



Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

November 6, 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Jack M. Kriesel
General Manager
Rayonier, Inc.
Post Office Box 2002
Fernandina Beach, Florida 32035-1309

Re: DEP File No. 0890004-006-AC (PSD-FL-256)
Fernandina Mill, Temporary Replacement Boiler


Dear Mr. Kriesel:

Enclosed is one copy of the Draft Air Construction Permit for the Fernandina Mill located at Foot of Gum Street, Fernandina Beach, Nassau County. The Technical Evaluation and Preliminary Determination, Best Available Control Technology, the Department's Intent to Issue Air Construction Permit and the "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT" are also included.

The "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT" must be published in the legal section of a newspaper of general circulation in Nassau County. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to the Mr. Syed Arif, P.E. of the New Source Review Section at the above letterhead address. If you have any other questions, please contact Mr. Arif at 850/921-9528.

Sincerely,


C. H. Farcy, P.E., Chief,
Bureau of Air Regulation

CHF/sa

Enclosures

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Printed on recycled paper.

In the Matter of an
Application for Permit by:

Rayonier, Inc.
P.O. Box 2002
Fernandina Beach, Florida 32035-1309

DEP File No. 0890004-006-AC
Draft Permit No. PSD-FL-256
Fernandina Mill
Nassau County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (copy of DRAFT Permit attached) for the proposed project, detailed in the application specified above and the attached Technical Evaluation and Preliminary Determination, for the reasons stated below.

The applicant, Rayonier, Inc. submitted a complete application on October 26, 1998 to the Department for an air construction permit to install a temporary fuel oil fired boiler. The temporary boiler will be used to supply steam to replace the existing No. 1 and No. 2 power boilers when they undergo foundation repairs at Fernandina Mill located at Foot of Gum Street, Fernandina Beach, Nassau County.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that a review for the Prevention of Significant Deterioration (PSD), a determination of Best Available Control Technology (BACT) and an air construction permit are required.

The Department intends to issue this air construction permit based on the belief that reasonable assurance have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed "Public Notice of Intent to Issue Air Construction Permit." The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/922-6979). The Department suggests that you publish the notice within thirty days of receipt of this letter. You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit or other authorization. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of "Public Notice of Intent to Issue Air Construction Permit." Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road,

Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

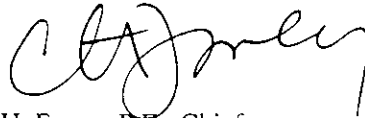
In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.



C. H. Fancy, P.E., Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE AIR CONSTRUCTION PERMIT (including the PUBLIC NOTICE, Technical Evaluation and Preliminary Determination, Draft BACT Determination, and the DRAFT permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 11-9-98 to the person(s) listed:

Mr. Jack M. Kriesel, Rayonier *
Mr. Doug Neeley, EPA
Mr. John Bunyak, NPS
Mr. Chris Kirts, DEP

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

 11-9-98
(Clerk) (Date)

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
 Mr. Jack Kriesel, GM
 Rayonier, Inc
 PO Box 2002
 Fernandina Bch, FL
 32035-1303

4a. Article Number
 Z 333 612 495

4b. Service Type
 Registered Certified
 Express Mail Insured
 Return Receipt for Merchandise COD

7. Date of Delivery
 11-12-98

5. Received By: (Print Name)

[Signature]

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

[Signature]

Thank you for using Return Receipt Service.

U.S. POSTAL SERVICE

RECEIPT

Z 333 612 495

US Postal Service
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sent to	Jack Kriesel
Street Number	Rayonier, Inc
Post Office, State, & ZIP Code	Fernandina Bch, FL
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, April 1995

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP File No. 0890004-006-AC (PSD-FL-256)
Fernandina Mill
Rayonier, Incorporated
Nassau County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Rayonier, Inc. to install a temporary boiler at its sulfite pulp mill. The plant is located at Foot of Gum Street, Fernandina Beach, Nassau County. A Best Available Control Technology (BACT) determination was required for nitrogen oxides, pursuant to Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD). The applicant's name and address are: Rayonier, Inc., Post Office Box 2002, Fernandina Beach, Florida 32035.

The temporary boiler has a heat input rate of 212 Million British Thermal Units per hour and will be in operation for a period of only one year. The temporary boiler will be used in lieu of Power Boilers 1 and 2 while they undergo foundation repairs. The existing control equipments of venturi scrubbers will be used to control particulate matter and sulfur dioxide emissions from the temporary boiler. Nitrogen oxides (NO_x) emission will be minimized from the temporary boiler by utilizing low NO_x burners and flue gas recirculation. An air quality impact analysis was not required because of the temporary nature of the project.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of "Public Notice of Intent to Issue Air Construction Permit." Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by

any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0114
Fax: 850/922-6979

Department of Environmental Protection
Northeast District
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7590
Telephone: 904/448-4300
Fax: 904/448-4363

The complete project file includes the application, technical evaluations, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

**Technical Evaluation
and
Preliminary Determination**

**Sulfite Pulp Mill
Rayonier, Inc.
Nassau County, Florida**

**Temporary Replacement Boiler
(212 Million Btu per hour)**

Construction Permit No. 089004-006-AC
PSD-FL-256

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

November 6, 1998

1. APPLICATION INFORMATION

1.1 Applicant Name and Address

Rayonier, Inc.
P.O. Box 2002
Fernandina Beach, Florida 32035-1309

Authorized Representative: Mr. Jack M. Kriesel, General Manager

1.2 Reviewing and Process Schedule

08-07-98: Date of Receipt of Application
09-01-98: DEP Completeness Request
09-03-98: DEP Additional Completeness Request
10-06-98: Rayonier's response to DEP's Completeness Requests of 09-01-98 and 09-03-98
10-19-98: DEP Completeness Request
10-26-98: Rayonier's response to DEP's Completeness Request of 10-19-98. Application complete
11-09-98: Issue Intent

2 FACILITY INFORMATION

2.1 Facility Location

This facility is located at Foot of Gum Street, Fernandina Beach, Nassau County, Florida. The UTM coordinates are Zone 17, 454.7 km east and 3392.2 km north.

