designed and operated so that it can withstand the stresses caused by the maximum ground motion on all structural components, including liners, leak-detection systems, leachate collection, treatment, and removal systems; final covers; and run-on/run-off systems.</li> </ul>
<p><b>Unstable Areas</b></p>
<p><b>V. Is the facility located in an unstable area? (Provide the source of this information.)</b> <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>If "yes," attach in <b>Attachment 19</b> a demonstration that the facility will be designed to ensure the integrity of all structural components, including liners, leak-detection systems, leachate collection, treatment, and removal systems; final covers; run-on/run-off systems.</li> </ul>
<p><b>Utilities</b></p>
<p><b>W. Attach a scaled map showing the location of all pipelines, power lines, and rights-of-way within the site in Attachment 7.</b></p>
<p><b>Emergency Response (NOT required for modifications)</b></p>
<p><b>X. Attach a copy of the facility's emergency response plan AND approval of the plan from the State Fire Marshal in Attachment 20.</b></p>

## 12. Facility Characteristics

<p><b>A. Attach in Attachment 7 drawing(s) including, as applicable, property lines, original contours (shown at not greater than five foot intervals), buildings, units of the facility, drainage, ditches, and roads.</b></p>
<p><b>B. Provide a description of the perimeter barriers and other control measures used to prevent unauthorized ingress or egress except by willful entry. At a minimum, each facility entry point shall be continuously manned, monitored, or locked during operating hours; each facility entry point shall be locked during non-operating hours; and facilities that receive waste from off-site sources shall post readable signs that list the types of waste that can be received at the facility.</b></p>
<p><b>C. Attach in Attachment 7 a figure demonstrating that there is an adequate buffer zone at the site. At a minimum, the buffer zone should be 200 feet between the facility and the property line.</b></p>
<p><b>D. Did the units of the facility exist prior to April 1, 2010?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>If "no" and the adjacent property contains a structure currently being used as a church prior to the submittal of a permit application, then no less than 300 feet shall be provided between the facility and the common property line. This requirement shall not apply to any surface impoundment or disposal facility existing prior to <b>April 1, 2010</b>; to any portion of such facility that has been closed or that has ceased operations; or to future expansions of the permitted disposal area of any such facility.</li> </ul>
<p><b>E. If a reduction in the buffer zone requirements is requested, attach in Attachment 21 copies of notarized affidavits from all landowners having an ownership interest in property located less than 200 feet from the facility (or 300 feet for a church). Additionally, attach copies of approved buffer waivers in Attachment 21.</b></p>
<p><b>F. Provide a description of the device or method used to determine wet weight tonnage, sources (in-state or out-of-state and, if industrial waste, where it was generated), and types of incoming waste (commercial, residential, infectious, etc.). This description shall also include the facility's central control and record keeping system for tabulating this information.</b></p>
<p><b>G. Provide a description of the device or method used to control entry of the waste and to prevent entry of unauthorized deliverables (examples, hazardous waste, TSCA-regulated PCB waste, or unauthorized solid waste). This description shall also include the facility's central control and record keeping system for tabulating this information.</b></p>

## 13. Surface Hydrology

<p><b>A. Provide a description of the method(s) to be used to prevent surface drainage through the operating areas of the facility.</b></p>
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<b>B.</b> Attach a description of the facility runoff collection system in <b>Attachment 22</b> . At a minimum, provide the design for surface-runoff-diversion levees, canals, or devices to prevent drainage from the units of the facility that have not received final cover. The proposed system shall be designed to collect and control at least the water volume resulting from a 24-hour/25-year storm event and/or the peak discharge from a 25-year storm event.
<b>C.</b> Describe how runoff from operating areas or areas that contain solid waste and have not yet received interim compacted cover or final cover are managed such that this contaminated runoff is not allowed to mix with non-contaminated surface runoff.
<b>D.</b> Describe the facility run-on control system. At a minimum, a run-on control system shall be installed to prevent run-on during the peak discharge from a 25-year storm event and/or to collect and control at least the water volume resulting from a 24-hour/25-year storm event.
<b>E.</b> Provide the rainfall amount from a 24-hour/25-year storm event. (Provide the source of this information.)
<b>F.</b> Are there any aquifer recharge areas in the site or within 1,000 feet of the site perimeter? (Provide the source of this information.) <input type="checkbox"/> Yes <input type="checkbox"/> No <ul style="list-style-type: none"> <li>If "yes," attach a map of aquifer recharge areas and describe the measures planned to protect those areas from the adverse impact of operations at the facility in <b>Attachment 23</b>. (Provide the source of this information.)</li> </ul>
<b>G.</b> Is the facility located in a 100-year flood plain? <input type="checkbox"/> Yes <input type="checkbox"/> No (Provide the source of this information.) Attach a map of the 100-year flood plain with the facility location clearly identified on the map in <b>Attachment 24</b> .
<b>H.</b> Describe how the facility plans to prevent restriction or reduction of the flow of the 100-year base flood or reduction of the temporary water-storage capacity of the flood plain. At a minimum the site shall be filled to bring site elevation above flood levels, or perimeter levees or other measures must be provided to maintain adequate protection against a 100-year flood.
<b>I.</b> Describe how the facility is designed to ensure that the flooding does not affect the integrity of the facility or result in the washout of solid waste.

#### 14. Facility Plans and Specifications

<b>General</b>
<b>A.</b> What is the proposed maximum final elevation? _____ ft National Geodetic Vertical Datum (NGVD) Elevation of maximum excavation? _____ ft NGVD Width at widest point? _____ ft Length at longest point? _____ ft
<b>B.</b> Attach in <b>Attachment 25</b> plan-view drawings showing original contours, proposed elevations of the base of units prior to installation of the liner system, proposed final contours, slopes, levees, and other pertinent features. Include detailed drawings as necessary.
<b>C.</b> Attach in <b>Attachment 26</b> representative cross-sectional drawings showing original and final grades, elevations, drainage, the location and type of liner, leachate collection system, and other pertinent information. Include detailed drawings as necessary.
<b>Liners</b>
<b>D.</b> Attach in <b>Attachment 27</b> a description of the liner system, which shall include verification the liner(s) is/are designed and operated in accordance with LAC 33:VII.713.B.3 and rationales for particular designs of such systems. If the applicant seeks approval for an alternate liner system, describe how the alternate system would offer equivalent or greater groundwater protection at the site as compared to the composite liner design as outlined in LAC 33:VII.713.B.3.d.
<b>E.</b> Attach in <b>Attachment 28</b> a quality assurance/quality control plan for excavation and liner construction and maintenance that ensures liners are designed, constructed, installed, and maintained properly.
<b>Levee Construction</b>
<b>F.</b> Attach in <b>Attachment 30</b> a description of the levee system, which shall include the type, source, and volume of material required for levee construction. In order to protect the facility against a 100-year flood, the levee shall be engineered to minimize wind and water erosion, have a grass cover or other protective cover to preserve structural integrity, and provide adequate freeboard protection against a 100-year flood.
<b>Gas Collection/Treatment or Removal System</b>



- G.** Does the facility have a gas collection/treatment or removal system installed or to be installed in accordance with 40 CFR Part 60, Subpart WWW?  Yes  No
- If "no," does the facility need to install a gas collection/treatment or removal system to limit methane gas to the lower-explosive limit at the facility boundary or 25 percent of the lower explosive limit in facility buildings?  Yes  No
- H.** Describe the facility's gas collection/treatment or removal system, which shall include a description of the sampling protocol, chain of custody, and test methods to be used, or explain why a gas collection/treatment or removal system is not required.

