

**AIR CONSTRUCTION PERMIT APPLICATION
FOR INSTALLATION OF PACKAGE BOILERS
RAYONIER PERFORMANCE FIBERS LLC
NASSAU COUNTY, FLORIDA**

Prepared For:

**Rayonier Performance Fibers LLC
PO Box 2002
Fernandina Beach, Florida 32035**

Prepared By:

**Golder Associates Inc.
6026 NW 1st Place
Gainesville, Florida 32607**

July 2009

0938-7544

DISTRIBUTION:

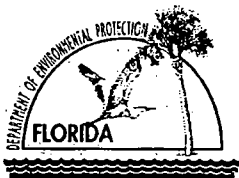
4 Copies – FDEP

2 Copies – Rayonier Performance Fibers LLC

2 Copy – Golder Associates Inc.

APPLICATION FOR AIR PERMIT

LONG FORM



Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

RECEIVED

JUL 8 2009

To ensure accuracy, please see form instructions.

NORTHEAST DISTRICT
DEP - JACKSONVILLE

Identification of Facility

1. Facility Owner/Company Name: Rayonier Performance Fibers LLC	
2. Site Name: Fernandina Beach Dissolving Sulfite Pulp Mill	
3. Facility Identification Number: 0890004	
4. Facility Location... Street Address or Other Locator: Foot of Gum Street City: Fernandina Beach County: Nassau Zip Code: 32034	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: David Rogers, Manager, Environmental Operations	
2. Application Contact Mailing Address... Organization/Firm: Rayonier Performance Fibers LLC Street Address: Post Office Box 2002 City: Fernandina Beach State: FL Zip Code: 32035	
3. Application Contact Telephone Numbers... Telephone: (904) 277-1346 ext. Fax: (904) 261-0333	
4. Application Contact E-mail Address: David.Rogers@rayonier.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3. PSD Number (if applicable):
2. Project Number(s):	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

The purpose of this application is to request the installation and operation of package boilers capable of producing up to 350,000 pounds per hour of steam as a temporary backup to the Recovery Boiler (EU 006) and No. 6 Power Boiler (EU022).

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
	Package Boilers	AC1F	NA

Application Processing Fee

Check one: Attached - Amount: \$ _____ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name : F.J. Perrett, General Manager
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Rayonier Performance Fibers LLC Street Address: Post Office Box 2002 City: Fernandina Beach State: FL Zip Code: 32035
3. Owner/Authorized Representative Telephone Numbers... Telephone: (904) 277-1405 ext. Fax: (904) 277-1411
4. Owner/Authorized Representative E-mail Address: jack.perrett@rayonier.com
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i>  Signature <u>02 JUL 09</u> Date

APPLICATION INFORMATION


Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:			
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):			
<input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.			
<input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively.			
<input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.			
<input type="checkbox"/> The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.			
3. Application Responsible Official Mailing Address...			
Organization/Firm:			
Street Address:			
City:		State:	Zip Code:
4. Application Responsible Official Telephone Numbers...			
Telephone: ()		ext.	Fax: ()
5. Application Responsible Official E-mail Address:			
6. Application Responsible Official Certification:			
<p>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</p>			
_____ Signature		_____ Date	

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: David A. Buff Registration Number: 19011
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 6026 NW 1st Place City: Gainesville State: FL Zip Code: 32607
3. Professional Engineer Telephone Numbers... Telephone: (352) 336-5600 ext. 21145 Fax: (352) 336-6603
4. Professional Engineer E-mail Address: dbuff@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/> , if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/> , if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/> , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/> , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">  <p><i>David A. Buff</i> Signature (seal)</p> </div> <div style="text-align: center;"> <p><i>7/1/09</i> Date</p> </div> </div>

* Attach any exception to certification statement.

**Board of Professional Engineers Certificate of Authorization #00001670.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 14 East (km) 454.7 North (km) 3392.2		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 30/39/44 Longitude (DD/MM/SS) 81/29/09	
3. Governmental Facility Code: NA	4. Facility Status Code: A	5. Facility Major Group SIC Code: 26	6. Facility SIC(s): 2611
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: David Rogers, Manager, Environmental Operations
2. Facility Contact Mailing Address... Organization/Firm: Rayonier Performance Fibers LLC Street Address: Post Office Box 2002 City: Fernandina Beach State: FL Zip Code: 32035
3. Facility Contact Telephone Numbers: Telephone: (904) 277-1346 ext. Fax: (904) 261-0333
4. Facility Contact E-mail Address: David.Rogers@rayonier.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: () ext. Fax: ()
4. Facility Primary Responsible Official E-mail Address:

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a “major source” and a “synthetic minor source.”

1. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input checked="" type="checkbox"/> Title V Source	
4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
Particulate Matter Total – PM	A	N
Particulate Matter less than 10 microns – PM10	A	N
Particulate Matter less than 2.5 microns – PM2.5	A	N
Sulfur Dioxide – SO2	A	N
Nitrogen Oxides – NOx	A	Y
Carbon Monoxide – CO	A	N
Volatile Organic Compounds – VOC	A	N
Lead – Pb	B	N
Total Reduced Sulfur – TRS	B	N
Hydrogen Sulfide – H2S	B	N
Total Hazardous Air Pollutants – HAPS	A	N
H001 – Acetaldehyde	A	N
H006 – Acrolein	B	N
H017 – Benzene	B	N
H032 – Carbon Disulfide	B	N
H033 – Carbon Tetrachloride	B	N
H038 – Chlorine	A	N
H041 – Chlorobenzene	B	N
H043 – Chloroform	A	N
H047 – Cobalt	B	N
H061 – 1,4-dichlorobenzene	B	N
H085 – Ethyl Benzene	B	N
H095 – Formaldehyde	B	N
H104 – Hexane	B	N
H106 – Hydrochloric Acid	B	N
H113 – Manganese	B	N
H114 – Mercury	B	N
H115 – Methanol	A	N
H117 – Bromomethane	B	N
H118 – Chloromethane	B	N
H119 – 1,1,1-trichloroethane	B	N
H123 – Methyl Isobutyl Ketone	B	N
H128 – Methylene Chloride	B	N
H133 – Nickel	B	N
H148 – Phosphorus	B	N
H163 – Styrene	B	N
H165 – 2,3,7,8-tetrachlorodibenzo-p-dioxin	B	N
H166 – 1,1,2,2-tetrachloroethane	B	N
H167 – Tetrachloroethane	B	N
H169 – Toluene	B	N
H174 – 1,2,4-trichlorobenzene	B	N
H176 – Trichloroethylene	B	N
H187 – Xylene	B	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility-Wide Cap [Y or N]? (all units)	3. Emissions Unit ID's Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:
There are no facility-wide caps proposed in the application.