2.2 Standard Industrial Classification Code (SIC)

Major Group No. 26 - Paper & Allied Products

Industry Group No. 2611 - Pulp Mills

2.3 Facility Category

This facility extracts cellulose from fibrous sources using a variation of the sulfite pulping process. It produces what is referred to as dissolving pulps. The production of acid sulfite pulp proceeds similarly to kraft pulping, except that different chemicals are used in the cooking liquor. In place of the caustic solution used to dissolve the lignin in the wood, sulfurous acid is employed. To buffer the cooking solution, ammonia as a base chemical is used.

The facility is classified as a major or Title V source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), or volatile organic compounds (VOC) exceed 100 Tons Per Year (TPY). Because emissions are greater than 250 TPY for at least one criteria pollutant, the facility is also a major facility with respect to 62-212.400, Prevention of Significant Deterioration (PSD). Per Table 62-212.400-2, modifications at the facility resulting in emissions increases greater than 40 TPY of NO_x require review per the PSD rules and a determination of Best Available Control Technology (BACT) per Rule 62-212, F.A.C. Since the temporary emissions increase for this project would not exceed two years, 62-212.400(3)(c) exempts Source Impact Analysis for this modification.

3. PROJECT DESCRIPTION

Rayonier is proposing to install a leased No. 6 fuel oil-fired boiler that will temporarily be used to supply steam to replace either No. 1 or No. 2 Power Boilers while that boiler undergoes foundation repair. No. 1 Power Boiler will be down for four months and No. 2 Power Boiler will be down for eight months, for an estimated total of one year to repair both boilers. The temporary boiler will be located west of and near the existing Nos. 1, 2 and 3 Power Boilers on the old foundation of the previously abandoned No. 4 Power Boiler. This will locate it near the existing scrubbers and stacks so that it can be tied into the ductwork leading to the "A" scrubber currently serving Nos. 1 and 2 Power Boilers. The temporary boiler will exhaust out the same stack associated with that scrubber.

Power Boiler No. 1 burns No. 6 fuel oil with a 2.5% sulfur content and has a heat input capacity of 185 MMBtu/hr. Power Boiler No. 2 primarily fires wood waste and also No. 6 fuel oil with 2.5% sulfur content when required. The heat input capacity for boiler No. 2 varies depending on the fuel fired and can vary from 185 MMBtu/hr on No. 6 oil to 218 MMBtu/hr on wood fuels. The proposed temporary unit will have a heat input capacity of 212 MMBtu/hr and will burn #6 fuel oil with a 2.5% sulfur content by weight. There is a single No. 6 fuel oil storage and supply system at the facility that supplies fuel to Boiler Nos. 1 and 2 and supplies fuel as needed to other combustion units.

4. PROJECT EMISSIONS

The proposed project, a 212 MMBtu/hr temporary boiler, will produce maximum emissions of 280 tons per year (TPY) of nitrogen oxides (NO_x) and 34 TPY of sulfur dioxide (SO₂) based on an annual consumption of 12.4 million gallons of No. 6 fuel oil and 100% capacity factor or 8760 hours of operation for the temporary boiler. The No. 6 fuel oil will be limited to maximum of 2.5% sulfur content, by weight. Future emissions are dependent on the operating scenario being used. Either No. 1 power boiler is being repaired and is replaced by the temporary boiler or No. 2 boiler is being repaired and is replaced by the temporary boiler. The Summary Table of Emissions below indicates the increases and decreases for each scenario and the actual annual increase or decrease expected given the time the temporary boiler substitutes for each boiler undergoing repair.

Pollutant	#1 boiler actual emissions (TPY)	#2 boiler actual emissions (TPY)	Temporary boiler potential emissions (TPY)	Delta emissions with temp. on & #1 off (TPY)	Delta emissions with temp. on & #2 off (TPY)	Delta emissions with repair of 8 mos. to # 2 & 4 mos. to #1 (TPY)
PM/PM ₁₀	111	159	21	-90	-138	-122
SO ₂	467	81	244	-223	162	34
CO	16	376	31	15	-345	-225
NO _x	227	58	395	167	336	280
VOC	1	10	7	6	-3	0

5. RULE APPLICABILITY

The proposed project, installation of a 212 MMBtu/hr temporary boiler in Nassau County, is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.).

This facility is located in an area designated attainment for all criteria pollutants in accordance with F.A.C. Rule 62-275.400.

The proposed project was reviewed under Rule 62-212.400(5), F.A.C., New Source Review (NSR) for Prevention of Significant Deterioration (PSD), because it will be a major stationary source. This review consisted of a determination of Best Available Control Technology (BACT). Since the temporary emissions increase for this project would not exceed two years, 62-212.400(3)(c) exempts Source Impact Analysis for this modification.

The emission units affected by this PSD permit shall comply with all applicable provisions of the Florida Administrative Code and, specifically, the following Chapters and Rules:

Chapter 62-4	Permits.
Rule 62-204.360	Designation of Prevention of Significant Deterioration Areas
Rule 62-204.800	Federal Regulations Adopted By Reference
Rule 62-210.200	Definitions
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.550	Stack Height Policy
Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions
Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-212.400	Prevention of Significant Deterioration
Rule 62-213	Operation Permits for Major Sources of Air Pollution
Rule 62-296.320	General Pollutant Emission Limiting Standards
Rule 62-297.310	General Test Requirements
Rule 62-297.401	Compliance Test Methods

6. CONCLUSION

Based on the foregoing technical evaluation of the application and additional information submitted by Rayonier, the Department has made a preliminary determination that the proposed project will comply with all applicable state air pollution regulations provided the Department's Best Available Control Technology Determination is implemented.

Permit Engineer: Syed Arif, P.E.

PERMITTEE:

Rayonier, Inc.