### 15. Facility Administrative Procedures

- A.** Describe the recordkeeping system, including the types of records to be kept and the use of records by management to control operations as required. This description will include the annual report. (Refer to Guidance document for details.)
- B.** Provide an estimate of the minimum personnel, listed by general job classification, required to operate the facility.
- C.** For Type II facilities only, provide the number and levels of certified facility operators determined and certified by the Louisiana Solid Waste Operator Certification and Training Program Board (R.S. 37:3151 et seq. and LAC 46:Part XXIII).

### 16. Facility Operations and Implementation

- A.** Attach a comprehensive operational plan describing the total operation in **Attachment 35**. The operational plan shall include types of waste and minimum equipment, waste-handling procedures, waste segregation procedures, inclement procedures, contingency procedures, provisions for controlling vectors, salvaging procedures and control, scavenging control, air monitoring procedures, traffic control, support facilities, day-to-day activities, quality-assurance/quality-control plan, and inspections of incoming waste.
- B.** Attach in **Attachment 20** a plan outlining procedures, equipment, and contingency plans for protecting employees and the general public from accidents, fires, explosions, etc., and provisions for emergency response and care, should an accident occur.
- C.** Attach an implementation plan in **Attachment 40**. The implementation plan shall include construction schedules for existing facilities including the beginning and ending time frames and time frames for the installation of all major features; details on phase implementation for any proposed facility to be constructed in phases; and a plan for closing and upgrading existing operating areas if proposing expansion of a facility or construction of a replacement facility. All time frames shall be specified in days, with day 1 as the date of standard permit issuance.

### 17. Facility Closure

- A.** Attach a closure plan in **Attachment 41**. The closure plan shall include the date of final closure, the method to be used and steps necessary for closing the facility, an itemized cost to close the facility by a third party, a description of final cover, the methods and procedures used to install the final cover, an estimate of the largest area of the facility ever requiring a final cover at any time during the active life, an estimate of the maximum inventory of solid waste ever on site over the active life of the facility, a schedule for completing all activities necessary for closure, a sequence of final closure of each unit of the facility, and a copy of the document that will be filed upon closure of the facility with the official parish record keeper.
- NOTE:** Separate closure requirements for those facilities clean closed in accordance with LAC 33:VII.713.E.3.b.
- B.** Attach a drawing showing final contours of the facility in **Attachment 41**.

### 18. Facility Post-Closure

Attach a post-closure plan in **Attachment 42**. The post-closure plan shall include a discussion of the long-term use of the facility after closure and an itemized cost of conducting post-closure at the facility by third party at a minimum. Additionally, if the facility is not clean closed in accordance with LAC 33:VII.713.E.3.b, the post-closure plan shall include a method for conducting post-closure activities; method for abandonment of monitoring systems, gas collection systems, etc.; measures planned to ensure public safety; and a description of the planned uses of the facility during post-closure.

### 19. Financial Responsibility

<b>A. Provide the name and address of the person or company who currently owns the land.</b>			
Name		Company	
Suite, Mail Drop, or Division		Street or P.O. Box	
City	State	Zip	Business Phone
<b>B. Provide the name and address of the person or company who will own the land if the standard permit is granted.</b>			
Name		Company	
Suite, Mail Drop, or Division		Street or P.O. Box	
City	State	Zip	Business Phone
<b>C. Provide the name of the agency or other public body that is requesting the standard permit, or if the agency is a public corporation, its published annual report (attach in <b>Attachment 43</b>), or if otherwise, the names of the principal owners, stockholders, general partners, and/or officers. If this information is available online, referencing a weblink is acceptable.</b>			
<b>D. Is this an existing facility?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No			
<ul style="list-style-type: none"> <li>• If "yes," list the current financial mechanism for this facility.</li> <li>• If "no," provide a statement of acknowledgement that financial assurance will be obtained in accordance with LAC 33:VII.1303.A.2. prior to accepting waste at the facility.</li> </ul>			

## 20. Geology

<p><b>A. Does the facility have natural soils of low permeability for the area occupied by the solid waste units, including vehicle parking and turnaround areas? (These soils shall provide a barrier to prevent any penetration of surface spills into groundwater aquifers underlying the area or to an underlying sand or other permeable stratum that would provide a conduit to such aquifers.)</b> <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <ul style="list-style-type: none"> <li>• If "yes," attach a demonstration in <b>Attachment 44</b>.</li> <li>• If "no," attach a design for surfacing natural soils that do not meet this requirement in <b>Attachment 44</b>.</li> </ul>
<p><b>B. Attach boring logs for each borehole, monitoring well, and piezometer in <b>Attachment 45</b>. Boring requirements shall follow the LDEQ's and Louisiana Department of Transportation and Development (LDOTD)'s <u>Construction of Geotechnical Boreholes and Groundwater Monitoring Systems Handbook</u> and LDOTD's <u>Water Well Rules, Regulations, and Standards in LAC 56</u>. Boring logs shall include the ground surface elevation with respect to NGVD, lithology and the intervals that were cored continuously, and the depth of first encountered groundwater.</b></p> <p><b>NOTE:</b> The facilities shall comply with the following boring requirements: geotechnical borehole spacing shall be no greater than 450 feet, the elevation (NGVD) of the lowest point of excavation; boring depth shall extend to at least 30 feet below the lowest point of excavation with continuous sampling; and at least 10% of the borings (minimum of three) shall extend to 100 feet below grade to characterize the shallow geology.</p>
<p><b>C. Attach a plan-view map in <b>Attachment 46</b>, which shall include existing topographic contours and locations of all borings, monitoring wells, and piezometers with respect to the facility.</b></p>
<p><b>D. Attach in <b>Attachment 47</b> regional geologic cross sections from available published information that depicts the stratigraphy to a depth of at least 200 feet below the ground surface. The areal extent, thickness, and depth to the upper surface, and any interconnection of aquifers, from all available information shall be provided for all recognized aquifers that have their upper surface within 200 feet of the ground surface. Provide directions and rates of groundwater flow for all recognized aquifers that have their upper surface within 200 feet of the ground surface.</b></p>
<p><b>E. Attach geologic cross sections along the perimeter of the facility and along each transect (line of borings) in <b>Attachment 48</b>. Each cross section shall include lithologic and boring log data for all borings; existing and plugged and abandoned monitoring wells, and piezometers; locations and depths of borings, monitoring wells, and piezometers; excavation depths; screen intervals of all existing and plugged and abandoned monitoring wells and piezometers; groundwater levels; other applicable features such as faults, slurry walls, groundwater dewatering systems; and identification of individual stratigraphic units including the uppermost aquifer, uppermost water-bearing permeable zone(s), and lower confining units.</b></p>

- F. Attach in **Attachment 49** structure maps and contour maps depicting the areal extent, depths, and thickness of all permeable zones, confining units, and faults to a depth of at least 30 feet below the lowest point of excavation.
- G. Attach in **Attachment 50** potentiometric maps depicting groundwater flow directions using a minimum of three piezometers or monitoring wells in each water-bearing zone, including zones that comprise the uppermost aquifer and uppermost water-bearing permeable zone(s). Piezometers and monitoring wells shall be constructed, and well-completion diagrams submitted, in accordance with the applicable well construction standards in LAC 33:VII.805.A.3.
- H. Attach at least four scaled quarterly potentiometric surface maps for each saturated permeable zone to a depth of at least 30 feet below the lowest point of excavation in **Attachment 50**. Include the location of the facility, monitoring well and piezometer locations, and corresponding water level elevation measurements.

