# Rayonier

*Performance Fibers*

*Fernandina Mill*

February 5, 2008



Mr. Jeffery F. Koerner, P.E.
Division of Air Resources Management
Florida Department of Environmental Protection
2600 Blair Stone Road, M.S. 5505
Tallahassee, FL 32399-2400

RE: Rayonier Fernandina Beach Dissolving Sulfite Pulp Mill
No. 6 Power Boiler Modification
Project No. 0890004-021-AC

Dear Mr. Koerner:

I am responding to your January 16, 2008 Request for Further Information in regard to the above referenced permit application. The responses are in the same order as your questions in your January 16, 2008 letter.

1. Based on the meeting with you, Corrie Braum, David Rogers and David Tudor on December 5, 2007 when the issue of concurrent processing was discussed we decided to NOT request concurrent processing. Unfortunately all of the references to concurrent processing in our cover letter of December 14, 2007 were not removed. We are not requesting concurrent processing. For your information Rayonier has submitted an application to the Northeast District to modify the Title V as a separate proceeding and have asked them to schedule their work on that application to follow the construction permit application now in your review.

2. There is no intention to change any of the emission limits in the initial construction permit for No.6 boiler. Attached are corrected pages 27 and 28 of the application reflecting the 210 ton of sulfur dioxide limit in the permit.

3. Methylene chloride is not an issue for the construction permit. Please disregard any reference or request on methylene chloride.

4. There is no intention to change any of the emission limits in the initial construction permit for No.6 boiler. Attached is corrected page 31 of the application reflecting the 591.3 tons per year of carbon monoxide limit in the original construction permit.

5. New application page 34a is attached containing the emission calculations for VOC reflecting the limits in the original construction permit

6. No. 6 power boiler will comply with the NSPS and the air construction permit limits when firing spend sulfite liquor (SSL).

7. 40 CFR Part 61 Subpart E does appear to apply if Rayonier decides to burn sludge in this boiler and requests a permit to do so. This application is only for a trial and during this trial will be testing the knots, bark and sludge for mercury. The sludge is mainly lost wood fiber waste with small amounts of biological material from digesting the dissolved substances cooked out of the wood. One would expect no more mercury emissions than that from burning wood waste because any sludge burned would be replacing either knots or bark, i.e. wood waste. We would not want this boiler to become subject to 40 CFR Part 61, Subpart E because of the trial requested. It is premature to reference in this trial permit. Once the trial burn is completed, Rayonier will make the decision whether to request permanent authorization to burn sludge. Only at that time would the boiler become subject to 40 CFR 61 Subpart E.

   However, we will add to the trial plan to test knots, bark and sludge for mercury. If we find these are the same within the normal variability one expects form such tests then we can conclude there is no increase in mercury emissions, therefore this change is not a modification with an increase in emissions and not subject to a construction permit or PSD review. If there is an increase, burning sludge would be subject to a construction permit and possibly a PSD permit if the increase exceeds the PSD significant emission rate.

   ODT stands for Oven Dried Tons, usually it refers to pulp. The other term common in this industry is ADT or air dried tons of pulp. The relationship between air dried and oven dried depends on the pulp, but usually about 10% is lost going from air dried to oven dried.

8. You are correct that the $SO_2$ emissions and fuel usage must be managed to achieve the SO2 emissions cap. The SSL would have to be co-fired with other fuels, typically bark. There is no past operation for burning SSL in this boiler. We will not exceed 55,188 tons per year.

If you have questions regarding this application please contact either David Rogers, (904)277-1346, e-mail: david.rogers@rayonier.com or Dave Tudor (904)557-8332, e-mail: david.tudor@rayonier.com.

Sincerely,

F. J. Perrett
General Manager

## F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

| | |
|---|---|
| 1. Pollutant Emitted: **SO2** | 2. Total Percent Efficiency of Control: **99** |
| 3.Potential Emissions: **420** lb/hour **210** tons/year | 4. Synthetically Limited? [X] Yes [ ] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **NA** to tons/year | |
| 6. Emission Factor: **0.8 lb/mmBtu** Reference: **40 CFR 60.43(1)** | 7. Emissions Method Code: **0** |

8. Calculation of Emissions:

**hrly: 525 mmBtu/hr x 0.8 lb/mmBtu = .00 lbs/hr**

**ann: 450 mmBtu/hr x 0.106545 lb/mmBtu x 1/2000 tons/lbs x 8760 hr/year = 210 TPY**

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

## F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -

### ALLOWABLE EMISSIONS

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

**Allowable Emissions** Allowable Emissions **1** of **3**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **RULE 40 CFR 60.43** | 2. Future Effective Date of Allowable Emissions: |
| 3. Allowable Emissions and Units: **0.8 lb/mmBtu** | 4. Equivalent Allowable Emissions: **420** lb/hour **1,576.8** tons/year |
| 5. Method of Compliance: **Alkali scrubber** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **0.8 lb/mmBtu x 450 mmBtu/hr x 8760/2000 = 1,576.8 TPY**<br>**0.8 lb/mmBtu x 525 mmBtu/hr = 420 lb/hr** | |