Post Office Box 2002
Fernandina Beach, Florida 32035-1309

Authorized Representative:

Jack M. Kriesel
General Manager

FID No.	0890004
PSD No.	PSD-FL-256
SIC No.	2611
Project:	Temporary Boiler
Permit No.	0890004-006-AC
Expires:	January 31, 2000

PROJECT AND LOCATION:

Permit for the construction of a 212 MMBtu/hr Combustion Engineering boiler at the Fernandina Mill, Foot of Gum Street, Fernandina Beach, Nassau County. UTM coordinates are Zone 17; 454.7 km E; 3392.2 km N.

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

Attached appendices are made a part of this permit:

Appendix BD BACT Determination
Appendix GC Construction Permit General Conditions

Howard L. Rhodes, Director
Division of Air Resources
Management

AIR CONSTRUCTION PERMIT 0890004-006-AC AND PSD-FL-256

SECTION I. FACILITY INFORMATION

FACILITY DESCRIPTION

The Fernandina Mill presently consists of three power boilers designated as Units 1, 2 and 3, and one recovery boiler designated as Unit 6. This permit is to construct a 212 MMBtu/hr temporary boiler designated as Unit 8 and will be used to replace Units 1 & 2 while they undergo foundation repairs.

REGULATORY CLASSIFICATION

The Fernandina Mill is classified as a Major Source of Air Pollution or Title V Source because it emits or has the potential to emit at least 100 tons per year of a regulated air pollutant. It is also a Major Facility with respect to preconstruction review because it emits or has the potential to emit at least 250 tons per year of a regulated air pollutant.

PERMIT SCHEDULE:

- 08-07-98: Date of Receipt of Application
- 10-26-98: Application deemed complete
- 11-09-98: Intent issued

RELEVANT DOCUMENTS:

The documents listed form the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Application received 08-07-98
- Department's letter dated 09-01-98, 09-03-98, and 10-19-98
- Company letters dated 10-06-98, and 10-26-98
- Technical Evaluation and Preliminary Determination dated 11-09-98
- Best Available Control Technology determination (issued concurrently with permit)

AIR CONSTRUCTION PERMIT 0890004-006-AC AND PSD-FL-256

SECTION II. EMISSION UNIT(S) ADMINISTRATIVE REQUIREMENTS

1. Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications shall be submitted to the Department of Environmental Protection, Northeast District Office located at 7825 Baymeadows Way, Suite 200B, Jacksonville, Florida 32256, and phone number (904) 448-4300. All applications for permits to construct or modify an emission unit(s) *subject to the Prevention of Significant Deterioration (PSD)* should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP) located at 2600 Blairstone Road, Tallahassee, Florida 32399-2400 and phone number (850) 488-0114.
2. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in *Appendix GC* of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
3. Emission Unit(s) Common Specific Conditions: The owner and operator is subject to and shall operate under the attached Emission Unit(s) Common Specific Conditions listed in *Appendix CSC* of this permit. The Emission Unit(s) Common Specific Conditions are binding and enforceable pursuant to Chapters 62-204 through 62-297 of the Florida Administrative Code.
4. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
5. Forms and Application Procedures: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. [Rule 62-210.900, F.A.C.]
6. Expiration: This air construction permit shall expire on **January 31, 2000**. [Rule 62-210.300(1), F.A.C.]. The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. However, the permittee shall promptly notify the permitting authority office of any delays in completion of the project which would affect the startup day by more than 90 days. [Rule 62-4.090, F.A.C.]
7. Applicable Regulations: The facility is subject to the following regulations: Florida Administrative Code Chapters 62-4; 62-103; 62-204; 62-210; 62-212, 62-296, and 62-297. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]

AIR CONSTRUCTION PERMIT 0890004-006-AC AND PSD-FL-256

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

LISTING OF EMISSIONS UNITS

This permit addresses the following emission units.

EMISSION UNIT NO.	EMISSIONS UNITS DESCRIPTION
001	Existing No. 1 Power Boiler, oil fired boiler
002	Existing No. 2 Power Boiler, oil and wood waste fired boiler
008	New 212 MMBtu/hr Temporary Boiler, oil fired boiler

SPECIFIC CONDITIONS (UNIT 008):

The following Specific Conditions apply to the following emission unit:

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
008	212 MMBtu/hr Temporary Boiler, oil fired boiler

EMISSION LIMITATIONS

1. The maximum allowable emission rates for NO_x for Unit No. 008 shall not exceed 0.425 pounds per million Btu (lb/mmBtu) or 90 pounds per hour (lb/hr) and 395 tons per year (TPY) pursuant to the Best Available Control Technology (BACT) Determination. [Rule 62-212.410, F.A.C.]
2. The maximum allowable emission rates for SO₂ for Unit No. 008 shall not exceed 0.26 lb/mmBtu or 55 lb/hr and 244 TPY. [Per application]
3. The maximum allowable emission rates for PM/PM₁₀ for Unit No. 008 shall not exceed 0.03 lb/mmBtu or 5 lb/hr and 21 TPY. [Per application]
4. Visible emissions shall not exceed 20 percent opacity except for either one six-minute period per hour during which opacity shall not exceed 27 percent, or one two-minute period per hour during which opacity shall not exceed 40 percent. [Rule 62-296.406(1), F.A.C.]
5. In order to minimize excess emissions during startup/shutdown/malfunction this emission unit shall adhere to best operational practices. [Rule 62-210.700, F.A.C.]

OPERATIONAL LIMITATIONS

6. The emission unit is allowed to operate continuously (8760 hours/year) [Rule 62-210.200, F.A.C., Definitions: Potential-to-Emit].
7. Only No. 6 fuel oil may be fired in the boiler. The maximum sulfur content of the No. 6 fuel oil shall not exceed 2.5 percent, by weight. [Rule 62-210.200, F.A.C., Definitions: Potential-to-Emit].
8. The maximum heat input rate to Unit No. 008 shall not exceed 212 MMBtu/hr [Rule 62-210.200, F.A.C., Definitions: Potential-to-Emit].