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>RPF-FI-C1</u> <input type="checkbox"/> Previously Submitted, Date: _____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>RPF-FI-C2</u> <input type="checkbox"/> Previously Submitted, Date: _____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>RPF-FI-C3</u> <input type="checkbox"/> Previously Submitted, Date: _____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment A</u>
3. Rule Applicability Analysis: <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment A</u>
4. List of Exempt Emissions Units: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units:
 Attached, Document ID: _____ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities: (Required for initial/renewal applications only)
 Attached, Document ID: _____ Not Applicable (revision application)

2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
 Attached, Document ID: _____
 Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
 Attached, Document ID: _____
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)
 Attached, Document ID: _____
 Equipment/Activities Onsite but Not Required to be Individually Listed
 Not Applicable

5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
 Attached, Document ID: _____ Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
 Attached, Document ID: _____ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

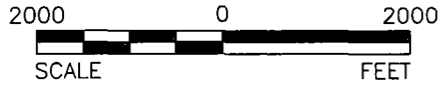
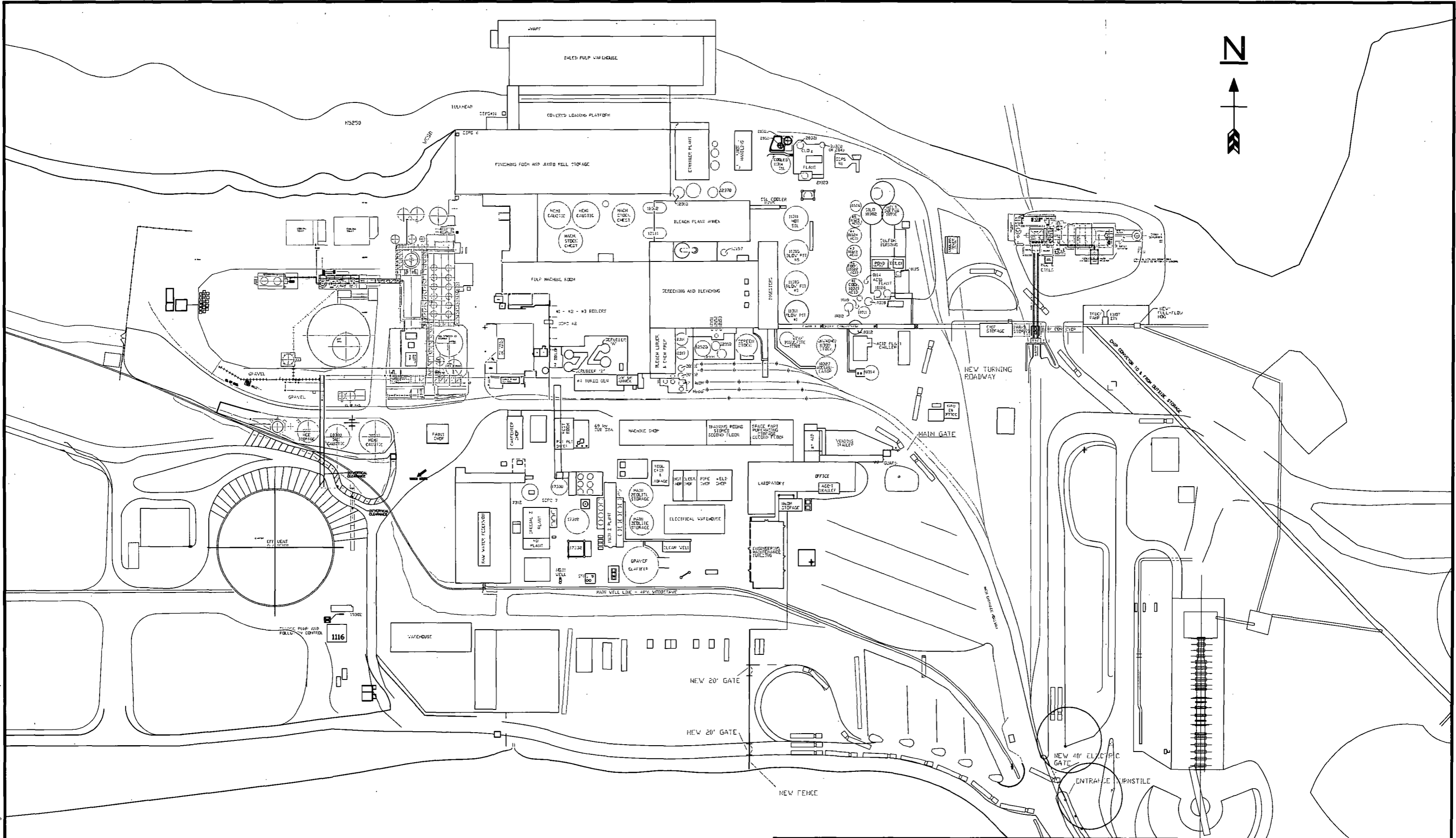
1. Acid Rain Program Forms: Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable (not an Acid Rain source) Phase II NO _x Averaging Plan (DEP Form No. 62-210.900(1)(a)1.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable
2. CAIR Part (DEP Form No. 62-210.900(1)(b)): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable (not a CAIR source)
3. Hg Budget Part (DEP Form No. 62-210.900(1)(c)): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable (not a Hg Budget unit)