**Allowable Emissions** Allowable Emissions **2** of **3**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** | 2. Future Effective Date of Allowable Emissions: |
| 3. Allowable Emissions and Units: **0.106545 lb/mmBtu** | 4. Equivalent Allowable Emissions: **55.94** lb/hour **210** tons/year |
| 5. Method of Compliance: **Alkali scrubber and CEMS for $SO_2$** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **0.106545 lb/mmBtu x 450 mmBtu/hr x 8760/2000 = 210 TPY**<br>**0.106545 lb mmBtu x 525 mmBtu/hr = 55.94 lb/hr**<br>**Equivalent hourly and annual emissions are based on an annual averaging time.** | |

**Allowable Emissions** Allowable Emissions **3** of **3**

| | |
|---|---|
| 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/ESTIMATED FUGITIVE EMISSIONS

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

| 1. Pollutant Emitted: **CO** | 2. Total Percent Efficiency of Control: **See Comment.** |
|---|---|
| 3.Potential Emissions: **157.5** lb/hour **591.3** tons/year | 4. Synthetically Limited? ☐ Yes [X] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **NA** to tons/year | |
| 6. Emission Factor: **0.3 lb/mmBtu** Reference: | 7. Emissions Method Code: |

8. Calculation of Emissions:

**hrly: 525 mmBtu/hr x 0.3 lb/mmBtu = 157.5 lbs/hr**

**annual: 450 mmBtu/hr x 0.3 lb/mmBtu X 8760/2000 = 591.3 TPY**

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

**CO control is based on methods and designs that prevent the pollutant from forming. Therefore it is not possible to calculate a control efficiency as if there were collection of a pollutant.**

## F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

| 1. Pollutant Emitted: **VOC** | 2. Total Percent Efficiency of Control: |
|---|---|
| 3.Potential Emissions: **1.05** lb/hour **3.94** tons/year | 4. Synthetically Limited? ☐ Yes [X] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **NA** to tons/year | |
| 6. Emission Factor: **0.002 lb/mmBtu** Reference: **permit 0890004-18-AC** | 7. Emissions Method Code: |

8. Calculation of Emissions:

**525 mmBtu/hr x 0.002 lb/mmBtu = 1.05 lb/hr**

**450 mmBtu/hr x 0.002 lb/mmBtu x 8760/2000 = 3.94 lb/hr**

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

## 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: **6241 N.W. 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653**
3. Professional Engineer Telephone Numbers...
   Telephone: **(325)336-5600** ext. **545** Fax: **(352)336-6603**
4. Professional Engineer Email Address: **dbuff@golder.com**
5. Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein*, that:*

*(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*

*(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.*

*(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, 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.*

*(4) If the purpose of this application is to obtain an air construction permit (check here [X], 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 ☐, 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.*

*(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 , 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.*

David A. Buff
Signature

2/5/08
Date

(seal)

* Attach any exception to certification statement.

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

January 16, 2008

*Sent by Electronic Mail – Received Receipt Requested*

F.J. Perrett, General Manager
Rayonier Performance Fibers, LLC
P.O. Box 2002
Fernandina Beach, FL 32035

Re: **Request for Additional Information**
Fernandina Beach Dissolving Sulfite Pulp Mill
Project No. 0890004-021-AC
No. 6 Power Boiler Modifications

Dear Mr. Perrett:

On December 17, 2007, the Department received your application and sufficient fee for an air construction permit requesting minor revisions to air construction Permit No. 0890004-018-AC for the Power Boiler No. 6 at the Fernandina Beach Mill. The application is incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the items below require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. The cover letter suggests that the application to modify the permit for the No. 6 power boiler also includes a concurrent revision of the Title V permit. This is not the case and this was clarified by e-mail on January 16, 2008. The Department's NED office is currently processing a Title V revision.
2. The cover letter states there will be no change in emissions limits affecting any PSD pollutants. However, in the emissions unit pollutant detail information of the application for $SO_2$ (page 27 and 28) states that the potential emissions are 220.95 tons/year. Please explain the use of the "0.1121 lb/MMBtu" emissions factor to calculate the potential emissions. Air construction Permit No. 0890004-018-AC specifies an emissions limit of 210.0 tons/year for a 12 month rolling average. Please correct the application page.
3. The cover letter also suggests that the application includes the addition of additional methylene chloride emissions from a lab vent. This is not discussed in the application. Is this part of the air construction permit request? If yes, please provide additional information including a description, usage (maximum quantity) and emissions (potential).
4. Air construction Permit No. 0890004-018-AC established a CO emissions limit of 157.5 lb/hour for 30-day rolling average and 591.3 tons/yr for a 12-month rolling average. The permit emissions limits are based on 0.3 lb/MMBtu heat input. The emissions unit pollutant detail information for CO in the application (page 31) states the potential emissions will be 105 lb/hour and 394.2 tons/year, which are based on 0.2 lb/MMBtu heat input. Please explain and correct as necessary.
5. Please submit the corresponding application pages related to VOC emissions. These were not included.
6. Please confirm that the No. 6 Power Boiler will comply with the NSPS and air construction permit limits when firing spent sulfite liquor (SSL).