AIR CONSTRUCTION PERMIT 0890004-006-AC AND PSD-FL-256

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

9. The maximum No. 6 fuel oil consumption allowed to be burned in Unit No. 008 is 12,400,000 gallons per year, which is equivalent to 8760 hours per year of operation at full load. [Rule 62-210.200, F.A.C., Definitions: Potential-to-Emit]
10. Unit No. 008 can be operated for one year (12 months) from the start-up date. The facility will notify Bureau of Air Regulation and the Northeast District of the start-up date for the emission unit. Quarterly progress reports shall be submitted to the Northeast District concerning the project. Any deviations from the project schedule as outlined in the PSD application shall be approved by the Bureau of Air Regulation. [Per application]
11. Unit No. 008 can be operated only when either Unit No. 001 or Unit No. 002 is down for foundation repairs. [Per application]

TEST METHODS AND PROCEDURES

12. Compliance with the allowable emission limiting standards for NO_x in Specific Condition 1 shall be determined by using EPA Reference Method 7E (or equivalent) as described in 40 CFR 60, Appendix A (1996, version) adopted by reference in Rule 62-204.800, F.A.C. [Rule 62-297.310, F.A.C.]
13. Compliance with the allowable emission limiting standards for SO₂ in Specific Condition 2 shall be determined by using EPA Reference Method 6C (or equivalent) as described in 40 CFR 60, Appendix A (1996, version) adopted by reference in Rule 62-204.800, F.A.C. [Rule 62-297.310, F.A.C.]
14. Compliance with the allowable emission limiting standards for PM/PM₁₀ in Specific Condition 3 shall be determined by using EPA Reference Method 5 (or equivalent) as described in 40 CFR 60, Appendix A (1996, version) adopted by reference in Rule 62-204.800, F.A.C. [Rule 62-297.310, F.A.C.]
15. The fuel shall be monitored initially and annually for the sulfur content using ASTM D4294 Method (or equivalent). [Rule 62-297.440, F.A.C.]
16. The permittee shall maintain daily records of fuel oil consumption for the emission unit. [Rule 62-210.200, F.A.C.]
17. Compliance with the visible emission standard shall be demonstrated with EPA Reference Method 9 as described in 40 CFR 60, Appendix A (1996, version) adopted by reference in Rule 62-204.800, F.A.C. [Rule 62-297.401, F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

18. All measurements, records, and other data required to be maintained by this facility shall be retained for at least five (5) years following the data on which such measurements, records, or data are recorded. These data shall be made available to the Department upon request. [Rule 62-4.070(3), F.A.C.]
19. Two copies of the results of the emission tests for the pollutant listed in Specific Conditions 1, 2 and 3 for Unit No. 8 shall be submitted within forty-five days of the last sampling run to the Northeast

AIR CONSTRUCTION PERMIT 0890004-006-AC AND PSD-FL-256

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

District office in Jacksonville. All reports shall be in a format consistent with and shall include the information in accordance with Rule 62-297.310 (8), F.A.C. [Rule 62-297.310(8), F.A.C.]

SPECIFIC CONDITIONS (UNIT 001-002)

The following Specific Conditions apply to the following emission units:

EMISSIONS UNIT NO.	EMISSIONS UNITS DESCRIPTION
001	No. 1 Power Boiler, oil fired boiler
002	No. 2 Power Boiler, oil and wood waste fired boiler

- 20. Emission Units No. 001 and 002 shall comply with all the requirements and emission limitations of Title V Air Operation Permit No. 0890004-005-AV. [Air Operation Permit 0890004-005-AV]
- 21. In order to minimize excess emissions during startup/shutdown/malfunction emission units No. 001 and 002 shall adhere to best operational practices. [Rule 62-210.700, F.A.C.]

DRAFT 11/10/03

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Fernandina Mill
Rayonier, Incorporated
PSD-FL-256 and 0890004-006-AC
Fernandina Beach, Nassau County

Rayonier plans to install a leased package #6 fuel oil boiler at its existing Fernandina Mill in Fernandina Beach, Nassau County. The unit is a Combustion Engineering 37-A-15 Type A Boiler. The boiler will temporarily be used to supply steam to replace either No. 1 or No. 2 power boiler while that boiler undergoes foundation repair. The facility currently consists of three (3) power boilers and a recovery boiler used for generating steam. Power Boiler No. 1 burns #6 fuel oil with a 2.5% sulfur content and has a heat input capacity of 185 MMBtu/hr. Power Boiler No. 2 primarily fires wood waste and also #6 fuel oil with 2.5% sulfur content when required. The heat input capacity for boiler No. 2 varies depending on the fuel fired and can vary from 185 MMBtu/hr on #6 oil to 218 MMBtu/hr on wood fuels. The proposed temporary unit will have a heat input capacity of 212 MMBtu/hr and will burn #6 fuel oil with a 2.5% sulfur content by weight. There is a single #6 fuel oil storage and supply system at the facility that supplies fuel to Boiler Nos 1 and 2 and supplies fuel as needed to other combustion units.

Rayonier has indicated that the maximum annual air pollutant emission rates in tons per year for the 212 MMBtu/hr temporary boiler, based on an annual consumption of 12.4 million gallons of No. 6 fuel oil and 100% capacity factor or 8760 hours of operation will be:

Pollutant	#1 boiler actual emissions (TPY)	#2 boiler actual emissions (TPY)	Temporary boiler potential emissions (TPY)	Delta emissions with temp. on & #1 off (TPY)	Delta emissions with temp. on & #2 off (TPY)	Delta emissions with repair of 8 mos. to # 2 & 4 mos. to #1 (TPY)	Subject to PSD Review
PM & PM ₁₀	111	159	21	-90	-138	-122	No
SO ₂	467	81	244	-223	162	34	No
CO	16	376	31	15	-345	-225	No
NO _x	227	58	395	167	336	280	Yes
VOC	1	10	7	6	-3	0	No

BACT DETERMINATION REQUESTED BY THE APPLICANT:

POLLUTANT	EMISSION LIMIT
Nitrogen Oxides	0.425 lb/mmBtu by flue gas recirculation and low NO _x burners

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

The Fernandina Mill is a major source of air pollution or Title V source. Because emissions of a pollutant are greater than 250 tons per year, it is a major facility with respect to the Prevention of Significant Deterioration (Rule 62-212.400). Because the project will result in a significant increase in nitrogen oxides emissions per Table 62-212.400-2, F.A.C., "Regulated Air Pollutants - Significant Emissions Rates," a BACT determination is required pursuant to Rule 62-212.410, F.A.C.