## 21. Groundwater Monitoring

A. Provide a description and designation of each zone that will be monitored.

B. Attach in **Attachment 51** a map for each groundwater monitoring zone that depicts the locations of all monitoring wells, including proposed monitoring wells, and each zone's relevant point of compliance. Designate each monitoring well as either background/upgradient or downgradient. An adequate number of monitoring wells shall be located hydraulically upgradient of the facility to yield samples that represent background groundwater quality. Additionally, an adequate number of monitoring wells shall be located hydraulically downgradient from the facility to yield samples that are representative of the groundwater passing the relevant point of compliance. The downgradient wells shall be screened in the same zone as the upgradient wells. Spacing between downgradient wells shall not exceed 800 feet.

C. Attach a completed copy of the "Table of Well Construction Details" provided in **Appendix A** of the Type I-II Surface Impoundment Permit Application Guidance that lists pertinent well construction details for each monitoring well in **Attachment 52**. Include the coordinates, designation of each well as either upgradient or downgradient, the unit(s) being monitored, elevation (NGVD) of a reference point for measuring water levels, elevation of the ground surface (NGVD), drilled depth (in feet), depth to which the well is cased (in feet), the depth to the top and bottom of the bentonite seal (in feet), the depth to the top and bottom of the screen (in feet), the slot size, the casing size, the type of grout, and as-built diagrams (cross sections) of each well providing the aforementioned well construction details.

D. Is the facility new?  Yes  No

- If "yes," attach a plan to install monitoring wells in **Attachment 53**. Monitoring wells shall be sampled quarterly for one year, and groundwater data shall be submitted after each quarterly sampling event and prior to waste acceptance.
- If "no," does the facility have an existing groundwater monitoring system?  Yes  No
  - If "yes," attach all background data and at least four years of detection monitoring data from monitoring wells in place at the time of the permit application in **Attachment 54**.
  - If "no," attach a plan to install monitoring wells in **Attachment 53**. Monitoring wells shall be sampled quarterly for one year, and groundwater data shall be submitted within 90 days after each quarterly sampling event.

E. What phase of groundwater monitoring is the facility currently implementing?

- Detection Monitoring  
 Assessment Monitoring  
 Corrective Action

Attach in **Attachment 55** any plan associated with the above phases.

F. Attach a Groundwater Sampling and Analysis Plan (SAP) in **Attachment 55**. The SAP shall include a description of the permeable zones being monitored; the locations of monitoring wells and piezometers; potentiometric maps showing gradient positions of the monitoring wells and piezometers; selection and justification of parameters to be sampled; sample collection, preservation, and shipment procedures; chain of custody control; analytical methods including practical quantitation limits; quality assurance/quality control methods; statistical evaluation methods (if applicable); reporting requirements; and any other pertinent information.

**NOTE:** Please be advised that if the facility is in assessment monitoring or corrective action, statistical evaluation methods should not be provided.

## 22. Capacity Evaluation

If this application is for a new Type II Surface Impoundment, attach a copy of the capacity evaluation submitted before this application and LDEQ's response in **Attachment 56**.

## 23. Additional Information

Attach any additional information needed to support the application. These should be included as additional attachments. Fill in the blanks on the last page of the checklist as needed.

#### 24. Environmental Assessment Statement (EAS or IT Question Responses)

Attach a discussion of the following questions in **Attachment 57**. Consult the *Guidance document* for details of what each statement discussion should include.

**NOTE:** Applications for **renewal** of an existing permit are **not** required to submit answers to these questions, unless said renewal or extension encompasses changes that would constitute a major modification.

Applications for a **minor modification** of an existing permit are **not** required to submit answers to these questions.

**A.** Demonstrate that the potential and real adverse environmental effects of the facility have been avoided to the maximum extent possible.

**B.** Provide a cost-benefit analysis demonstrating that the social and economic benefits of the facility outweigh the environmental-impact costs.

**C.** Discuss and describe possible alternative projects that would offer more protection to the environment without unduly curtailing nonenvironmental benefits.

**D.** Discuss possible alternative sites that would offer more protection to the environment without unduly curtailing nonenvironmental benefits.

**E.** Discuss and describe the mitigating measures which would offer more protection to the environment than the facility, as proposed, without unduly curtailing nonenvironmental benefits.

**SOLID WASTE PERMIT APPLICATION ATTACHMENT LIST AND CHECKLIST**

Instructions: Complete this checklist and submit it with the completed solid waste permit application. Each line should have a “yes,” “no,” or “N/A” checked. If one of the attachments is marked as “N/A,” subsequent attachments should still be labeled with the corresponding attachment letter listed in the first columns. If additional attachments are needed, fill in the title(s) on the last page or the additional page provided in the guidance. **Not all attachments will be used for this application.**

Attachment	Item Description	Yes	No	N/A
1	Proof of publication of notice to submit a solid waste permit application	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Copy of lease	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Zoning documentation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Certificate of Registration and/or Certificate of Good Standing from the Secretary of State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Summary of enforcement actions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Airport or FAA notifications	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Master plan to include: scaled map of location of pipelines, power lines, and right-of-ways; figure(s) showing property lines, original contours, buildings, units of the facility, drainage, ditches, and roads; <b>and</b> figure of buffer zone	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	Traffic flow letter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	Aerial photograph of land use within one-mile radius	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	Description of measures used to isolate surface impoundment operations from all environmentally sensitive sites within 1,000 feet <b>and</b> a list of all known areas within 1,000 feet	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11	Letters from state and federal agencies regarding environmentally sensitive sites	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	Copy of US Army Corps of Engineers 404 permit or copy of (and proof of submittal) US Army Corps of Engineers 404 permit application	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	Scaled map showing location of shot holes, seismic lines, and wells within 2,000 feet	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	Scaled map of all water wells within one mile	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	Scaled map of all recorded faults within one mile	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16	Geophysical mapping or stratigraphic correlation of boring logs <b>and</b> discussion of measures to be taken to mitigate adverse effects	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17	Demonstration of alternate setback distance	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18	Demonstration of ability to withstand stresses caused by maximum ground motion	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19	Demonstration of integrity of structural components	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20	Copy of Emergency Response Plan <b>and</b> State Fire Marshal’s approval of plan <b>and/or</b> Contingency plan (if different than Emergency Response Plan)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21	Copies of notarized affidavits from landowners less than 200 (or 300) feet from the facility	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22	Description of facility runoff collection system	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23	Map of aquifer recharges areas <b>and</b> description of the measures planned to protect them	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	Map of 100-year floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25	Plan-view drawings showing original contours, proposed elevations, proposed final contours, slopes, levees, and other pertinent features	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26	Cross-sectional drawings showing original contours, elevations, drainage, location and type of liner, leachate collections system, and other pertinent features	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Attachment	Item Description	Yes	No	N/A
27	Description of liner system	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**ATTACHMENT LIST AND CHECKLIST**