7. Will the sludge material that will be used during the trial burn be subject to 40 CFR 61 Subpart E? Please refer to EPA's applicability determination index. What does "ODT" mean?

8. Page 21 of the application identifies the following information for spent sulfite liquor (SSL):

   - 5.5% sulfur by weight
   - 6.3 tons per hour, maximum
   - 55,188 tons per year, maximum

   Based on this information, the uncontrolled $SO_2$ emissions would be:

   (0.055 ton S / ton SSL)(6.3 ton SSL / hour) (2 tons $SO_2$ / ton S) (2000 lb / hour) = 1386 lb/hour

   (0.055 ton S / ton SSL)(55,188 tons SSL / year) (2 tons $SO_2$ / ton S) = 6070.68 tons/year

   Since the $SO_2$ limits in the permit are 420 lb/hour and 210.0 tons/year, the equivalent control efficiency would have to be:

   (1386 lb/hour – 420 lb/hour) (100%) / (1386 lb/hour) = 70%

   (6070.68 tons/year– 210.0 tons/year) (100%) / (6070.68 tons/year) = 96.5%

   It appears that $SO_2$ emissions and fuel usage must be managed to achieve the $SO_2$ emissions cap. Please detail the periods of operation in which SSL would be fired. Will it typically be co-fired with other fuels? Based on past operation, what is the expected annual usage?

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official. You are reminded that Rule 62-4.055(1), F.A.C. requires applicants to respond to requests for information within 90 days or to provide a written request for an additional period of time to submit the information.

If you have any questions regarding this matter, please contact the project engineer, Corrie Branum, at 850/921-8968.

Sincerely,

Jeffery J. Koerner

Jeffery F. Koerner, Program Administrator
New Source Review Section

This letter was sent by electronic mail with received receipt requested to the following people:

Mr. F.J. Perrett, Rayonier Performance Fibers, LLC (jack.perrett@rayonier.com)
Mr. Dave Rogers, Rayonier Performance Fibers, LLC (david.rogers@rayonier.com)
Mr. Dave Tudor, Rayonier Performance Fibers, LLC (david.tudor@rayonier.com)
Mr. David Buff, Golder Associates, Inc. (dbuff@golder.com)
Mr. Chris Kirts, NED Office (Christopher.Kirts@dep.state.fl.us)
Ms. Rita Felton-Smith NED Office (Rita.Felton@dep.state.fl.us)

# Memorandum

# Florida Department of Environmental Protection

TO: Joseph Kahn, Division of Air Resource Management

THRU: Trina Vielhauer, Bureau of Air Regulation
Jeff Koerner, New Source Review Section JK

FROM: Corrie Branum, New Source Review Section CB

DATE: April 17, 2008

SUBJECT: Final Air Permit No. 0890004-021-AC
Rayonier Performance Fibers, LLC
Fernandina Beach Dissolving Sulfite Pulp Mill
No. 6 Power Boiler, Miscellaneous Permit Revisions

The Final Permit for this project is attached for your approval and signature. The purpose of this project is to revise original air construction permit No. 0890004-018-AC for the No. 6 Power Boiler to:

- Increase the steam production limit;
- Authorize the firing of spent sulfur liquor;
- Remove the Boiler MACT provisions of Subpart DDDDD in 40 CFR Part 63; and
- Authorize a temporary trial burn of effluent treatment system solids. The trial burn has been added to section G of the final permit.
- Updated the numbering on conditions in section A.

The existing plant is located in Nassau County at Foot of Gum Street in Fernandina Beach, Florida. The project results in minor revisions and clarifications to permit conditions in the original air construction permit.

I recommend your approval of the attached Final Permit for this project.

Attachments

TLV/jfk/cb

## PERMITTEE

Rayonier Performance Fibers LLC
Post Office Box 2002
Fernandina Beach, FL 32035

## PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation, New Source Review Section
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

## PROJECT

Project No. 0890004-021-AC
Fernandina Beach Dissolving Sulfite Pulp Mill

Rayonier Performance Fibers operates an existing dissolving sulfite pulp mill (SIC No. 2611) located in Nassau County at the Foot of Gum Street in Fernandina Beach, Florida. The permit is to revise original air construction permit No. 0890004-018-AC for the No. 6 Power Boiler to: increase the steam production limit; authorize the firing of spent sulfur liquor; remove the Boiler MACT provisions of Subpart DDDDD in 40 Code of Federal Regulations Part 63; and authorize a temporary trial burn of effluent treatment system solids.