DATE OF RECEIPT OF A BACT APPLICATION:

October 6, 1998

REVIEW GROUP MEMBERS:

Syed Arif, P.E., prepared BACT

BACT DETERMINATION PROCEDURE:

In accordance with Chapter 62-212, F.A.C., this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department of Environmental Protection (Department), on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that, in making the BACT determination, the Department shall give consideration to:

- Any Environmental Protection Agency determination of BACT pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 - Standards of Performance for New Stationary Sources or 40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants.
- All scientific, engineering, and technical material and other information available to the Department.
- The emission limiting standards or BACT determination of any other state.
- The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine, for the emission unit in question, the most stringent control available for a similar or identical emission unit or emission unit category. If it is shown that this level of control is technically or economically unfeasible for the emission unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from this facility can be grouped into categories based upon the control equipment and techniques that are available to control emissions from these emission units. Using this approach, the emissions can be classified as follows:

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

- **Combustion Products** (e.g., SO₂, NO_x, PM). Controlled generally by good combustion of clean fuels, removal in add-on control equipment.
- **Products of Incomplete Combustion** (e.g., CO, VOC). Control is largely achieved by proper combustion techniques.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "non-regulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., PM, SO₂, H₂SO₄, fluorides, etc.), if a reduction in "non-regulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

BACT POLLUTANT ANALYSIS

NITROGEN OXIDES (NO_x)

Oxides of nitrogen (NO_x) are generated during fuel combustion by oxidation of chemically bound nitrogen in the fuel (fuel NO_x) and by thermal fixation of nitrogen in the combustion air (thermal NO_x). As flame temperature increases, the amount of thermally generated NO_x increases. Fuel type affects the quantity and type of NO_x generated. Generally, natural gas is low in nitrogen. However it causes higher flame temperatures and generates more thermal NO_x than oil or coal, which have higher fuel nitrogen content, but exhibit lower flame temperatures.

NO_x emissions represent a significant portion of the total emissions generated by this project, and must be minimized using BACT. A review of EPA BACT/LAER Clearinghouse (BACT Clearinghouse) information indicates that NO_x emissions at most small facilities are minimized by process control and good combustion practices.

The applicant has proposed combustion controls equipped on the temporary boiler which includes flue gas recirculation (FGR) and low NO_x burners. The combination of FGR and low NO_x burners results in less NO_x formation. Low NO_x burners reduce NO_x by conducting the combustion process in stages. Staging partially delays the combustion process, resulting in a cooler flame which suppresses thermal NO_x formation. NO_x reductions of 40 to 85 percent (relative to uncontrolled emission levels) have been observed with low NO_x burners when combined with flue gas recirculation.

In a FGR system, a portion of the flue gas is recycled from the stack to the burner windbox. Upon entering the windbox, the cooler gas is mixed with combustion air prior to being fed to the burner. The FGR system reduces NO_x emissions by two mechanisms. In the first mechanism, the recycled flue gas is made up of combustion products which acts as inserts during combustion of the fuel/air mixture. This additional mass is heated in the combustion zone, thereby lowering the peak flame temperature and reducing the amount of NO_x formed. Second, to a lesser extent, FGR also reduces NO_x formation by lowering the oxygen concentration in the primary flame

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

zone. This combination of NO_x controls and good combustion practices should provide effective emissions control.

BACT DETERMINATION BY DEP:

Based on the information provided by the applicant and the information searches conducted by the Department, lower emissions limits can be obtained employing the top-down BACT approach for NO_x.

NO_x DETERMINATION

The top-down BACT approach for fuel oil boilers listed in order from most stringent control to least:

1. Selective Catalytic Reduction (SCR)
2. Selective Noncatalytic Reduction (SNCR)
3. Good combustion design/practices

The following table summarizes the feasibility of using these control technologies with the Combustion Engineering Boiler as designed for installation in Rayonier's Fernandina Mill.

Control Technology	Emission Reduction (%)	Technically Feasible	Cost per ton	Adverse Environ. Impacts
SCR with ammonia	80-90	Yes	\$6,970	Yes
SNCR	40-70	Yes	\$8,750	No
Low NO _x Burners with Flue Gas Recirculation	20-50	Yes	N/A	No
Fuel Substitution	7-35	Yes	\$21,000	No

The BACT/LAER database does not list any facilities which uses post-combustion add-on controls for temporary boiler installations. Because the boiler is temporary (12 months), the economic impact analysis of add-on type controls were based on a one year equipment life amortization versus a typical 10 year life. The one year time frame results in a very high economic impact.

For NO_x emissions, the Department accepts the applicants proposed use of low NO_x burners with flue gas recirculation as BACT for this project.

The BACT emission level established by the Department is as follows:

POLLUTANT	EMISSION LIMIT
Nitrogen Oxides (NO _x)	0.425 lb/mmBtu; 90 lbs/hr (395 TPY)

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

COMPLIANCE

Compliance with the NO_x limitations shall be in accordance with the EPA Reference Method 7E as contained in 40 CFR 60, Appendix A.