Additional Requirements Comment

ATTACHMENT RPF-FI-C1

FACILITY PLOT PLAN

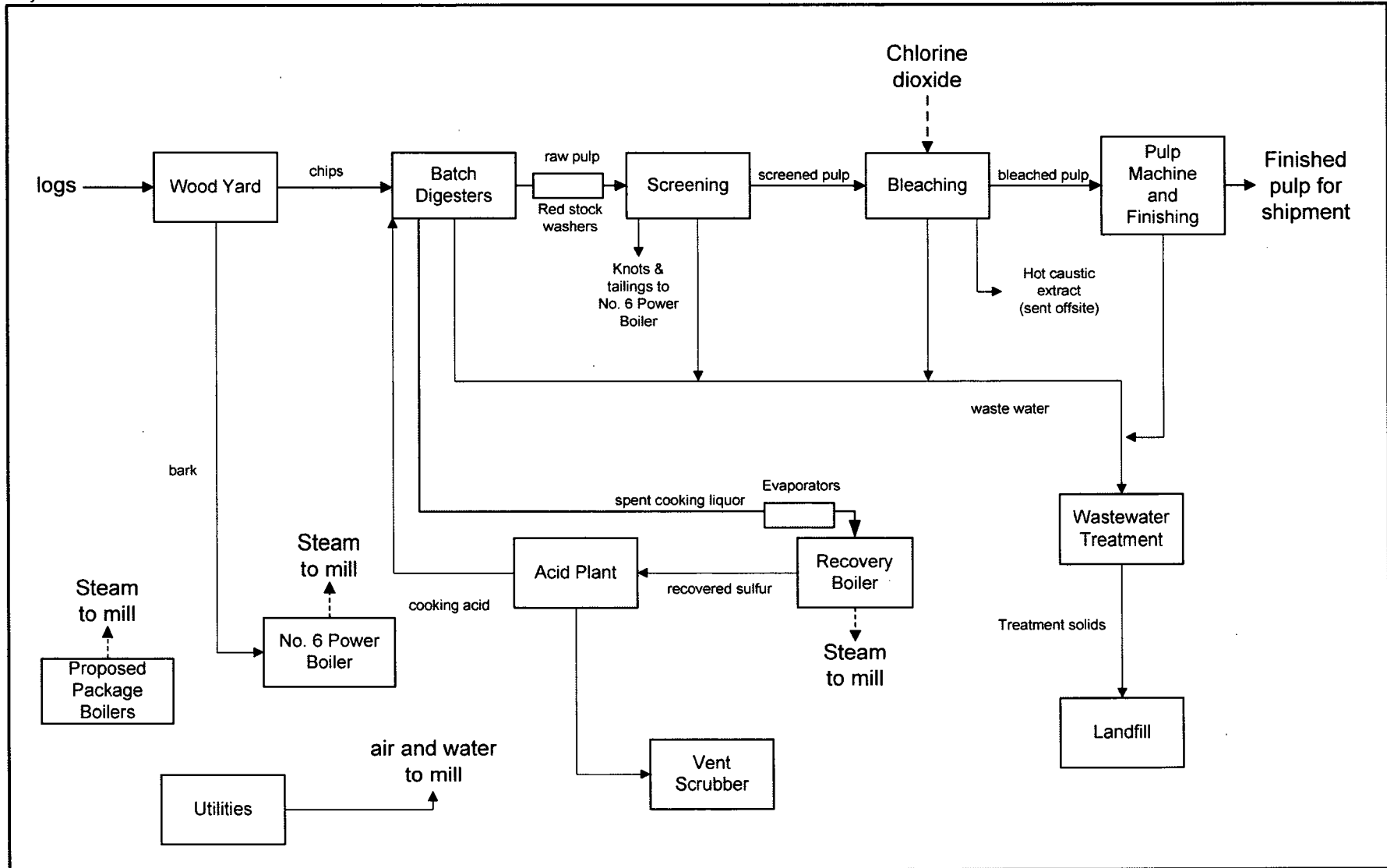
Drawing file: 09387544A001.dwg Jul 01, 2009 - 12:27pm



 Golder Associates GAINESVILLE, FLORIDA	SCALE	AS SHOWN	TITLE	<h2 style="text-align: center;">FACILITY PLOT PLAN</h2>	
	DATE	06/18/09			
FILE No.	09387544A001	CHECK	NG	RAYONIER FACILITY - FERNANDINA BEACH, FLORIDA	
PROJECT No.	001-1001	REVIEW	DB		
				FIGURE	RPF-FI-C1

ATTACHMENT RPF-FI-C2

PROCESS FLOW DIAGRAM



Attachment RPF-FI-C2
 Process Flow Diagram – Facility
 Rayonier Performance Fibers LLC
 Fernandina Beach Mill

Process Flow Legend	
Solid/Liquid	—————>
Gas	- - - - ->
Steam>

09387544\FI & EU1 flow diagrams.vsd
 Tab: FI-C2



ATTACHMENT RPF-FI-C3

**PRECAUTIONS TO PREVENT EMISSIONS OF
UNCONFINED PARTICULATE MATTER**

ATTACHMENT RPF - FI - C3

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

Reasonable precautions to include the following:

Emissions Point Vent Number	Emissions Point Name	Description and Control Measures
WY001	Chip pit blower	Fresh chips are pneumatically conveyed to a chip pile by a blower. Chipping technology minimizes the production of fines. Also, chips are made from freshly cut pine trees having a moisture content of about 50 percent. This moisture aids in keeping any dust that might be made airborne.
WY004	Chip pile	Chipping technology minimizes the production of fines. Chips are made from freshly cut pine trees having a moisture content of about 50 percent. This moisture aids in keeping any dust that might be made airborne. Also, frequent rains keep the chip pile sufficiently wet to control windborne particulate.
WY006	Bark pile	Bark has at least 50 percent moisture and is created in large pieces. Some of the bark must be hogged before burning. Therefore, little becomes airborne from the pile. Furthermore, frequent rains maintain the pile at sufficient moisture to suppress dusting.
AP003	Molten sulfur handling Area	Fugitive emissions from the molten sulfur handling areas are regulated by Rule 62-296.411, F.A.C. These rules require curbing and drip pans at unloading areas. Cleanup of spills must occur periodically. Logs must be kept on spills. All of these actions are implemented. They provide the means of minimizing the release of unconfined particulate matter from this source.

EMISSIONS UNIT INFORMATION

Section [1]
Package Boilers

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [1]
Package Boilers

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Package Boilers

3. Emissions Unit Identification Number:

4. Emissions Unit Status Code: c	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 2611
--	--------------------------------	--------------------------	--

8. Federal Program Applicability: (Check all that apply)

- Acid Rain Unit
- CAIR Unit
- Hg Budget Unit

9. Package Unit:

Manufacturer: **Not yet selected**

Model Number:

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

Emission units consists of up to four package boilers each fired by No. 2 fuel oil. The boilers will be operated only when the No. 6 Power Boiler (EU 022) or the Recovery Boiler (EU 006) are shut down or are operating at reduced rate.

EMISSIONS UNIT INFORMATION

**Section [1]
Package Boilers**

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION

Section [1]
 Package Boilers

B. EMISSIONS UNIT CAPACITY INFORMATION
 (Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate:	350,000 lb/hr steam
3. Maximum Heat Input Rate:	438 million Btu/hr
4. Maximum Incineration Rate:	pounds/hr tons/day
5. Requested Maximum Operating Schedule:	
	24 hours/day 7 days/week
	52 weeks/year 8,760 hours/year
6. Operating Capacity/Schedule Comment:	
	The package boilers will be operated only when other boilers are operated at a reduced rate or are shut down.
	The maximum heat input rate was calculated using a net enthalpy of 1000 Btu/lb of steam and 80% efficiency.
	350,000 lb/hr steam x 1,000 Btu/lb steam / 0.8 = 437.5 MMBtu/hr.

EMISSIONS UNIT INFORMATION

Section [1]
 Package Boilers

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Package Boilers		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Up to 4 individual package boilers			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 100 feet	7. Exit Diameter: 1.7 feet	
8. Exit Temperature: 350°F	9. Actual Volumetric Flow Rate: 32,000 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Typical operating parameters are for one package boiler of 75,000 lb/hr steam capacity.			