Attachment	Item Description	Yes	No	N/A
28	Quality assurance/quality control plan for liners	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
29	Description of leachate collection system	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30	Description of levee system	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
31	Description of daily fill and cover	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
32	Description of interim and interim compacted cover	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
33	Calculations for volume of material for daily, interim, and final cover	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
34	Slope stability analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35	Comprehensive operation plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
36	Description of method to handle process waters	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
37	Plan for disposal and testing of ash	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
38	Description of testing and uses for fuel or compost	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
39	Description of marketing procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40	Implementation plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
41	Closure plan <b>and</b> drawing of final contours (if applicable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42	Post-closure plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
43	Annual report for public corporation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
44	Demonstration of natural soil permeability <b>or</b> Design for surfacing natural soils	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
45	Boring logs for boreholes, monitoring wells, and piezometers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
46	Plan-view map of existing topographic contours and locations of all borings, monitoring wells, and piezometers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
47	Regional geologic cross sections depicting stratigraphy to a depth of at least 200 feet below ground surface	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
48	Geologic cross sections along perimeter of the facility and along each transect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
49	Structure and contour maps showing areal extent, depths, and thickness	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50	Scaled quarterly potentiometric surface maps, groundwater flow direction, and well-completion diagrams	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
51	Maps of groundwater monitoring zones	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
52	Table of well construction details ( <i>use the copy provided in Appendix A of the Type I-II Surface Impoundment Permit Application Guidance</i> )	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
53	Plan for installation of monitoring wells	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
54	Background data and monitoring data from past four years	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
55	Detection Monitoring Sampling and Analysis Plan (SAP), Assessment Monitoring SAP, and/or Corrective Action Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
56	Capacity Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
57	Environmental Assessment Statement (IT Questions)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
58				
59				

**ATTACHMENT 3**  
**ZONING DOCUMENTATION**





June 7, 2021

Providence

RE: 275 Rodemacher Rd Lena, La 71447  
Cleco Brame Energy Center Ash Management Area  
Solid Waste Permit Modification Application  
Type I Industrial Landfill and Surface Impoundment  
Providence Project No. 002-278

To Whom It May Concern:

Please be advised that no zoning exists outside of the incorporated limits of Rapides Parish. The above referenced project/location is located in unincorporated Rapides Parish. If you have any questions or need any further assistance, please don't hesitate to call. Thank you for your cooperation.

Sincerely,

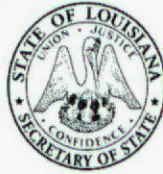
A handwritten signature in black ink, appearing to read "B Powell", is written below the word "Sincerely,".

Blake Powell  
GIS/Addressing

**ATTACHMENT 4**

**CERTIFICATE OF REGISTRATION AND/OR CERTIFICATE OF  
GOOD STANDING FROM THE SECRETARY OF STATE**

State of  
Louisiana  
Secretary of  
State



**COMMERCIAL DIVISION**  
**225.925.4704**

Fax Numbers  
225.932.5317 (Admin. Services)  
225.932.5314 (Corporations)  
225.932.5318 (UCC)

---

Name	Type	City	Status
CLECO POWER LLC	Limited Liability Company	PINEVILLE	Active

**Previous Names**

**Business:** CLECO POWER LLC

**Charter Number:** 35014212K

**Registration Date:** 12/12/2000

**Domicile Address**

2030 DONAHUE FERRY RD.  
PINEVILLE, LA 713605226

**Mailing Address**

C/O LAUREN LABORDE  
2030 DONAHUE FERRY RD.  
PINEVILLE, LA 713605226

**status**

**Status:** Active

**Annual Report Status:** In Good Standing

**File Date:** 12/12/2000

**Last Report Filed:** 12/9/2020

**Type:** Limited Liability Company

**Registered Agent(s)**

<b>Agent:</b>	LAUREN SOILEAU LEBOEUF
<b>Address 1:</b>	2030 DONAHUE FERRY ROAD
<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Appointment Date:</b>	8/21/2019

<b>Agent:</b>	LAUREN LABORDE
<b>Address 1:</b>	2030 DONAHUE FERRY ROAD
<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Appointment Date:</b>	12/9/2020

**Officer(s)**

Additional Officers: No

<b>Officer:</b>	CLECO CORPORATE HOLDINGS LLC
<b>Title:</b>	Member
<b>Address 1:</b>	2030 DONAHUE FERRY RD

<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Officer:</b>	ANDREW CHAPMAN
<b>Title:</b>	Manager
<b>Address 1:</b>	2030 DONAHUE FERRY RD
<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Officer:</b>	RICHARD GALLOT, JR
<b>Title:</b>	Manager
<b>Address 1:</b>	2030 DONAHUE FERRY RD
<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Officer:</b>	DAVID GILCHRIST
<b>Title:</b>	Manager
<b>Address 1:</b>	2030 DONAHUE FERRY RD
<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Officer:</b>	CHRISTOPHER LESLIE
<b>Title:</b>	Manager
<b>Address 1:</b>	2030 DONAHUE FERRY RD
<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Officer:</b>	PEGGY SCOTT
<b>Title:</b>	Manager
<b>Address 1:</b>	2030 DONAHUE FERRY RD
<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Officer:</b>	STEVEN TURNER
<b>Title:</b>	Manager
<b>Address 1:</b>	2030 DONAHUE FERRY RD
<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Officer:</b>	BRUCE WAINER
<b>Title:</b>	Manager
<b>Address 1:</b>	2030 DONAHUE FERRY RD
<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Officer:</b>	WILLIAM FONTENOT
<b>Title:</b>	Manager
<b>Address 1:</b>	2030 DONAHUE FERRY RD
<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Officer:</b>	GERALD HANRAHAN
<b>Title:</b>	Manager
<b>Address 1:</b>	2030 DONAHUE FERRY RD
<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Officer:</b>	JON PERRY
<b>Title:</b>	Manager
<b>Address 1:</b>	2030 DONAHUE FERRY RD
<b>City, State, Zip:</b>	PINEVILLE, LA 71360
<b>Officer:</b>	AARON RUBIN
<b>Title:</b>	Manager
<b>Address 1:</b>	2030 DONAHUE FERRY RD