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Syed Arif, P.E.
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

Approved By:

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

Howard L. Rhodes, Director
Division of Air Resources Management

Date:

Date:

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
- (a) Have access to and copy and records that must be kept under the conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

- G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
- (a) A description of and cause of non-compliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

- G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
- (a) Determination of Best Available Control Technology (X)
 - (b) Determination of Prevention of Significant Deterioration (X); and
 - (c) Compliance with New Source Performance Standards ().
- G.14 The permittee shall comply with the following:
- (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements;
 - 2. The person responsible for performing the sampling or measurements;
 - 3. The dates analyses were performed;
 - 4. The person responsible for performing the analyses;
 - 5. The analytical techniques or methods used; and
 - 6. The results of such analyses.
- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Florida Department of
Environmental Protection

Memorandum

TO: Clair Fancy

THRU: Al Linero *Al Linero* 11/5

FROM: Syed Arif *Syed Arif*

DATE: November 5, 1998

SUBJECT: Rayonier, Inc./ Fernandina Mill /
0890004-006-AC (PSD-FL-256)

Attached is the Public Notice package for installing a temporary boiler at the above referenced sulfite pulping facility. This boiler will operate while the foundation for the existing boilers is repaired.

The only pollutant subject to PSD review was nitrogen oxides (NO_x). The Best Available Control Technology (BACT) determination concluded that the low NO_x burners with flue gas recirculation meets BACT requirements for a temporary installation. The BACT emission limit for NO_x was determined to be 0.425 lb/mmBtu. The existing control equipment of venturi scrubbers for particulate matter and sulfur dioxide emissions will be used with the temporary boiler to minimize those emissions. Since the project is of a temporary nature, source impact analysis is not required for this modification.

Regarding the existing boilers, Rayonier has certified that the repairs will not increase the capacity of the units and that they do not involve major repairs or modifications of internal boiler components.

I recommend your approval and signature.

AAL/sa

Attachments

**RAYONIER - FERNANDINA BEACH
Temporary Boiler**

SO₂ Emission Rates in Lb/MMbtu by Type/Sulfur Content of Oil

1000000 Btu/MMBtu

#2 oil		#6 oil	
142S = lb/1000 gal		157S = lb/1000 gal	
Btu/gal #2 oil	140000	150,000	
gal/MMbtu	7.14	6.67	
Sulfur percent	0.5	1.5	
lb SO ₂ /1000 =	71	213	
lb/MMbtu =	0.51	1.42	

Tested SO₂ Emission Rate at Rayonier								
as submitted to FL DEP								
150,000 btu/gal								
2.34% Sulfur								
Scrubber A	gal/hr	MMbtu/hr	SO ₂ lb/hr	SO ₂ emitted	pH	SO ₂ lb/MMBtu	Reduction	
	1260	189.0	241.5	36.70	6.6	0.19	85%	
	<u>1576</u>	<u>236.4</u>	<u>302.1</u>	<u>26.00</u>	6.5	<u>0.11</u>	<u>91%</u>	
	1418	212.7	271.8	31.35		0.15	88%	
	1520	228.0	271.4	11.0	7.4	0.05		
	<u>1115</u>	<u>167.3</u>	<u>213.7</u>	<u>16.2</u>	7.4	<u>0.10</u>		
	1317.5	197.6	242.55	13.6		0.07	94%	
Scrubber B	with wood particulate							
	320	48.0	61.3	4.6	6.6	0.10		
	<u>354</u>	<u>53.1</u>	<u>67.9</u>	<u>3.9</u>	6.5	<u>0.07</u>		
	337	50.6	64.6	4.3		0.08	93%	
	236	35.4	45.2	2.0	7.4	0.06		
	<u>262</u>	<u>39.3</u>	<u>50.2</u>	<u>1.4</u>	7.5	<u>0.04</u>		
	249	37.4	47.7	1.7		0.05	96%	

**RAYONIER - FERNANDINA BEACH
Temporary Boiler**

Particulate Calculations

Fuel Oil Particulate Emissions

	#6 Oil 9.19(S)+3.22 *		#2 Oil @ 0.5%
Btu/gal	150,000	150,000	140000
gal/MMbtu	6.67	6.67	7.14
S content	2.5	1.5	na
lb/1000 gal*	26.2	17.0	2
lb/MMbtu*	0.175	0.113	0.014
87% reduction	0.023		

	Uncontrolled* ton/yr	Reduction in ton/yr	Controlled ton/yr
Existing Fuel	162.5		21.1
#6 Oil @ 1.5%	105.5	57.0	
#2 Fuel Oil	13.3	149.2	

*Based on EPA AP- 42 Emissions Factors

Fuel Substitution

	Emissions without scrubber reductions	
	Added Cost	\$/ton removed
2.5%-1.5%	\$ 1,240,800	\$ 21,762
2.5% - #2 oil	\$ 2,924,743	\$ 19,600

RAYONIER - FERNANDINA BEACH
Temporary Boiler

BACT Analysis for a Fabric Filter

ACFM (from Rayonier test)	120,000
Net Gas to Cloth Ratio	5
Net Cloth Area (ft ²)	24,000
Gross Cloth Area Multiplier	1.25
Gross Cloth Area (ft ²)	30,000

From Table 5.6, select Continuous, Pulse jet, modular ---> Figure #5.5

Base Cost of cloth	47,220.00
Cost per ft ² of cloth	7.323
Cost of cloth for Rayonier boiler	219,690.00
Base Cost of Insulation	3,000.00
Cost per ft ² of cloth	2.079
Cost of Insulation	62,370.00

Total Base Cost in 1986 Dollars:	332,280.00
Difference in years '86 - '98	11
Cost multiplier '86 --> '98 @3%	1.384
Total Cost in 1998 Dollars:	459,953.23
Number of Boilers	1
Total Cost:	459,953.23

Bag Costs:	
Cost per ft ²	6.80
Total Bag Costs:	204,000.00

Cage Costs:	
diameter of bag/cage (ft)	0.50
length of bag (ft)	10.00
Area per bag	15.71
Minimum # of bags needed (+10% spares)	2101
Number of cages purchased	2100.85
Cost per cage of flange top	1.00
Cost per cage of venturi	5.00
Cost per cage	12.50
Total cost of cages	26263.50

Cost of bags & cages, '86 dollars:	230263.50
Difference in years '86 - '98	11
Cost multiplier '86 --> '98 @3%	1.384
Total Cost in 1998 Dollars:	318,738.54
Number of Boilers	1
Total Cost:	318,738.54