EMISSIONS UNIT INFORMATION

**Section [1]
Package Boilers**

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): External Combustion Boilers; Industrial; Distillate Oil; Grades 1 and 2 Oil		
2. Source Classification Code (SCC): 1-02-005-01		3. SCC Units: Thousand Gallons Burned
4. Maximum Hourly Rate: 3.22	5. Maximum Annual Rate: 28,207	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.0015	8. Maximum % Ash:	9. Million Btu per SCC Unit: 136
10. Segment Comment: Maximum hourly rate based on 438 MMBtu/hr total maximum heat input.		

Segment Description and Rate: Segment ____ of ____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

EMISSIONS UNIT INFORMATIONSection [1]
Package Boilers**E. EMISSIONS UNIT POLLUTANTS****List of Pollutants Emitted by Emissions Unit**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			NS
PM10			NS
SO2			EL
CO			NS
NOx			NS
VOC			NS

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Package Boilers

Page [1] of [6]
Particulate Matter - PM

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.64 lb/hour 2.82 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.2 lb/1000 gal Reference: AP-42, Section 1.3 (9/98)		7. Emissions Method Code: 3	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Attachment RPF-EU1-F1.10.			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Package Boilers

Page [1] of [6]
Particulate Matter - PM

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1]
 Package Boilers

POLLUTANT DETAIL INFORMATION

Page [2] of [6]
 Particulate Matter - PM10

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: PM10		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.32 lb/hour 1.41 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.1 lb/1000 gal Reference: AP-42, Section 1.3 (9/98)		7. Emissions Method Code: 3	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Attachment RPF-EU1-F1.10.			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Package Boilers

Page [2] of [6]
Particulate Matter - PM10

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Package Boilers

Page [3] of [6]
Sulfur Dioxide – SO2

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO2		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.69 lb/hour 3.00 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 142 x S, where S = 0.0015% S fuel oil Reference: AP-42, Section 1.3 (9/98)		7. Emissions Method Code: 3	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Attachment RPF-EU1-F1.10.			
11. Potential, Fugitive, and Actual Emissions Comment: The package boilers will burn No. 2 fuel oil with a maximum sulfur content of 0.0015 percent.			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.0015% S fuel	4. Equivalent Allowable Emissions: 0.69 lb/hour 3.0 tons/year
5. Method of Compliance: Fuel analysis	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Package Boilers

Page [4] of [6]
Nitrogen Oxides – NOx

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOx		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 77.28 lb/hour 338.48 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 24 lb/ 1000 gal Reference: AP-42, Section 1.3 (9/98)		7. Emissions Method Code: 3	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Attachment RPF-EU1-F1.10.			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATIONSection [1]
Package Boilers**POLLUTANT DETAIL INFORMATION**Page [4] of [6]
Nitrogen Oxides – NOx**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS****Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.****Allowable Emissions** Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Package Boilers

Page [5] of [6]
Carbon Monoxide - CO

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
(Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 16.10 lb/hour 70.52 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission-Factor: 5 lb/1000 gal Reference: AP-42, Section 1.3 (9/98)		7. Emissions Method Code: 3	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Attachment RPF-EU1-F1.10.			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATIONSection [1]
Package Boilers**POLLUTANT DETAIL INFORMATION**Page [5] of [6]
Carbon Monoxide - CO**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS****Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.****Allowable Emissions** Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.64 lb/hour 2.82 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.2 lb/ 1000 gal Reference: AP-42, Section 1.3 (9/98)		7. Emissions Method Code: 3	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Attachment RPF-EU1-F1.10.			
11. Potential, Fugitive, and Actual Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1]
Package Boilers

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 4

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Rule 62-296.405(1)(a)	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 4

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Rule 62-296.406(1)	

Section [1]
 Package Boilers

G. VISIBLE EMISSIONS INFORMATION (CONTINUED)

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 3 of 4

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: 40 CFR 60, Subpart Dc	

Visible Emissions Limitation: Visible Emissions Limitation 4 of 4

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: 40 CFR 60, Subpart Db	

EMISSIONS UNIT INFORMATION

Section [1]
Package Boilers

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code: EM	2. Pollutant(s): NOx
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: NOx CEMS may be required, depending on age and size of boiler.	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [1]
Package Boilers

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

<p>1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>RPF-EU1-11</u> <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>RPF-EU1-12</u> <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)</p>
<p>5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>6. Compliance Demonstration Reports/Records:</p> <p><input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____</p> <p><input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____</p> <p><input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____</p> <p><input checked="" type="checkbox"/> Not Applicable</p> <p>Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.</p>
<p>7. Other Information Required by Rule or Statute: <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment A</u> <input type="checkbox"/> Not Applicable</p>

EMISSIONS UNIT INFORMATION

Section [1]
Package Boilers

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment A</u> <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements Comment

ATTACHMENT RPF-EU1-F1.10

EMISSION CALCULATIONS

ATTACHMENT RPF-EU1-F1.10
MAXIMUM EMISSIONS FROM NO. 2 DIESEL FUEL BURNING
IN THE PACKAGE BOILERS
RAYONIER PERFORMANCE FIBERS

Pollutant	Emission Factor ^a (lb/10 ³ gal)	Fuel Usage Rate (10 ³ gal/hr)	Fuel Usage Rate (10 ³ gal/yr)	Maximum Emissions	
				(lb/hr)	(TPY)
PM	0.2	3.22	28,207	0.64	2.82
PM ₁₀	50% of PM	3.22	28,207	0.32	1.41
PM _{2.5}	12% of PM	3.22	28,207	0.08	0.34
SO ₂	0.213 ^b	3.22	28,207	0.69	3.00
CO	5	3.22	28,207	16.10	70.52
NO _x	24	3.22	28,207	77.28	338.48
Hg	0.000408 ^c	3.22	28,207	0.0013	0.0058
Pb	0.0012 ^c	3.22	28,207	0.0039	0.017
VOC	0.2	3.22	28,207	0.64	2.82