**City, State, Zip:** PINEVILLE, LA 71360

**Officer:** MELISSA STARK

**Title:** Manager

**Address 1:** 225 W. WASHINGTON

**Address 2:** STE. 2200

**City, State, Zip:** CHICAGO, IL 60606

**Officer:** PARASKEVAS FRONIMOS

**Title:** Manager

**Address 1:** 2030 DONAHUE FERRY ROAD

**City, State, Zip:** PINEVILLE, LA 71360

## Mergers (3)

Filed Date	Effective Date:	Type	Charter#	Chater Name	Role
12/27/2000	12/27/2000	MERGE	35014212K	CLECO POWER LLC	SURVIVOR
			14900050D	CLECO UTILITY GROUP INC.	NON-SURVIVOR
2/25/2010	2/23/2010	MERGE	35014212K	CLECO POWER LLC	SURVIVOR
			40128423K	POWER BLOCK 1, LLC	NON-SURVIVOR
3/14/2014	3/15/2014	MERGE	35014212K	CLECO POWER LLC	SURVIVOR
			41453665K	COUGHLIN TRANSCO LLC	NON-SURVIVOR

## Amendments on File (27)

Description	Date
Merger	12/27/2000
Domestic LLC Agent/Domicile Change	2/12/2001
Domestic LLC Agent/Domicile Change	7/6/2001
Appointing, Change, or Resign of Officer	10/12/2001
Appointing, Change, or Resign of Officer	5/13/2002
Appointing, Change, or Resign of Officer	1/8/2003
Appointing, Change, or Resign of Officer	5/15/2003
Domestic LLC Agent/Domicile Change	6/24/2003
Appointing, Change, or Resign of Officer	7/30/2003
Appointing, Change, or Resign of Officer	1/29/2004
Domestic LLC Agent/Domicile Change	6/8/2005
Appointing, Change, or Resign of Officer	2/20/2006
Appointing, Change, or Resign of Officer	5/11/2006
Appointing, Change, or Resign of Officer	5/26/2006
Domestic LLC Agent/Domicile Change	7/31/2006
Appointing, Change, or Resign of Officer	8/4/2006
Domestic LLC Agent/Domicile Change	8/23/2006
Appointing, Change, or Resign of Officer	10/24/2006
Appointing, Change, or Resign of Officer	1/30/2007
Merger	2/25/2010
Restated Articles	5/26/2010

Appointing, Change, or Resign of Officer	5/26/2010
Merger	3/14/2014
Restated Articles	4/13/2016
Appointing, Change, or Resign of Officer	9/14/2016
Appointing, Change, or Resign of Officer	4/12/2017
Domestic LLC Agent/Domicile Change	8/21/2019

**Print**

**ATTACHMENT 41**

**CLOSURE PLAN AND DRAWING OF FINAL CONTOURS  
(IF APPLICABLE)**

**CLECO POWER LLC**  
**BRAME ENERGY CENTER**  
**LENA, RAPIDES PARISH, LOUISIANA**



**REVISED CLOSURE PLAN**

**FLY ASH POND**

**AGENCY INTEREST NO. 2922**

**D-079-0390/P-0005-R1**

**SEPTEMBER 2021**  
**REVISED MARCH 2022**

Providence Engineering and Environmental Group LLC  
1201 Main Street  
Baton Rouge, LA 70802  
(225) 766-7400  
[www.providenceeng.com](http://www.providenceeng.com)  
Providence Project No: 002-286





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## 1.0 INTRODUCTION

Cleco Power LLC (Cleco) owns and operates an electric utility power station known as the Brame Energy Center (BEC) located near Boyce, Rapides Parish, Louisiana. Cleco received the solid waste permit, Permit P-0005-R1, from the Louisiana Department of Environmental Quality (LDEQ) to construct and operate the Unit 2 Metal Cleaning Waste Pond, the Bottom Ash Pond, and the Fly Ash Pond which are all located within the BEC property.

This Facility Closure Plan (Plan) includes the pre-closure and closure methods and activities that Cleco will implement to close the Fly Ash Pond as shown in **Figure 1**, in accordance with the applicable standards of LAC 33:VII.519.B.6 (general requirements), LAC 33:VII.713.E and F (surface impoundment requirements) and applicable sections of 40 CFR 257.102 (Coal Combustion Residuals (CCR)).

Closure under CCR will be addressed in a separate closure plan submitted to the Environmental Protection Agency. Details of the risk-based closure that address the Louisiana Solid Waste regulations for the Fly Ash Pond are included in the following sections.

## 2.0 BACKGROUND

The waste surface area of the Fly Ash Pond is approximately 36 acres as noted in P-0005R1, however the overall size of the Fly Ash Pond is approximately 43.3 acres. The Fly Ash Pond received fly ash, abrasives, sodium carbonate (tank bottoms), neutralized waste/fly ash, and spent activated carbon/trona. Excavated sludge from the metal cleaning waste ponds was also placed in the Fly Ash Pond on an as needed basis.

Rainwater that collects in the Fly Ash Pond is pumped to the Bottom Ash Pond. A floating pump is used to pump water from the Fly Ash Pond to the Bottom Ash Pond and a second stationary pump is utilized as a backup in emergency conditions. Under normal operating conditions, the water level is monitored and pumped to the Bottom Ash Pond on an as needed basis.

The types of materials handled within the Fly Ash Pond are non-hazardous, onsite generated materials only. None of the materials disposed are characteristic or listed hazardous wastes as defined by LAC 33:V Subpart I or by federal regulations as confirmed by the process knowledge of each waste.

Cleco has temporarily ceased placement of waste into the Fly Ash Pond, pending USEPA's review of Cleco's Part B (liner equivalency) application allowed by 40 CFR 257.71(d). Cleco is planning a risk-based closure of the surface impoundment, that meets the risk-based requirements of the Louisiana solid waste regulations. Cleco intends to complete the closure activities in 2024. The Fly Ash Pond is considered valuable real estate and Cleco plans to convert the area to a non-CCR landfill as part of the existing landfill onsite.

The estimate of maximum inventory ever on site for the Fly Ash Pond is 530,000 cubic yards.

### **3.0 PRE-CLOSURE ACTIVITIES**

The materials are not classified as characteristic or listed hazardous wastes as defined by LAC 33:V.Subpart 1 or by federal regulations; therefore, an analysis of the materials is not required prior to being hauled to an appropriately permitted disposal facility. Cleco utilizes process knowledge of the waste material source, which is limited to the ash material generated during the operation and maintenance of the utility boilers for Unit 2.

#### **3.1 Notification of Intent to Close**

Pursuant to LAC 33:VII.713.E.1, Cleco will notify the LDEQ Office of Environmental Services in writing at least 90 days before closure or intent to close with the following closure information:

- date of planned closure
- updated Closure Plan
- closure schedule and
- estimated cost for closure

The closure process requires notifications to be completed prior and subsequent to closure activities.

#### **3.2 Dewatering**

Standing water within the Fly Ash Pond will be used to solidify ash or will be pumped to the Bottom Ash Pond. The ash forms a cement-type material when wet; therefore, excess stormwater will be pumped to the Bottom Ash Pond.