Purchased Equipment Cost:	
Grand Total:	778,691.77

**RAYONIER - FERNANDINA BEACH
Temporary Boiler**

BACT Analysis for a Fabric Filter

Estimating Total Capital Investment

Direct Costs

Purchased equipment costs

Fabric Filter + Bags + auxilliary equipment	As estimated, A ₁	\$778,691.77
Instrumentation	(0.10)*A	\$77,869.18
Sales taxes	(0.03)*A	\$23,360.75
Freight	(0.05)*A	\$38,934.59
	<u>B = (1.18)*A</u>	<u>\$918,856.29</u>
.Purchased Equipment Cost, PEC		

Direct installation costs

Foundations & supports	(0.04)*B	\$36,754.25
Handling & erection	(0.50)*B	\$459,428.14
Electrical	(0.08)*B	\$73,508.50
Piping	(0.01)*B	\$9,188.56
Insulation for ductwork	(0.07)*B	\$64,319.94
Painting	(0.02)*B	\$18,377.13
	<u>(0.72)*B</u>	<u>\$661,576.53</u>
Direct Installation Costs		

Total Direct Costs, DC	<u>(1.72)*B + SP + Bldg.</u>	<u>\$1,580,432.82</u>
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Indirect Costs (installation)

Engineering	(0.10)*B	\$91,885.63
Construction and field expenses	(0.20)*B	\$183,771.26
Contractor fees	(0.10)*B	\$91,885.63
Start-up	(0.01)*B	\$9,188.56
Performance test	(0.01)*B	\$9,188.56
Contingencies	(0.03)*B	\$27,565.69
	<u>(0.45)*B</u>	<u>\$413,485.33</u>
Total Indirect Costs, IC		

Total Capital Investment = DC + IC	<u>(2.17)*B + SP + Bldg.</u>	<u>\$1,993,918.15</u>
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**RAYONIER - FERNANDINA BEACH
Temporary Boiler**

BACT Analysis for a Fabric Filter

Estimating Annual Costs

Direct Costs

Operating labor		
Operator	(3 hr/day)*(365 day/yr)*(\$25/hr)	\$27,375.00
Supervisor	15% of Operator	\$4,106.25
Coordinator	1/3 of Operator	\$9,125.00
Operating materials		
Maintenance		
Labor	(3 hr/day)*(365 day/yr)*(\$25/hr)	\$27,375.00
Material	100% of maintenance labor	\$27,375.00
Utilities		
Electricity - fan	fan power requirement(kWh/yr)*\$0.08\$/kWh	\$74,178.84
Waste Disposal	(TPY Particulate controlled)*\$20/ton	\$3,217.50
Total Direct Annual Costs		\$172,752.59

Indirect Costs

Overhead	60%*(labor _{oper.+supv.+coord.+maint.})+(maint mat.)	\$57,213.75
Administrative charges	2% of Total Capital Investment	\$39,878.36
Property taxes	1% of Total Capital Investment	\$19,939.18
Insurance	1% of Total Capital Investment	\$19,939.18
Capital recovery	CRF*(Total Capital Investment) assume a 1 year life	\$1,993,918.15
Total Indirect Annual Costs		\$2,130,888.62
Total Annual Costs		\$2,303,641.21
Amount of Particulate Controlled (TPY)		160.88
	162.5 TPY * 99% efficiency	
Total Annual Cost per Ton of Particulate Controlled		\$14,319.45

APPENDIX B
RACT/BACT/LAER CLEARINGHOUSE
DETERMINATIONS

RAYONIER - FERNANDINA BEACH
TEMPORARY BOILER BACT REVIEW
RBLC Results for NOx Control

STATE	LAST UPDATE	PROCESS	THROUGHPUT	EMISSION RATE	CONTROL DESCRIPTION	BASIS
PA	11/27/95	BOILER #3, OIL/NATURAL GAS	4116 MMBTU/HR	0.23 LB/MMBTU	SOFA	RACT
NJ	5/29/95	BOILER (DISTILLATE FUEL)	131 MMBTU/HR	0.2 LB/MMBTU	LOW NOX BURNERS	BACT-OTHER
FL	3/24/95	BOILER, 1 EACH	205 MMBTU/H	0.18 LB/MMBTU	COMBUSTION CONTROL	BACT-PSD
SC	3/24/95	BOILER, NO 2 OIL - AUXILIARY	190.35 MMBTU/HR	32.4 LB/HR ^A		BACT-PSD
VA	5/7/97	BOILER, STEAM, 3	205.8 MMBTU	74.6 TPY ^B	LOW NOX BURNER, FGR (INTERNAL OR EXTERNAL)	NSPS
NY	9/13/94	BOILERS, AUXILIARY	750 MMBTU/HR	0.2 LB/MMBTU	COMBUSTION CONTROLS	BACT-OTHER
FL	1/19/95	SUBPART DB BOILER, 0.05% S FO	190 MMBTU/HR	28.5 LB/HR ^C	LOW NOX BURNERS, EGR	BACT-PSD

A - Calculated Emission Rate (assuming 8760 hr/yr) in MMBtu = 0.17
B - Calculated Emission Rate (assuming 8760 hr/yr) in MMBtu = 0.08
C - Calculated Emission Rate (assuming 8760 hr/yr) in MMBtu = 0.0003