^a From AP-42, Section 1.3, Tables

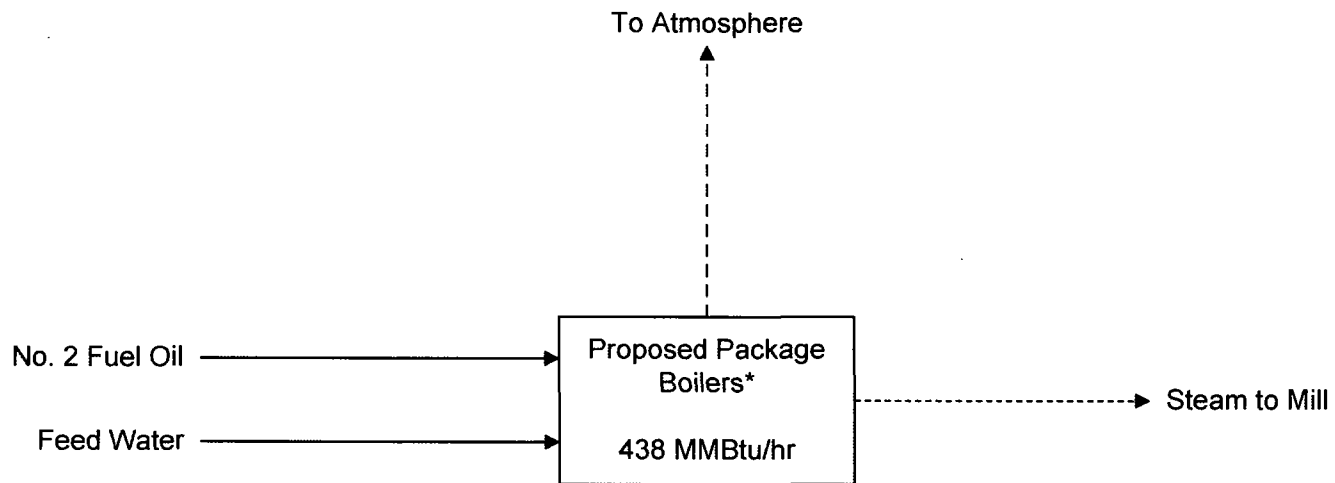
^b $142 \times S$, where $S = 0.0015\%$

^c From AP-42, Table 1.3-10. Hg formula: $3 \text{ lb}/10^{12} \text{ Btu} * 136 \text{ MMBtu}/\text{gal} = 0.000408 \text{ lb}/10^3 \text{ gal}$.

Pb formula: $9 \text{ lb}/10^{12} \text{ Btu} * 136 \text{ MMBtu}/\text{gal} = 0.0012 \text{ lb}/10^3 \text{ gal}$.

ATTACHMENT RPF-EU1-I1

PROCESS FLOW DIAGRAM



*There could be up to four package boilers to provide the total heat input.

Attachment RPF-EU1-I1
Process Flow Diagram – Proposed Package Boilers
Rayonier Performance Fibers LLC
Fernandina Beach Mill

Process Flow Legend	
Solid/Liquid	—————▶
Gas	- - - - -▶
Steam	- - - - -▶

09387544\FI & EU1 flow diagrams.vsd
Tab: EU1-I1



ATTACHMENT RPF-EU1-I2

FUEL ANALYSIS

ATTACHMENT RPF-EU1-I2

FUEL ANALYSIS
PACKAGE BOILERS

Fuel	Density (lb/gal)	Weight Percent			Additives	Heat Capacity
		Sulfur	Nitrogen	Ash		
No. 2 Fuel Oil	7.13	0.0015	0.006	<0.01	None	136,000 Btu/gal

Source: Perry's Chemical Engineer's Handbook, 7th Edition.

ATTACHMENT A

ATTACHMENT A
SUPPLEMENTAL INFORMATION FOR
CONSTRUCTION PERMIT APPLICATION

1.0 PROJECT DESCRIPTION

Rayonier Performance Fibers LLC (Rayonier) operates the Fernandina Beach Mill under Title V operating permit No. 0890004-020-AV, issued by the Florida Department of Environmental Protection (FDEP). Rayonier currently operates a Recovery Boiler (EU 006) and No. 6 Power Boiler (EU 022) at the mill, among other sources. The Recovery Boiler is permitted to burn red liquor solids (RLS), No. 6 fuel oil (or a blend of on-spec used oil and No. 6 fuel oil), and small amounts of ultra low sulfur diesel (ULSD) No. 2 fuel oil blended with RLS. The No. 6 Power Boiler is permitted to burn biomass, tire-derived fuel (TDF), No. 2 fuel oil, No. 6 fuel oil (maximum sulfur content of 2.5 percent by weight), spent sulfite liquor (same as RLS), and small quantities of facility-generated on-spec used oil (to be blended with the No. 6 fuel oil).

Rayonier requests the permitting of an alternative operating scenario to allow the ability to bring rental package boilers on-site whenever needed in the event of an extended shutdown of either the Recovery Boiler or the No. 6 Power Boiler. Such events could occur due to failure of a major component of the boilers, which could require a shutdown of several months or more to repair. In such an event, Rayonier would not have enough steam available to continue to produce finished pulp. Rayonier may desire to bring one or more package boilers on-site in order to continue producing pulp for an indefinite time period. Since the boilers will be rental package units, they may vary in size and capacity each time they are brought on-site.

Therefore, Rayonier is proposing to permit to operate one or more package boilers capable of producing up to a total combined rate of 350,000 pounds of steam per hour (lb/hr) continuously. This is below the steam capacity of the Recovery Boiler, and slightly above the steam capacity of the No. 6 Power Boiler. At this time, Rayonier does not know the number or steam capacity of the package boilers that may be brought on-site. This will only be determined at the time the need is established. Generally, package boilers for Rayonier's purposes range in size from 50,000 to 100,000 lb/hr steam. Therefore, to generate a total of 350,000 lb/hr steam would typically require up to four package boilers.

The proposed boilers will burn 0.0015-percent sulfur (maximum) No. 2 fuel oil. The maximum hourly fuel consumption rate combined for all boilers is 3,220 gallons per hour, with an annual usage rate of 28,212 gallons per year.

The package boilers will be backup units that will only operate when either the No. 6 Power Boiler (EU 022) or the Recovery Boiler (EU 006) are shut down for repair or are being operated at reduced rates. Therefore, the package boilers will only replace steam, on a pound-for-pound basis, that is lost from the shutdown or reduced operation of the No. 6 Power Boiler or the Recovery Boiler.

2.0 AIR EMISSIONS

The maximum potential emissions of the package boilers are presented in Attachment RPF-EU1-F1.10 of the application form. These emission calculations are based on the U.S. Environmental Protection Agency's (EPA's) AP-42 factors for No. 2 fuel oil and the hourly and annual usage. The annual emissions reflect 8,760 hours per year of operation, which is a worst-case scenario. Generally, it is not expected that a boiler outage will last that long; however, a catastrophic failure of a major component of one of the existing boilers could result in such a situation.

The proposed package boilers will only operate when either the No. 6 Power Boiler or the Recovery Boiler is not in operation or is being operated at a reduced rate. Therefore, the actual emissions from the package boilers will be offset by the reduction in emissions from these boilers.