## NOTICE AND PUBLICATION

The Department distributed an Intent to Issue Permit package on March 20, 2008. The applicant published the Public Notice of Intent to Issue in the News-Leader on April 2, 2008. The Department received the proof of publication on April 10, 2008.

## COMMENTS

No comments on the Draft Permit were received from the public, the Department's Northeast District Office, the EPA Region 4 Office, the National Park Service, or the applicant.

## CONCLUSION

The final action of the Department is to issue the permit.

**STATE OF FLORIDA**
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

# NOTICE OF FINAL PERMIT

*In the Matter of an Application for Permit by:*

Rayonier Performance Fibers, LLC
Post Office Box 2002
Fernandina Beach, FL, 32035

Authorized Representative:
Mr. F.J. Perrett, General Manager

Project No. 0890004-021-AC
Fernandina Beach Mill
No. 6 Power Boiler, Permit Revisions
Nassau County

Enclosed is the final air construction permit, which revises original air construction permit No. 0890004-018-AC for the No. 6 Power Boiler to: increase the steam production limit; authorize the firing of spent sulfur liquor; remove the Boiler MACT provisions of Subpart DDDDD in 40 Code of Federal Regulations Part 63; and authorize a temporary trial burn of effluent treatment system solids. The existing plant is located in Nassau County at the Foot of Gum Street in Fernandina Beach, Florida. As noted in the attached Final Determination, only minor changes and clarifications were made to the permit as drafted. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Trina Vielhauer, Chief
Bureau of Air Regulation

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final Permit and Final Determination) was sent by electronic mail with received receipt requested before the close of business on 4/18/08 to the persons listed below.

Mr. F.J. Perrett, Rayonier Performance Fibers, LLC (jack.perrett@rayonier.com)
Mr. Dave Rogers, Rayonier Performance Fibers, LLC (david.rogers@rayonier.com)
Mr. Dave Tudor, Rayonier Performance Fibers, LLC (david.tudor@rayonier.com)
Mr. David Buff, Golder Associates, Inc. (dbuff@golder.com)
Ms. Kathleen Forney, EPA Region 4 (Forney.Kathleen@epa.gov)
Mr. Chris Kirts, NED Office (Christopher.Kirts@dep.state.fl.us)

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

Mary L. Adams 4/18/08
(Clerk) (Date)

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

# FINAL PERMIT REVISION

**PERMITTEE**

Rayonier Performance Fibers, LLC
The Foot of Gum Street
Fernandina Beach, Florida 32035-1309

*Authorized Representative*:
Mr. F.J. Perrett, General Manager

Air Permit No. 0890004-021-AC
Expires: March 1, 2009
Fernandina Beach Mill
No. 6 Power Boiler
Miscellaneous Revisions

**FACILITY AND PROJECT**

Rayonier Performance Fibers, LLC operates the Fernandina Beach Mill, which is an existing dissolving sulfite pulp mill (SIC No. 2611) located in Nassau County, at The Foot of Gum Street in Fernandina Beach, Florida. The UTM map coordinates are: Zone 17; 454.7 km East; and, 3392.2 km North.

Original air construction Permit No. 0890004-018-AC was issued to authorize: an increase in the permitted throughput capacity for the facility operations; installation of the new No. 6 Power Boiler to replace existing Nos. 1-3 Power Boilers; installation of three evaporator bodies to evaporate moisture from hot caustic extract; and to recognize the production of the No. 6 Batch Digester. This project is a revision of the original air construction permit to: increase the recognized maximum steam production rates; authorize spent sulfite liquor as an approved fuel; remove the industrial boiler MACT provisions (Subpart DDDDD, 40 Code of Federal Regulations (CFR) Part 63); and authorize a trial burn of effluent treatment system solids in the No. 6 Power Boiler. For more information on these projects refer to the project description found on the next page.

This air construction permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and 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 hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

**ATTACHMENTS**

Appendix SS-1, Stack Sampling Facilities
Table 297.310-1, Calibration Schedule

Joseph Kahn, Director
Division of Air Resource Management

4/18/08
Effective Date

JK/tlv/cb

## PROJECT DESCRIPTIONS

### Permit No. 0890004-018-AC, Original Air Construction Permit

Original air construction Permit No. 0890004-018-AC authorized: an increase in the permitted throughput capacity for the facility operations; installation of the new No. 6 Power Boiler to replaces existing Nos. 1-3 Power Boilers; installation of three evaporator bodies to evaporate moisture from hot caustic extract (HCE); and specification of the production of the No. 6 Batch Digester. The increase in production will occur in two stages and depends on the installation of some additional equipment including: addition of a new HCE washer press roll; first improvements to pulp machine (drying and head-box); addition of a new HCE evaporator train; installation of a new HCE blow heat recovery system to control all HCE cells; addition of a new HCE cell; installation of a new HCE washer; second improvements to pulp machine (drying and speed increase); and installation of a new post-HCE washer. The No. 6 Power Boiler is a refurbished coal-fired boiler that contains the following controls: settling chamber (ash hopper), 4-field electrostatic precipitator, alkaline wet scrubber, staged combustion, flue gas recirculation, and the capability to add a selective non-catalytic reduction system.