RAYONIER - FERNANDINA BEACH
TEMPORARY BOILER BACT REVIEW

RBLC Results SOx Control

STATE	LAST UPDATE	PROCESS	THROUGHPUT	EMISSION RATE	CONTROL DESCRIPTION	BASIS
NJ	5/29/95	BOILER (DISTILLATE FUEL)	131 MMBTU/HR	0.21 LB/MMBTU	FUEL SPEC: USE OF LOW SULFUR OIL	BACT-OTHER
FL	3/24/95	BOILER, 1 EACH	205 MMBTU/H		FUEL SPEC: LIMIT FUEL SULFUR CONTENT	BACT-PSD
FL	1/13/95	BOILER, AUXILIARY, NG	100 MMBTU/H	0.003 LB/MMBTU	FUEL SPEC: LOW SULFUR FUEL, GAS FIRED	BACT-PSD
FL	1/13/95	BOILER, SPREADER STOKER, FUEL OIL, 3	490 MMBTU/H	0.05 LB/MMBTU	FUEL SPEC: LOW SULFUR FUEL OIL. LIMITED FIRING. APCE INCLUDES ESP, SNCR, AND CARBON INJECTION.	BACT-PSD
VA	5/7/97	3 STEAM BOILERS	205.8 MMBTU EA	152.4 TPY ^A	FUEL SPEC: 0.20% S FUEL OIL	NSPS
VA	5/7/97	BOILER, 14		2.64 LB/MMBTU	FUEL SPEC: %S LIMITS	NSPS

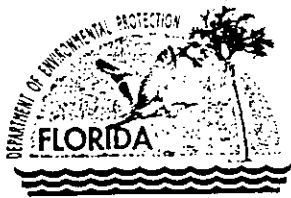
A - Assuming 8760 hours of operation, emission rate is
0.17 lb/MMbtu

RAYONIER - FERNANDINA BEACH
TEMPORARY BOILER BACT REVIEW
RBLC Results for PM Control

STATE	LAST UPDATE	PROCESS	THROUGHPUT	EMISSION RATE	CONTROL DESCRIPTION	BASIS
NJ	5/29/95	BOILER (NATURAL GAS)	131 MMBTU/HR	0.005 LB/MMBTU	BOILER DESIGN	BACT-OTHER
NJ	5/29/95	BOILER (DISTILLATE FUEL)	131 MMBTU/HR	0.02 LB/MMBTU	BOILER DESIGN	BACT-OTHER
NY	9/13/94	BURNERS, DUCT (2)	553 MMBTU/HR	0.003 LB/MMBTU	COMBUSTION CONTROLS	BACT-OTHER
NY	9/13/94	BOILERS, AUXILIARY	750 MMBTU/HR	0.05 LB/MMBTU	COMBUSTION CONTROLS	BACT-OTHER
SC	3/24/95	BOILER, NO 2 OIL - AUXILIARY	190.35 MMBTU/HR	2.7 LB/H ^A	FUEL SPEC: LOW ASH CONTENT FUEL OIL	BACT-PSD
VA	5/7/97	3 STEAM BOILERS	205.8 MMBTU EA	4.8 TPY ^B	MULTICYCLONE	NSPS

A - Emission rate in lb/MMbtu (assuming 8760 hrs)=
A - Emission rate in lb/MMbtu (assuming 8760 hrs)=

0.014 lb/MMbtu
0.001 lb/MMbtu



Department of Environmental Protection

Lawton Chiles
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

Virginia B. Wetherell
Secretary

September 3, 1998

RECEIVED

SEP 03 1998

BUREAU OF
AIR REGULATION

CERTIFIED - RETURN RECEIPT

Mr. Jack M. Kriesel, General Manager
Rayonier, Inc.
Foot of Gum Street
Fernandina Beach, FL 32035-1309

Dear Mr. Kriesel:

Nassau County - AP
Rayonier, Inc.
Temporary Replacement Boiler
File No.: 0890004-006
Request For Additional Information (Amended)

PSD-FI-256

On September 1, the Northeast District determined that additional information and questions needed to be answered before the referenced application could be further processed. At that time, there were issues concerning the applicability of PSD to this project, and it was requested that Rayonier contact the Tallahassee office. It has been determined that the following information and questions need to be answered (in addition to those requested in the September 1 correspondence) before the application can be further processed.

1. Based on the information presented in the application, specifically the Summary of Emissions and Increases/Decreases Table, it appears that the PSD significant thresholds will be triggered for the following pollutants:
 - a. PM₁₀, 41 tons (Delta emissions with the temporary boiler on and #1 boiler off)
 - b. SO₂, 406 tons (Delta emissions with temporary boiler on and #2 boiler off)
 - c. NO_x, 122 tons (Delta emissions with temporary boiler on and #2 off)
2. It is requested that the same analysis used in the Summary of Emissions and Increases/Decreases Table be conducted for Particulate Matter. Please submit this information.
3. Please provide the Department with the information that you propose as BACT for PM₁₀, SO₂, NO_x, and PM (if PM is above the significant threshold).
4. In accordance with 62-4.050(4)(a)1., the processing fee for a construction permit for an emissions unit requiring PSD review shall be \$7500.00. Please submit a check in this amount made payable to the Florida Department of Environmental Protection.
5. Because the processing of construction permits requiring PSD reviews are processed in the Tallahassee Office, it is requested that a copy of the original application and subsequent information (requested in this letter and the September 1 letter), be sent to Tallahassee for processing.

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

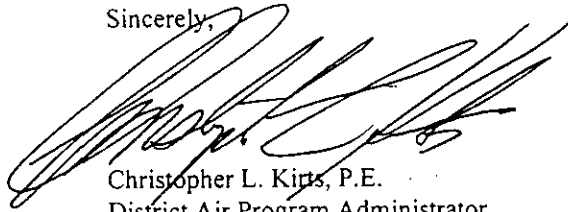
Rayonier, Inc.
Request For Additional Information
Page Two

The subject application can not be processed until the above requested information is provided or corrected. The application will be held in abeyance until October 1 to allow for supplement or amendment.

All information requested must be submitted by the applicant and certified by the professional engineer named in the application. Three copies of the requested information must be submitted. Please note that it would be helpful, if as much information as possible (the application) could be resubmitted using ELSA on diskette.

If you have any questions concerning this matter, please contact Rita Felton-Smith at (904) 448-4310, extension 237.

Sincerely,



Christopher L. Kirts, P.E.
District Air Program Administrator

CLK:RFS

Attachment

cc: David E. Tudor
Al Linero, BAR/DARM
John Reynolds, BAR/DARM
Syed Arif, BAR /DARM