Dewatering will be achieved by using the existing pump system that discharges to the Bottom Ash Pond. Also, trailer mounted pumps located at localized low points of the Fly Ash Pond may be used to facilitate dewatering efforts that will also discharge to the Bottom Ash Pond per the current Louisiana Pollution Discharge Elimination System (LPDES) permit.

#### **3.3 Run-off Diversion System**

The run-off diversion system for the Fly Ash Pond will be maintained during closure of the Fly Ash Pond. While the Fly Ash Pond is in the closure process, the run-off and run-on control systems will be maintained and utilized. Storm water and water in contact with the ash will be pumped to the Bottom Ash Pond which is discharged through LPDES Outfall 401.

Cleco will conduct sampling and inspection of the outfall in accordance with requirements of the associated LPDES permit to ensure compliance with water quality standards and to ensure the effective operation of the run-on/run-off diversion system for the facility during the closure period.

#### 4.0 CLOSURE PLAN NARRATIVE DESCRIPTION

Cleco will implement the risk-based closure method for the closure of the Fly Ash Pond. The detailed sequence of events to complete the risk-based closure include the following:

- Mobilization of contractor personnel and equipment. The contractor will mobilize his personnel and equipment to the site to begin closure operations.
- The contractor will remove any additional water remaining in the Fly Ash Pond to allow for removal of the waste material. The dewatering of the Fly Ash Pond will consist of pumps and hoses to pump the water to the Bottom Ash Pond as required by the LPDES permit.
- Once dewatering of the Fly Ash Pond has been completed, mechanical excavation and removal of any remaining waste within the pond will commence. Excavated material will be placed into haul trucks and hauled to an appropriately permitted disposal facility.
- The contractor will continue to mechanically remove waste until visible wastes are not present within the pond. Based on visual observation, decontamination of the clay liner and all areas affected by waste within the pond, the contractor will over excavate approximately six inches of clay liner material on the bottom of the pond and on the side slopes.
- Groundwater monitoring of area surrounding the Fly Ash Pond will continue in its present form as this area is proposed to be incorporated into currently permitted landfill.
- Confirmatory sampling will be conducted of the clay liner to ensure that the remaining constituent concentrations are protective of human health and the environment. Confirmatory samples will be compared to LDEQ Risk Evaluation/Corrective Action Program (RECAP) standards. If residual concentrations exceed the screening standards, Cleco may either elect to remove additional materials and resample the area or further evaluate the area under RECAP Management Options.
- Documentation of closure activities will be completed, and a Final Closure Report will be submitted to LDEQ.
- Closure inspection by LDEQ per LAC 33:VII.407.E.
- All closure activities will be inspected by a Professional Engineer to ensure that closure has proceeded according to plan. Then, certification by a qualified professional engineer in the State of Louisiana that the closure has been completed in accordance with the amended Closure Plan, will be concluded.

- As-built drawings of the risk-based closure will be provided at the time of the Final Closure Report.

## 5.0 CLOSURE OF FLY ASH POND

Cleco plans to remove the waste and decontaminate the Fly Ash Pond in accordance with recognized and generally accepted good engineering practices.

Per LAC 33:VII.519.B.6.b.iii, the maximum inventory of solid waste ever onsite over the entire life of the facility is approximately 530,000 cubic yards.

### 5.1 Equipment and Structures Requiring Decontamination

During closure operations, the following pieces of equipment utilized will be decontaminated as follows:

- Earth Moving Equipment – steam cleaning with rinse water
- Transporting Hose/Piping/*etc.* – steam cleaning with rinse water
- Haul Trucks – steam cleaning with rinse water

Prior to off-site disposal, any mechanical equipment removed during closure will be steam cleaned with rinse water. Residual solids from decontamination will be disposed in an onsite landfill or at an appropriately permitted landfill. The rinse water will be discharged through a permitted outfall.

## 6.0 SOIL SAMPLING

Soil sampling to support the risk-based closure of the Fly Ash Pond will be conducted in accordance with the following sections and with LDEQ RECAP requirements. Cleco proposes to collect soil samples from several locations within the Fly Ash Pond based on a grid layout. Proposed sampling locations are shown in **Figure 2**.

### 6.1 Field Preparation Procedures

Prior to sampling, field personnel will obtain clearance for all sampling locations with the appropriate site personnel and Louisiana One Call. Any required health and safety training will also be completed prior to initiation of fieldwork. In addition, coordination with the analytical laboratory regarding sample containers and the minimum required sample quantitation limits will be conducted in preparation for fieldwork.

### 6.2 Sample Identification and Labeling

Each sample will receive a unique identification number. All sample containers used will be properly labeled immediately upon sample collection. The following information will be included on each sample label:

- Sample identification number
- Time and date of sample collection
- Initials of the sample collector
- Contract laboratory
- Facility name
- Analyses to be performed
- Preservative used (if required)

### 6.3 Soil Sample Collection

Underlying soil samples will be collected from locations shown on **Figure 2**. Samples will be collected with a hand auger from the 0 to 6-inch depth interval. The impoundment will be divided into one-acre quadrants. Two samples from each quadrant representing the base of the impoundment for each acre will be taken. One sample per acre from the side slopes will be taken from each quadrant. Sampling locations may be relocated based on accessibility and/or other obstructions within the Fly Ash Pond. Sampling locations will be easily accessed from within the bottom of the pond after all visible waste materials and approximately six inches of clay liner from the base and side slopes has been removed.

Soil samples will be collected from a dry pond bottom and along the side slopes. Discreet samples collected will be placed in a stainless-steel mixing bowl directly from the ponar or drive tube sampler.

All soil samples collected from the grid sampling locations will be analyzed for the following parameters based on process and site knowledge and the groundwater semiannual monitoring requirements for the Fly Ash and Bottom Ash Ponds:

- pH
- Sulfate
- Arsenic
- Cadmium
- Copper
- Nickel
- Vanadium
- Zinc

Analytical testing methods are specified in Section 7.0.

### 6.4 Field Decontamination Procedures

Field decontamination procedures will be used to remove contaminants to the extent practicable from sampling equipment to minimize cross-contamination. Decontamination will be performed on all non-disposable sampling equipment before each individual sample collection. Sampling

equipment will be decontaminated between sampling locations, as required. Sampling equipment will be cleaned with a phosphate-free detergent and scrub brushes to remove debris and contaminants. The equipment will then be triple-rinsed using lab-quality deionized water and allowed to air dry prior to re-use.

#### **6.4.1 Sample Containers and Handling**

##### **6.4.1.1 Sample Containers**

The contract laboratory will provide all containers for sample collection and/or transfer. All containers will be prepared in accordance with good laboratory practices and made chemically clean pursuant to sample collection and container requirements of the approved analytical procedures for the respective analyses to be conducted. Containers not provided by the laboratory will not be substituted in the field. Any required preservatives will be added to the containers by the contract laboratory prior to use in the field. Field personnel will be responsible for ensuring the correct preservative has been used. When filling a container, care will be taken to avoid loss of preservatives and injury to personnel due to contact with the preservatives. Containers will be filled completely to minimize or eliminate headspace as appropriate.