### Air Permit No. 0890004-021-AC, Revised Air Construction Permit

This project revises the original air construction permit for the No. 6 Power Boiler to: authorize increases the steam production limits without changes to the maximum heat input rates to reflect the actual thermal efficiency of the boiler; authorize the firing of spent sulfite liquor to be an authorized fuel; remove the industrial boiler MACT provisions (Subpart DDDDD, 40 CFR Part 63) that have been vacated by the EPA; and authorize a trial burn of effluent treatment system solids.

**GENERAL CONDITIONS:**

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 the conditions.

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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any 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 of 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.

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.

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 permitted to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and 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.

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 any record 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.

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 non-compliance, 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.

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.

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.

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.

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.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)

( ) Determination of Prevention of Significant Deterioration (PSD)

(**X**) Compliance with New Source Performance Standards (NSPS)

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 for 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:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurement;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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.

**SPECIFIC CONDITIONS:**

**A. No. 6 Power Boiler.**

| E.U. ID No. | Brief Description |
|---|---|
| 022 | Bubbling Fluidized Bed No. 6 Power Boiler with a Settling Chamber followed by an ESP for PM emissions control and a Wet Alkali Scrubber for $SO_2$ emissions control |

Emissions Unit 022 identifies the No. 6 Power Boiler, which is a converted existing power boiler. It will be firing mostly biomass (green bark, chips, knots, fines and landscape waste), tires, No. 2 fuel oil for startup, No. 6 fuel oil (max. sulfur content of 2.5%, by weight), spent sulfite liquor and small amounts of facility-generated on-spec used oil (to be blended with the No. 6 fuel oil). The boiler was originally constructed in 1983 as a traveling grate coal-fired boiler.

The converted boiler will include staged combustion and flue gas recirculation (FGR) to reduce NOx emissions. Due to the planned conversion, there is some uncertainty associated with the emissions characteristics. A selective non-catalytic reduction (SNCR) system may be installed to control NOx emissions. This would generally consist of an ammonia tank, pumps, piping, compressed air delivery, injectors, and a control system.

Particulate matter emissions will be controlled with a large settling chamber followed by an electrostatic precipitator (ESP). Large ash particles settle out in the chamber and are removed from the bottom hopper by a screw conveyor system. The design includes a four-field ESP with collector plates and rigid electrodes. Each field will have a dedicated transformer/rectifier (T/R) set and ash hopper. Ash will be removed by a screw conveyor system.

Acid gases will be controlled by a wet alkaline scrubber located after the ESP and induced draft fan. The wet scrubber will spray approximately 4000 gpm of re-circulated alkaline scrubber water over a series of chevrons and louver-type packings to reduce acid gas emissions. The design pressure drop across the system will be approximately 2 inches of water column. Emissions exhaust at a volumetric flow rate of 183,421 acfm and a temperature of 150° F through the single wet scrubber stack that will be approximately 10 feet in diameter and 190 feet above ground level.

{Permitting note(s): This emissions unit is regulated under: 40 CFR 60, Subpart D; adopted and incorporated by reference in Rule 62-204.800, F.A.C.}

**The following specific conditions apply to the emissions unit listed above:**

**General**

**A.0.** General.
a. Power Boilers Nos. 1, 2 and 3 shall be permanently shutdown once Power Boiler No. 6 becomes commercially operational and has been compliance tested.

[Rules 62-4.070(3) and 62-212.400(5), F.A.C.]

b. References/Acronyms.
1. SIP: Florida's State Implementation Plan.
2. NSPS: New Source Performance Standards.
3. NESHAP: National Emission Standards for Hazardous Air Pollutants.
4. AC: Air Construction Permit.
5. PSD NSR: Prevention of Significant Deterioration New Source Review.
6. CEMS: continuous emissions monitoring system.
7. COMS: continuous opacity monitoring system.

c. Unless otherwise stated, the "Administrator" is the Department's "Secretary" or its designee.

d. Control Equipment.

1. To control particulate matter, the permittee shall install a settling chamber (or equivalent) followed by a 4-field electrostatic precipitator designed to achieve at least the emissions standards specified in this permit.
2. To control acid gases, the permittee shall install a wet alkaline scrubber designed to achieve at least the emissions standards specified in this permit.
3. To control nitrogen oxides, the converted boiler shall be designed with staged combustion and include flue gas recirculation (FGR). In addition, the permittee is authorized to install (as necessary) a selective non-catalytic reduction system (SNCR) with ammonia injection to achieve at least the emissions standards specified in this permit.

[Rule 62-4.070(3), F.A.C.]