The burning of ULSD fuel in the package boilers will result in lower emissions based on a comparison of emission factors for the fuels the existing boilers are permitted to burn. Since the package boilers will replace steam generated by the No. 6 Power Boiler and the Recovery Boiler on a pound-for-pound basis, the comparisons of the emissions from each boiler and for each fuel, on a lb/10³ lb of steam basis, are shown in Tables A-1 and A-2. As shown, combustion of ULSD fuel in the package boilers will result in lower emissions than combustion of other fuels in the Recovery Boiler and No. 6 Power Boiler.

The comparison tables are based on Tables B-1 through B-8 in Attachment B. The emission factors and the activity factors used to calculate the emissions in lb/hr for each pollutant emitted from burning ULSD fuel in the package boilers are shown in Table B-1. Emission factors were based on EPA AP-42 for No. 2 fuel oil firing and using a maximum sulfur content of 0.0015 percent.

Emissions were then converted to pounds of pollutant per pound of steam by dividing the hourly emissions by the hourly steam rate.

The emission factors and the activity factors used to calculate the emissions in lb/hr for each pollutant emitted when burning RLS in the Recovery Boiler are shown in Table B-2. The emission factors are based on NCASI Technical Bulletin No. 884 for sulfite recovery furnaces, or, in the case of particulate matter (PM) emissions, based on the permit limit. The resulting emissions were then divided by the maximum steam rate for the recovery boiler, 392,000 lb/hr, when firing maximum RLS.

EPA AP-42 emission factors were used to calculate the emission factors for No. 6 fuel oil and No. 2 fuel oil firing in the Recovery Boiler, as shown in Tables B-3 and B-4, respectively. The maximum fuel oil firing capacity of the Recovery Boiler was used, as well as the corresponding steam rate, to calculate emission factors in terms of lb/10³ lb of steam.

The resulting Recovery Boiler emission factors are summarized in Table A-1.

The same approach was used to determine the emission factors for fuels combusted in the No. 6 Power Boiler. The results are provided in Tables B-5 through B-8, and summarized in Table A-2.

3.0 RULE APPLICABILITY

3.1 New Source Performance Standards

3.1.1 Subpart Db

New Source Performance Standards (NSPS) Subpart Db is applicable to each steam-generating unit for which construction, modification, or reconstruction is commenced after June 9, 1984, and that has a maximum design heat input rate of greater than 100 million British thermal units per hour (MMBtu/hr). The package boilers that will be brought on-site may meet this applicability criterion, i.e., built, modified or reconstructed after June 9, 1984. Additionally, package boilers having a steam capacity of approximately 75,000 lb/hr or more will usually have maximum design heat input rates greater than 100 MMBtu/hr. Therefore, the package boilers could be subject to Subpart Db.

Under Subpart Db, sulfur dioxide (SO₂), PM, and nitrogen oxides (NO_x) emissions are regulated. Opacity is also regulated under Subpart Db. For boilers burning very low sulfur fuel oil with a maximum sulfur content of 0.5 percent or less, no other requirements for SO₂ control apply. The package boilers will meet this NSPS standard by burning No. 2 fuel oil with a maximum sulfur content of 0.0015 percent. The package boilers are not subject to any PM emission standard under Subpart Db, also due to combusting ULSD fuel.

NO_x standards under Subpart Db are potentially applicable to the package boilers. If the annual capacity factor on fuel oil exceeds 10 percent, a NO_x standard of 0.10 lb/MMBtu or 0.2 lb/MMBtu would apply, depending on whether the boiler has a high heat release rate or a low heat release rate [Title 40, Part 60.443b of the Code of Federal Regulations (40 CFR 60.443b)]. If a NO_x limit applies, a continuous emissions monitoring system (CEMS) for NO_x is required, unless steam generator parameters are monitored, or an alternate monitoring plan is approved.

The package boilers will be subject to a 20-percent limit on opacity based on a 6-minute average, except for one 6-minute period per hour of not more than 27-percent opacity [40 CFR 60.43b(f)]. In addition, Section 60.48b(a) requires that a continuous monitoring system be installed for measuring the opacity of emissions from an affected facility. However, 40 CFR 60.13(i)(2) allows facility owners or operators to propose alternative opacity monitoring methods for facilities that are operated infrequently. Presented below is an alternative opacity monitoring plan proposed by Rayonier. Rayonier requests that FDEP approve the alternative opacity monitoring plan for the package boilers as described below.

ALTERNATIVE OPACITY MONITORING PLAN

1. Rayonier will perform an EPA Method 9 visible emissions test during each calendar year, if the boiler is operated more than 6 months duration during the year.
2. Rayonier will have a Method 9-trained and -certified visible emission observer perform a 6-minute opacity test once per daylight shift on each package boiler whenever the package boiler is operated on the daylight shift.
3. If the opacity readings exceed 10 percent for a 6-minute test, the observer will continue the readings for another 12 minutes to obtain two additional data sets for a total of three 6-minute data sets.
4. The observer will log in the reading results along with the date and time, and maintain the records onsite for inspection by FDEP. Fuel usage and fuel analysis data will be maintained onsite to verify that the 10-percent capacity limit is not exceeded.

Rayonier will follow the boiler manufacturer's maintenance schedule and procedures to ensure that serviceable components are well maintained.

3.1.2 Subpart Dc

NSPS Subpart Dc is applicable to each steam-generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989, and that has a maximum design heat input rate of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr. The package boilers that will be brought on-site may meet this applicability criterion, i.e., built, modified or reconstructed after June 9, 1989. Therefore, the package boilers could be subject to Subpart Dc.

Under Subpart Dc, SO₂, PM, and NO_x emissions are not regulated further provided that the fuel sulfur content does not exceed 0.5 percent. The package boilers will meet this NSPS standard by burning No. 2 fuel oil with a maximum sulfur content of 0.0015 percent.

Opacity is also regulated under Subpart Dc. The package boilers will be subject to a 20-percent limit on opacity based on a 6-minute average, except for one 6-minute period per hour of not more than 27-percent opacity [40 CFR 60.43c(c)]. No continuous monitoring system for measuring the opacity of emissions is required.

3.2 Prevention of Significant Deterioration Requirements

Federal prevention of significant deterioration (PSD) requirements are contained in 40 CFR 52.21. The State of Florida has adopted PSD regulations [Rule 62-212.400; Florida Administrative Code (F.A.C.)] that are essentially identical to the federal regulations. PSD regulations require that all new major stationary facilities or major modifications to existing major facilities that emit air pollutants regulated under the Clean Air Act (CAA) be reviewed and a construction permit issued. Florida's State Implementation Plan (SIP), which contains PSD regulations, has been approved by the EPA and PSD approval authority in Florida has been granted to FDEP.