##### **6.4.1.2 Sample Handling**

Powder-free latex or nitrile gloves will be worn during the collection of each sample. Care will be taken to ensure that samples are not inadvertently contaminated by contact with anything other than the designated containers. Immediately upon collection, all sample containers will be properly labeled and then stored in an ice chest containing a sufficient amount of wet ice to maintain a maximum temperature of 4°C.

##### **6.4.1.3 Chain-of-Custody Procedures**

Field sampling personnel will be responsible for the samples throughout the sampling period. All samples will be stored in ice chests (on wet ice at a temperature not to exceed 4°C) for transportation to the contract laboratory. Appropriate chain-of-custody forms detailing the analytical requirements will be completed by the designated sampling personnel and will accompany the samples to the laboratory.

When transferring possession of samples, the transferor and the recipient will sign and record the date and time on the chain-of-custody form. A standardized chain-of-custody form will be



used that is designed to prompt the user(s) to complete all required sample collection and transport information.

## 7.0 ANALYTICAL TESTING - CONFIRMATORY SOIL SAMPLES

The soil samples will be analyzed for the current groundwater detection monitoring parameters for the Fly Ash and Bottom Ash Ponds. Specific conductance and alkalinity, which are included in the current groundwater monitoring program, will not be among the parameters used for closure verification. The analysis will be performed by a subcontracted analytical laboratory that is certified through the Louisiana Environmental Laboratory Accreditation Program (LELAP). Analytical parameters and testing methods will include the following, as applicable:

- pH
- Sulfate using EPA SW-846 Method 9056
- Arsenic using EPA SW-846 Method 6020
- Cadmium using EPA SW-846 Method 6020
- Copper using EPA SW-846 Method 6020
- Nickel using EPA SW-846 Method 6020
- Vanadium using EPA SW-846 Method 6020
- Zinc using EPA SW-846 Method 6020

All analyses will be performed in accordance with the most recently applicable approved method for each respective parameter for which testing is required.

## 8.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) MEASURES

Data collection and laboratory analyses will be conducted in a manner consistent with RECAP (LDEQ, 2003) requirements. The specific QA/QC procedures to be followed in the field and in the laboratory are described below.

### 8.1 Field QA/QC

Field QA/QC procedures will include the collection of sample blanks and analysis for the same constituents for which the actual sampled media are being tested. The determination of the types, number, and frequency of QA/QC sample collection will be based upon the following considerations, as applicable:

- One field duplicate sample per 20 field samples per medium sampled
- One matrix spike/matrix spike duplicate (MS/MSD) sample per 20 field samples per medium sampled
- One rinsate blank per 20 samples
- One field blank per day of sampling
- One trip blank per cooler containing volatile samples (*i.e.*, VOCs, TPH-GRO, and VPH)

## 8.2 Laboratory QA/QC

Standard analytical laboratory QA/QC procedures and the analytical methods specified in Section 7.0 will be followed. Documentation for the following will be requested from the laboratory at the time the samples are submitted for analysis:

- Sample documentation
- Initial and continuing calibration data
- Documentation of detection limits
- Analyte identification and quantification
- Quality control blanks
- Matrix spike recovery results
- Performance evaluation data set
- Analytical error determination
- Total measurement error determination

## 8.3 Sample Documentation

Sample collection, field preparation, preservation, and shipment will be documented. This will include field documentation, a sample documentation log, sample location documentation, soil boring logs, equipment calibration logs, sample labeling, and proper chain-of-custody documentation.

## 9.0 GROUNDWATER SAMPLING BENEATH THE FLY ASH POND

Groundwater sampling to support the risk-based closure of the Fly Ash Pond will be conducted in accordance with the following sections and with LDEQ RECAP requirements. Groundwater samples will be collected from three temporary piezometer locations installed in the floor of the Fly Ash Pond based on a grid layout. Proposed sampling locations are shown in **Figure 3**.

The underlying groundwater will be sampled after all visible waste materials and approximately six inches of clay liner from the base and side slopes have been removed from the Fly Ash Pond.

Groundwater sample collection methods and procedures are further described below.

### 9.1 Field Preparation Procedures

Prior to sampling, field personnel will obtain clearance for all sampling locations with the appropriate site personnel and Louisiana One Call. Any required health and safety training will also be completed prior to initiation of fieldwork. In addition, coordination with the analytical laboratory regarding sample containers and the minimum required sample quantitation limits will be conducted in preparation for fieldwork.

## 9.2 Sample Identification and Labeling

Each sample will receive a unique identification number. All sample containers used will be properly labeled immediately upon sample collection. The following information will be included on each sample label:

- Sample identification number
- Time and date of sample collection
- Initials of the sample collector
- Contract laboratory
- Facility name
- Analyses to be performed
- Preservative used (if required)

## 9.3 Groundwater Sample Collection

Underlying groundwater samples will be collected from three temporary piezometers that will be installed at locations shown on **Figure 3**. Sampling locations may be relocated based on accessibility and/or other obstructions within the Fly Ash Pond. Sampling locations should be easily accessed from within the bottom of the pond after all visible waste materials and approximately 6 inches of clay liner from the base and side slopes has been removed.

All groundwater samples collected from the temporary piezometer sampling locations will be analyzed for the constituents included in Section 7.0.

## 9.4 Field Decontamination Procedures

Field decontamination procedures will be used to remove contaminants to the extent practicable from sampling equipment to minimize cross-contamination. Decontamination will be performed on all non-disposable sampling equipment before each individual sample collection. Sampling equipment will be decontaminated between sampling locations, as required. Sampling equipment will be cleaned with a phosphate-free detergent and scrub brushes to remove debris and contaminants. The equipment will then be triple-rinsed using lab-quality deionized water and allowed to air dry prior to re-use.

### 9.4.1 Sample Containers and Handling

#### 9.4.1.1 Sample Containers

The contract laboratory will provide all containers for sample collection and/or transfer. All containers will be prepared in accordance with good laboratory practices and made chemically clean pursuant to sample collection and container requirements of

the approved analytical procedures for the respective analyses to be conducted. Containers not provided by the laboratory will not be substituted in the field. Any required preservatives will be added to the containers by the contract laboratory prior to use in the field. Field personnel will be responsible for ensuring the correct preservative has been used. When filling a container, care will be taken to avoid loss of preservatives and injury to personnel due to contact with the preservatives. Containers will be filled completely to minimize or eliminate headspace as appropriate.

#### **9.4.1.2 Sample Handling**

Powder-free latex or nitrile gloves will be worn during the collection of each sample. Care will be taken to ensure that samples are not inadvertently contaminated by contact with anything other than the designated containers. Immediately upon collection, all sample containers will be properly labeled and then stored in an ice chest containing a sufficient amount of wet ice to maintain a maximum temperature of 4°C.

#### **9.4.1.3 Chain-of-Custody Procedures**

Field sampling personnel will be responsible for the samples throughout the sampling period. All samples will be stored in ice chests (on wet ice at a temperature not to exceed 4°C) for transportation to the contract laboratory. Appropriate chain-of-custody forms detailing the analytical requirements will be completed by the designated sampling personnel and will accompany the samples to the laboratory.