**Operational Parameters**

**A.1.** Permitted Capacity. The maximum heat input rates are:
a. The maximum heat input rate is 525 MMBtu/hour based in a 24-hour average, which is approximately 330,000 lb/hour of steam production. Initial and annual compliance testing shall be conducted within 90% of this permitted steam rate. If the initial compliance tests cannot be performed at this level, the AC will be modified to reflect the actual installed capacity; and,
b. The maximum annual heat input rate is 450 MMBtu/hour which is approximately 286,000 lb/hr of steam production. This will require recordkeeping on a 12-month rolling average basis.

[Rules 62-4.070(3), 62-204.800 and 62-212.200 (PTE), F.A.C.; and, application received September 12, 2005]

**A.2.** Methods of Operation. This boiler may be fired with:
a. Biomass, consisting of green bark, knots, chips, fines and landscape waste.
b. Tire derived fuel (TDF).
c. No. 6 fuel oil with a maximum sulfur content of 2.5%, by weight, during startup, shutdown, or as a temporary alternate fuel during solid fuel feed upsets.
d. Facility-generated on-specification used oil with a maximum sulfur content of 2.5%, by weight~~, and~~ shall be blended with the No. 6 fuel oil or spent sulfite liquor prior to firing.
e. No. 2 fuel oil for startup.
f. Spent sulfite liquor with a maximum sulfur content of 5.5%, by weight, for startup, shutdown, or as a temporary alternate fuel during solid fuel feed upsets. The maximum firing rate is 1200 gph of this fuel.

[Application Nos. 0890004-018-AC and 0890004-021-AC; Rule 62-710.210, F.A.C.; and, 40 CFR Part 279]

**A.3.** Hours of Operation. The hours of operation are not limited, i.e., 8,760 hours/year.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, application received September 12, 2005]

**Emission Limits and Standards**

*{Permitting Note: Unless otherwise specified, the averaging times for these specific conditions A.4. and/thru A.11. are based on the specified averaging time of the applicable test method. The standards apply to all authorized fuels.}*

**A.4.** Particulate Matter (PM).

a. As determined by an EPA Method 5 or 17 compliance test, PM emissions shall not exceed 0.07 lb/MMBtu heat input; nor 36.75 lbs/hr and 138.0 TPY.

[Application Nos. 0890004-018-AC and 0890004-021-AC; and Rule 62-4.070(3), F.A.C.]

b. As determined by an EPA Method 5 or 5B compliance test, no owner or operator shall cause to be discharged into the atmosphere from any affected facility any gases which:
(1) Contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel or fossil fuel and wood residue; nor 52.5 lbs/hr.

[NSPS; and, 40 CFR 60.42(a)(1)]

c. As determined by an EPA Method 5 compliance test, PM emissions shall not exceed 0.2 lb/MMBtu heat input of carbonaceous fuel plus 0.1 lb/MMBtu heat input of fossil fuel; nor 105 lbs/hr.

[SIP; and, Rule 62-296.410(2)(b)(2. and Chapter 62-297, F.A.C.]

**A.5.** Sulfur Dioxide ($SO_2$).
a. As determined by CEMS data, no owner or operator shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of:

(1) 340 nanograms per joule heat input (0.80 lb per million Btu and 420 lbs/hr) derived from liquid fossil fuel or liquid fossil fuel and wood residue, and measured as any three-hour period (arithmetic average of three contiguous one-hour periods).

[NSPS; 40 CFR 60.43(a)(1); 40 CFR 60.45(g)(2); Application Nos. 0890004-018-AC and 0890004-021-AC; and, Rule 62-212.400(2)(g), F.A.C.]

b. In order to escape PSD NSR requirements and as determined by CEMS data, $SO_2$ emissions shall not exceed 210.0 tons per consecutive 12-month rolling total. All valid CEMS data (including startups, shutdowns and malfunctions) shall be used to determine compliance with this limit.

[Rules 62-4.160(2), 62-210.200(PTE), and 62-212.400(2)(g), F.A.C.; Application Nos. 0890004-018-AC and 0890004-021-AC; and, supplemental information received November 7, 2005]

**A.6.** Nitrogen Oxides (NOx).
a. As determined by CEMS data, no owner or operator shall cause to be discharged into the atmosphere from any affected facility any gases which contain nitrogen oxides, expressed as $NO_2$, in excess of:

(1) 129 nanograms per joule heat input (0.30 lb per million Btu and 101.20 lbs/hr), and measured as any three-hour period (arithmetic average of three contiguous one-hour periods).

[NSPS; 40 CFR 60.44(a)(2); 40 CFR 60.45(g)(3); Application Nos. 0890004-018-AC and 0890004-021-AC; and, Rule 62-212.400(2)(g), F.A.C.]

b. When different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) is determined by proration using the following formula:

$$PS_{NOx} = \frac{w(260)+x(86)+y(130)+z(300)}{w+x+y+z}$$

where:
$PS_{NOx}$ = is the prorated standard for nitrogen oxides when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired;
w = is the percentage of total heat input derived from lignite;
x = is the percentage of total heat input derived from gaseous fossil fuel;
y = is the percentage of total heat input derived from liquid fossil fuel; and,
z = is the percentage of total heat input derived from solid fossil fuel (except lignite).