A "major facility" is defined under Florida PSD regulations as any one of 28 named source categories that has the potential to emit 100 tons per year (TPY) or more of any pollutant regulated under the CAA, or any other stationary facility that has the potential to emit 250 TPY or more of any pollutant regulated under the CAA. An "emission unit" is defined as any part or activity of a facility that has the potential to emit any air pollutant. "Potential to emit" means the capability, at maximum design

capacity, to emit a pollutant, considering the application of control equipment and any other federally enforceable limitations on the emission units' capacity. A "major modification" is defined under PSD regulations as a change at an existing major stationary facility that increases emissions by greater than significant amounts.

The package boilers will operate only to replace steam lost due to the Recovery Boiler or No. 6 Power Boiler being shut down or operated at a reduced rate. As demonstrated in Section 2.0, air emissions will actually decrease whenever the package boilers are operated due to the burning of only ULSD fuel oil in the package boilers. Therefore, PSD review will not apply to the package boilers.

3.3 Small Boiler BACT Analysis

Per Rule 62-296.406, F.A.C., the package boilers will be subject to a best available control technology (BACT) analysis for PM and SO₂. Rayonier is proposing a maximum sulfur content of 0.0015 percent in the No. 2 fuel oil burned by the package boilers as BACT. Potential emissions for the package boilers will result in maximum emissions of 3.0 TPY of SO₂ and 2.82 TPY of PM. As mentioned previously, the actual emissions will be more than offset by the shutdown or reduced operation of an existing power or recovery boiler. The low potential emissions of the package boilers do not warrant any add-on controls for PM and SO₂. In addition, the cost effectiveness of any add-on control would be high and economically infeasible.

TABLE A-1
COMPARISON OF PACKAGE BOILER AND RECOVERY BOILER EMISSION FACTORS
RAYONIER PERFORMANCE FIBERS LLC - FERNANDINA BEACH

Pollutant	Package Boiler	Recovery Boiler		
	No. 2 Fuel Oil (lb /10 ³ lb Steam)	RLS (lb /10 ³ lb Steam)	No. 6 Fuel Oil (lb /10 ³ lb Steam)	No. 2 Fuel Oil (lb /10 ³ lb Steam)
Sulfur Dioxide	0.0020	0.42	2.00	0.0026
Nitrogen Oxides	0.22	0.47	0.52	0.29
Carbon Monoxide	0.046	0.062	0.056	0.061
Particulate Matter	0.0018	0.11	0.018	0.0024
Volatile Organic Compounds	0.0018	0.023	0.0084	0.0024

RLS = Red Liquor Solids

TABLE A-2
COMPARISON OF PACKAGE BOILER AND NO. 6 POWER BOILER EMISSION FACTORS
RAYONIER PERFORMANCE FIBERS LLC - FERNANDINA BEACH

Pollutant	Package Boiler	Power Boiler			
	No. 2 Fuel Oil (lb /10 ³ lb Steam)	Biomass (lb /10 ³ lb Steam)	TDF (lb /10 ³ lb Steam)	RLS (lb /10 ³ lb Steam)	No. 6 Fuel Oil (lb /10 ³ lb Steam)
Sulfur Dioxide	0.0020	0.040	0.169	0.40	0.17
Nitrogen Oxides	0.22	0.31	0.307	0.45	0.31
Carbon Monoxide	0.046	0.48	0.477	0.059	0.053
Particulate Matter	0.0018	0.086	0.111	0.11	0.017
Volatile Organic Compounds	0.0018	0.0032	0.003	0.021	0.0081

TDF = Tire-Derived Fuel

RLS = Red Liquor Solids

ATTACHMENT B

TABLE B-1
EMISSION FACTORS FOR NO. 2 FUEL OIL BURNED IN THE PACKAGE BOILERS
RAYONIER PERFORMANCE FIBERS LLC - FERNANDINA BEACH

Pollutant	No. 2 Fuel Oil				
	Emission Factor (lb/10 ³ gal)	Ref.	Activity Factor (10 ³ gal/hr)	Emissions lb/hr	Emission Factor lb /10 ³ lb Steam
Sulfur Dioxide	0.213	1	3.22	0.69	0.0020
Nitrogen Oxides	24	1	3.22	77.28	0.22
Carbon Monoxide	5	1	3.22	16.10	0.046
Particulate Matter	0.2	1	3.22	0.64	0.0018
Volatile Organic Compounds	0.2	2	3.22	0.64	0.0018

NOTE: The total steam rate for the package boilers is 350,000 lb/hr.

References:

1. Based on AP-42, Table 1.3-4 for PM emissions with scrubber control. PM formula: $0.50 \cdot (1.12[S] + 0.37)$, where $S = 2$
2. Based on AP-42, Table 1.3-3.

TABLE B-2
EMISSION FACTORS FOR RLS BURNED IN THE RECOVERY BOILER
RAYONIER PERFORMANCE FIBERS LLC - FERNANDINA BEACH

Pollutant	Red Liquor Solids				
	Emission Factor (lb/ton RLS)	Ref.	Activity Factor (ton/hr RLS)	Emissions (lb/hr)	Emission Factor (lb/10 ³ lb Steam)
Sulfur Dioxide	4.7	1	35	164.50	0.420
Nitrogen Oxides	5.26	1	35	184.10	0.470
Carbon Monoxide	0.69	1	35	24.15	0.062
Particulate Matter	1.23	2	35	42.95	0.110
Volatile Organic Compounds	0.25	1	35	8.88	0.023

NOTE: The maximum steam rate for the Recovery Boiler is 392,000 lb/hr.

RLS= Red Liquor Solids

References:

1. Based on NCASI Technical Bulletin No. 884, Table 5.3, for sulfite recovery furnaces, median values.
2. Based on permit limit of 0.040 gr/dscf @ 8% O₂, and maximum permitted RLS burning rate of 70,000 lb/hr.

PM formula: 125,280 dscfm (avg) * 0.04 gr/dscf * 60 mins/hr * 1 lb/7000 gr = 43.0 lb/hr.

TABLE B-3
EMISSION FACTORS FOR NO. 6 FUEL OIL BURNED IN THE RECOVERY BOILER
RAYONIER PERFORMANCE FIBERS LLC - FERNANDINA BEACH

Pollutant	No. 6 Fuel Oil				
	Emission Factor (lb/10 ³ gal)	Ref.	Activity Factor (10 ³ gal/hr)	Emissions (lb/hr)	Emission Factor (lb/10 ³ lb Steam)
Sulfur Dioxide	-	1	-	321.90	2.00
Nitrogen Oxides	47	2	1.79	84.13	0.52
Carbon Monoxide	5	2	1.79	8.95	0.056
Particulate Matter	1.59	3	1.79	2.84	0.018
Volatile Organic Compounds	0.76	4	1.79	1.36	0.0084

NOTE: The steam rate for No. 6 Fuel Oil in the Recovery Boiler is 161,158 lb/hr based on a heat input of 268.5 MMBtu/

References:

1. Based on emission limit in title V air operation permit No. 0890004-020-AV, condition E.5.
2. Based on AP-42, Table 1.3-1.
3. Based on AP-42, Table 1.3-4 for PM emissions with scrubber control. PM formula: $0.50 * (1.12[S] + 0.37)$, where $S = 2$.
4. Based on AP-42, Table 1.3-3.