When transferring possession of samples, the transferor and the recipient will sign and record the date and time on the chain-of-custody form. A standardized chain-of-custody form will be used that is designed to prompt the user(s) to complete all required sample collection and transport information.

### **10.0 ANALYTICAL TESTING – GROUNDWATER SAMPLES**

Groundwater samples will be analyzed for the current groundwater detection monitoring parameters for the Fly Ash and Bottom Ash Ponds. Specific conductance and alkalinity, which are included in the current groundwater monitoring program, will not be among the parameters used for closure verification. The analysis will be performed by a subcontracted analytical laboratory that is certified through the Louisiana Environmental Laboratory Accreditation Program (LELAP). Analytical parameters and testing methods will include the following, as applicable:

- pH
- Sulfate using EPA SW-846 Method 300.0
- Arsenic using EPA SW-846 Method 6020
- Cadmium using EPA SW-846 Method 6020
- Copper using EPA SW-846 Method 6020
- Nickel using EPA SW-846 Method 6020
- Vanadium using EPA SW-846 Method 6020
- Zinc using EPA SW-846 Method 6020

All analyses will be performed in accordance with the applicable approved method for each respective parameter for which testing is required.

## 11.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) MEASURES

Data collection and laboratory analyses will be conducted in a manner consistent with RECAP (LDEQ, 2003) requirements. The specific QA/QC procedures to be followed in the field and in the laboratory are described below.

### 11.1 Field QA/QC

Field QA/QC procedures will include the collection of sample blanks and analysis for the same constituents for which the actual sampled media are being tested. The determination of the types, number, and frequency of QA/QC sample collection will be based upon the following considerations, as applicable:

- One field duplicate sample per 20 field samples per medium sampled
- One matrix spike/matrix spike duplicate (MS/MSD) sample per 20 field samples per medium sampled
- One rinsate blank per 20 samples
- One field blank per day of sampling
- One trip blank per cooler containing volatile samples (*i.e.*, VOCs, TPH-GRO, and VPH)

#### 11.1.1 Laboratory QA/QC

Standard analytical laboratory QA/QC procedures and the analytical methods specified in Section 7.0 will be followed. Documentation for the following will be requested from the laboratory at the time the samples are submitted for analysis:

- Sample documentation
- Initial and continuing calibration data
- Documentation of detection limits
- Analyte identification and quantification
- Quality control blanks

- Matrix spike recovery results
- Performance evaluation data set
- Analytical error determination
- Total measurement error determination

**11.1.2 Sample Documentation**

Sample collection, field preparation, preservation, and shipment will be documented. This will include field documentation, a sample documentation log, sample location documentation, soil boring logs, equipment calibration logs, sample labeling, and proper chain-of-custody documentation.

**12.0 DATA EVALUATION AND REPORTING**

Upon receipt of analytical results, detected concentrations of COCs in soils and groundwater will be compared to applicable RECAP standards to determine if impacts are present prior to removal and disposition as part of risk-based closure of the Fly Ash Pond.

A Final Closure Report will be completed to detail sampling and testing methods used, comparison of analytical results to applicable RECAP standards and closure activities will be prepared and submitted to LDEQ.

**13.0 SCHEDULE**

Closure of the existing Fly Ash Pond is expected to take approximately 3 years to complete. The table below provides a listing of major milestones necessary to close the Fly Ash Pond, with an estimated duration and an estimated year of completion. Cleco estimates that closure will be completed in 2024.

Task Description	Estimated Duration	Estimated Year of Completion <sup>1</sup>
Place Amended Closure Plan in Facility Operating Record (FOR).	1 Day	2021/2022
Send Amended Closure Plan to LDEQ for Review	1 Month	2021/2022
LDEQ Review and Approval of Amended Closure Plan	6 Months	2021/2022
Dewatering of the Fly Ash Pond and <i>In Situ</i> waste material	3 Months	2022
Removal of the waste and decontamination of the In Situ Clay Liner by over excavation of approximately 6 inches based on visual observation of waste material.	18 Months	2023
Analytical testing to verify risk-based closure	3 Months	2024
Inspection by LDEQ	1 Month	2024
Certification report and completion of closure by Professional Engineer licensed in the State of Louisiana	1 Month	2024
Approval by LDEQ	1 Month	2024

<sup>1</sup>Timeframes noted in schedule may change based on weather conditions or other external factors.

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



**Bottom Ash Pond**

**Fly Ash Pond**

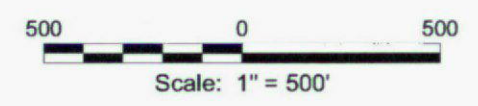
**Ash Management Area Landfill**

**Legend**

 Facilities

**Reference**

Base map comprised of Bing Maps aerial imagery and its data suppliers exported 06/18/21.



**Site Map**

**Fly Ash Pond Closure Plan**  
Boyce, Rapides Parish, Louisiana

**Cleco Power LLC**  
Brame Energy Center



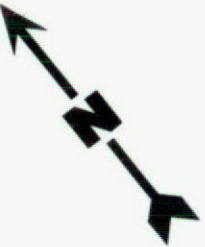
Drawn By	DSG	06/18/21
Checked By	GJL	06/18/21
Approved By	GJL	06/18/21

Project Number	002-286
Drawing Number	002-286-B001

**1**  
Figure



**FIGURE 2**  
**SOIL SAMPLING LOCATIONS**

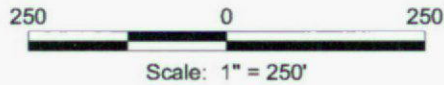


**Legend**

-  Facility
-  Soil Sampling Location (1 Acre Grid)
-  Sloped Soil Sampling Location (1 Acre Grid)

**Reference**

Base map comprised of Bing Maps aerial imagery and its data suppliers exported 06/18/21.



**Soil Sampling Locations**

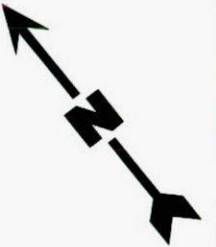
Fly Ash Pond Closure Plan  
Boyce, Rapides Parish, Louisiana

**Cleco Power LLC**  
Brame Energy Center



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002-286		
Drawing Number		Figure
002-286-B002		

**FIGURE 3**  
**GROUNDWATER SAMPLING LOCATIONS**

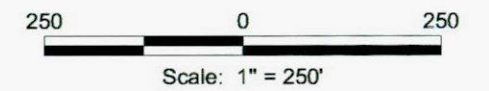


**Legend**

- Facility
- Soil Sampling Location (1 Acre Grid)
- Sloped Soil Sampling Location (1 Acre Grid)
- Groundwater Sampling Location

**Reference**

Base map comprised of Bing Maps aerial imagery and its data suppliers exported 06/18/21.



**Groundwater Sampling Locations**

**Fly Ash Pond Closure Plan**  
Boyce, Rapides Parish, Louisiana

**Cleco Power LLC**  
Brame Energy Center



Drawn By	DSG	03/02/22
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Project Number		<b>3</b> Figure
002-286		
Drawing Number		
002-286-B003		