[NSPS; and, 40 CFR 60.44(b)]

c. In order to escape PSD NSR requirements and as determined by CEMS data, NOx emissions shall not exceed 380.0 tons per consecutive 12-month rolling total. All valid CEMS data (including startups, shutdowns and malfunctions) shall be used to determine compliance with this limit.

[NSPS; Application Nos. 0890004-018-AC and 0890004-021-AC; 40 CFR 60.45(g); and, Rule 62-212.400(2)(g), F.A.C.]

**A.7.** Carbon Monoxide (CO). As determined by CEMS data, CO emissions shall not exceed 157.5 lbs/hr, 30-day rolling average; nor, 591.3 tons per consecutive 12-month rolling total. These limits are based on 0.3 lb/MMBtu heat input. All valid CEMS data (including startups, shutdowns and malfunctions) shall be used to determine compliance with this limit.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, Application Nos. 0890004-018-AC and 0890004-021-AC]

**A.8.** Volatile Organic Compounds (VOC). As determined by an EPA Method 25A compliance test, VOC emissions shall not exceed 0.002 lb/MMBtu heat input; nor 1.05 lbs/hr and 3.94 TPY.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; Application Nos. 0890004-018-AC and 0890004-021-AC]

**A.9.** Visible Emissions.
a. As determined by COMS data, no owner or operator shall cause to be discharged into the atmosphere from any affected facility any gases which:
(1) Exhibit greater than 20 percent opacity (6-minute average) except for one six-minute period per hour of not more than 27 percent opacity.

[NSPS; 40 CFR 60.42(a)(2); and, 40 CFR 60.45(g)(1) Application Nos. 0890004-018-AC and 0890004-021-AC]

b. As determined by a DEP Method 9 compliance test, visible emissions shall not exceed 30 percent opacity except that a density of 40 percent opacity is permissible for not more than two minutes in any one hour.

[SIP; and, Rule 62-296.410(2)(b)1. and Chapter 62-297, F.A.C.]

**A.10.** Fuel Oil Sulfur Content. As determined by a lab analysis, the sulfur content of the as-fired No. 6 fuel oil shall not exceed 2.5 percent, by weight and spent sulfite liquor shall not exceed 5.5 percent, by weight.

[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.; and Application Nos. 0890004-018-AC and 0890004-021-AC]

**A.11.** "On-Specification" Used Oil. The burning of "on-specification" used oil is allowed at this facility in accordance with all other conditions of this permit and the following additional conditions:
a. Only "on-specification" used oil generated by the facility shall be fired in this emissions unit. The "on-specification" used oil shall be blended with the No. 6 fuel oil prior to firing. "On-specification" used oil is defined as that which meets the 40 CFR 279 (Standards for the Management of Used Oil) specifications listed below. Used oil that does not meet all of the following specifications is considered "off-specification" oil and shall not be fired. See Specific Conditions **A.47.** and **A.48.**

| CONSTITUENT / PROPERTY * | ALLOWABLE LEVEL |
|---|---|
| Arsenic | 5 ppm maximum |
| Cadmium | 2 ppm maximum |
| Chromium | 10 ppm maximum |
| Lead | 100 ppm maximum |
| Total Halogens | 1000 ppm maximum |
| Flash Point | 100 °F minimum |
| PCBs | less than 50 ppm |

* As determined by approved methods specified in EPA Publication SW-846 (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods).

[40 CFR 279.11]

b. Upon request, a certification shall be provided that the used oil (prior to blending with the No. 6 fuel oil) complies with the limits listed above, the provisions of 40 CFR 279 and 761, and shall be recorded and retained on file.

c. "On-specification" used oil may be fired as follows:

1. Any time provided the maximum concentration of PCBs is less than 2 ppm. The analysis and recordkeeping apply to each amount prior to blending even if to be blended with 90% virgin oil.
2. Only during normal operating temperature and not during startup and shutdown if the maximum concentration of $2 \leq PCB \leq 50$ ppm.

[40 CFR 279 and 761; and, Rule 62-4.070(3), F.A.C.]

**Excess Emissions**

*{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS provision.}*

**A.12.** SIP Excess Emissions – Allowed. Excess emissions resulting from startup, shutdown or malfunction shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.]

**A.13.** SIP Excess Emissions – Prohibited. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.]

**A.14.** NSPS Excess Emissions. Excess emission and monitoring system performance reports shall be submitted to the Administrator for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in Sec. 60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(1) Opacity. Excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported.

(2) Sulfur dioxide. Excess emissions for affected facilities are defined as:

(i) Any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of sulfur dioxide as measured by a continuous monitoring system exceed the applicable standard under 40 CFR 60.43.