TABLE B-4
EMISSION FACTORS FOR NO. 2 FUEL OIL BURNED IN THE RECOVERY BOILER
RAYONIER PERFORMANCE FIBERS LLC - FERNANDINA BEACH

Pollutant	No. 2 Fuel Oil				
	Emission Factor (lb/10 ³ gal)	Ref.	Activity Factor (10 ³ gal/hr)	Emissions (lb/hr)	Emission Factor (lb/10 ³ lb Steam)
Sulfur Dioxide	0.213	1	0.03	0.0064	0.0026
Nitrogen Oxides	24	1	0.03	0.72	0.29
Carbon Monoxide	5	1	0.03	0.15	0.061
Particulate Matter	0.2	1	0.03	0.0060	0.0024
Volatile Organic Compounds	0.2	2	0.03	0.0060	0.0024

NOTE: The steam rate for No. 2 Fuel Oil in the Recovery Boiler is 2,449 lb/hr based on a heat input of 4.08 MMBtu/hr.

References:

1. Based on AP-42, Table 1.3-1. SO₂ factor for No. 2 Fuel Oil is 142(S) where S is the sulfur content. S = 0.0015 for No. 2 Fuel Oil. PM control efficiency in scrubber assumed 90%. No SO₂ removal in the scrubber is assumed.
2. Based on AP-42, Table 1.3-3.

**TABLE B-5
EMISSION FACTORS FOR BIOMASS BURNED IN THE NO. 6 POWER BOILER
RAYONIER PERFORMANCE FIBERS LLC - FERNANDINA BEACH**

Pollutant	Biomass				
	Emission Factor (lb/MMBtu)	Ref.	Heat Input Rate (MMBtu/hr)	Emission (lb/hr)	Emission Factor (lb/10 ³ lb Steam)
Sulfur Dioxide	0.025	1	525	13.13	0.040
Nitrogen Oxides	0.193	2	525	101.33	0.31
Carbon Monoxide	0.3	2	525	157.5	0.48
Particulate Matter	0.054	3	525	28.35	0.086
Volatile Organic Compounds	0.002	2	525	1.05	0.0032

NOTE: The steam rate for biomass in the Power Boiler is 330,000 lb/hr at heat input of 525 MMBtu/hr.

References:

1. Based on AP-42, Table 1.6-2. Boiler fired with biomass controlled by ESP.
2. Based on permit limit. NO_x limit based on 12-month rolling average. CO limit based on 30-day rolling average.
3. Based on AP-42, Table 1.6-1.

TABLE B-6
EMISSION FACTORS FOR TIRE-DERIVED FUEL BURNED IN THE NO. 6 POWER BOILER
RAYONIER PERFORMANCE FIBERS LLC - FERNANDINA BEACH

Pollutant	Tire-Derived Fuel				
	Emission Factor (lb/MMBtu)	Ref.	Heat Input Rate (MMBtu/hr)	Emission Rate (lb/hr)	Emission Factor (lb/10 ³ lb Steam)
Sulfur Dioxide	0.1065	1.	93	9.90	0.17
Nitrogen Oxides	0.193	1	93	17.95	0.31
Carbon Monoxide	0.300	1	93	27.90	0.48
Particulate Matter	0.070	1	93	6.51	0.11
Volatile Organic Compounds	0.002	1	93	0.19	0.0032

NOTE: The steam rate for the TDF in the No. 6 Power Boiler is 58,457 lb/hr based on a heat input of 93 MMBtu/hr.
TDF= Tire-Derived Fuel.

References:

1. Based on permit limit. SO₂ and NO_x are 12-month rolling averages; CO is 30-day rolling average.

TABLE B-7
EMISSION FACTORS FOR RLS BURNED IN THE NO. 6 POWER BOILER
RAYONIER PERFORMANCE FIBERS LLC - FERNANDINA BEACH

Pollutant	RLS					
	Emission Factor	Ref.	Activity Factor	Emission Rate (lb/hr)	Emission Factor (lb/10 ³ lb Steam)	
Sulfur Dioxide	4.7 b/ton RLS	1	6.3 ton/hr RLS	29.61	0.40	
Nitrogen Oxides	5.26 b/ton RLS	1	6.3 ton/hr RLS	33.14	0.45	
Carbon Monoxide	0.69 b/ton RLS	1	6.3 ton/hr RLS	4.35	0.059	
Particulate Matter	0.07 b/MMBtu	2	118 MMBtu/hr	8.23	0.11	
Volatile Organic Compounds	0.25 b/ton RLS	1	6.3 ton/hr RLS	1.58	0.021	

NOTE: The steam rate for RLS in the Power Boiler is 73,894 lb/hr at a heat input of 117.6 MMBtu/hr.

RLS = Red Liquor Solids

References:

1. Based on NCA SI Technical Bulletin No. 884, Table 5.3, for sulfite recovery furnaces, median values.
2. Permit limit

TABLE B-8
EMISSION FACTORS FOR NO. 6 FUEL OIL BURNED IN THE NO. 6 POWER BOILER
RAYONIER PERFORMANCE FIBERS LLC - FERNANDINA BEACH

Pollutant	No. 6 Fuel Oil				
	Emission Factor	Ref.	Activity Factor	Emission Rate (lb/hr)	Emission Factor (lb /10 ³ lb Steam)
Sulfur Dioxide	0.107 lb/MMBtu	1	210 MMBtu/hr	22.37	0.17
Nitrogen Oxides	0.193 lb/MMBtu	1	210 MMBtu/hr	40.53	0.31
Carbon Monoxide	5 lb/10 ³ gal	2	1.4 10 ³ gal/hr	7.00	0.053
Particulate Matter	1.59 lb/10 ³ gal	3	1.4 10 ³ gal/hr	2.22	0.017
Volatile Organic Compounds	0.76 lb/10 ³ gal	4	1.4 10 ³ gal/hr	1.06	0.0081

NOTE: The steam rate for No. 6 Fuel Oil in the Power Boiler is 132,000 lb/hr at a heat input rate of 210 MMBtu/hr.

References:

1. Based on permit limit.
2. Based on AP-42, Table 1.3-1.
3. Based on AP-42, Table 1.3-4 for PM emissions with scrubber control. PM formula: $0.50 \cdot (1.12[S] + 0.37)$, where $S = 2.5$.
4. Based on AP-42, Table 1.3-3.