(3) Nitrogen oxides. Excess emissions for affected facilities using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards under 40 CFR 60.44.

[40 CFR 60.45(g)]

**Monitoring of Operations**

**A.15.** Determination of Process Variables.

(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

**A.16.** Steam Monitoring. The permittee shall continuously monitor the steam production rate to demonstrate compliance with the requirements of this permit.

[Rule 62-4.070(3), F.A.C.]

**Continuous Monitoring Requirements**

**A.17.** Each owner or operator shall install, calibrate, maintain, and operate continuous monitoring systems for measuring the opacity of emissions, sulfur dioxide emissions, nitrogen oxides emissions, carbon monoxide emissions and oxygen, in accordance with 40 CFR 60.13, 40 CFR 60.45, and 40 CFR 60, Appendices B and F.

[40 CFR 60.13; 40 CFR 60.45(a); 40 CFR 60, Appendices B and F; Rule 62-4.070(3), F.A.C.; and, application project No. 0890004-018-AC]

**A.18.** The owner or operator shall install, calibrate, maintain, and operate a continuous flow monitoring system in accordance with 40 CFR 60, Performance Specification 6 of Appendix B and Procedure 1 of Appendix F.

[Application project No. 0890004-018-AC; and, 40 CFR 60, Appendices B and F]

**A.19.** For performance evaluations under 40 CFR 60.13(c) and calibration checks under 40 CFR 60.13(d), the following procedures shall be used:
(1) Methods 6, 7, and 3B, as applicable, shall be used for the performance evaluations of sulfur dioxide and nitrogen oxides continuous monitoring systems. Acceptable alternative methods for Methods 6, 7, and 3B are given in 40 CFR 60.46(d).
(2) Sulfur dioxide or nitric oxide, as applicable, shall be used for preparing calibration gas mixtures under Performance Specification 2 of Appendix B to 40 CFR 60.
(3) For affected facilities burning fossil fuel(s), the span value for a continuous monitoring system measuring the opacity of emissions shall be 80, 90, or 100 percent and for a continuous monitoring system measuring sulfur oxides or nitrogen oxides the span value shall be determined as follows:

[In parts per million]

| Fossil fuel | Span value for sulfur dioxide | Span value for nitrogen oxides |
|---|---|---|
| Gas..... | {1} | 500 |
| Liquid..... | 1,000 | 500 |
| Solid..... | 1,500 | 1000 |
| Combinations..... | 1,000y + 1,500z | 500(x+y) + 1,000z |

{1}Not applicable.

where:
x = the fraction of total heat input derived from gaseous fossil fuel, and
y = the fraction of total heat input derived from liquid fossil fuel, and
z = the fraction of total heat input derived from solid fossil fuel.

(4) All span values computed under 40 CFR 60.45(c)(3) for burning combinations of fossil fuels shall be rounded to the nearest 500 ppm.

(5) For a fossil fuel-fired steam generator that simultaneously burns fossil fuel and non-fossil fuel, the span value of all continuous monitoring systems shall be subject to the Administrator's approval.

[40 CFR 60.45(c)]

**A.20.** For any continuous monitoring system installed under 40 CFR 60.45(a), the following conversion procedures shall be used to convert the continuous monitoring data into units of the applicable standards (ng/J, lb/million Btu):
(1) When a continuous monitoring system for measuring oxygen is selected, the measurement of the pollutant concentration and oxygen concentration shall each be on a consistent basis (wet or dry). Alternative procedures approved by the Administrator shall be used when measurements are on a wet basis. When measurements are on a dry basis, the following conversion procedure shall be used:

$E = CF[20.9/(20.9\text{-percent } O_2)]$

where:

E, C, F, and % $O_2$ are determined under 40 CFR 60.45(f).

[40 CFR 60.45(e)]

**A.21.** The values used in the equation under 40 CFR 60.45(e)(1) is derived as follows:
(1) E = pollutant emissions, ng/J (lb/million Btu).
(2) C = pollutant concentration, ng/dscm (lb/dscf), determined by multiplying the average concentration (ppm) for each one-hour period by $4.15 \times 10^{-4}$ M ng/dscm per ppm ($2.59 \times 10^{-9}$ M lb/dscf per ppm) where M = pollutant molecular weight, g/g-mole (lb/lb-mole). M = 64.07 for sulfur dioxide and 46.01 for nitrogen oxides.
(3) % $O_2$, %$CO_2$ = oxygen or carbon dioxide volume (expressed as percent), determined with equipment specified under 40 CFR 60.45(a).
(4) F, $F_c$ = a factor representing a ratio of the volume of dry flue gases generated to the calorific value of the fuel combusted (F), and a factor representing a ratio of the volume of carbon dioxide generated to the calorific value of the fuel combusted ($F_c$), respectively. Values of F and $F_c$ are given as follows:
(iii) For liquid fossil fuels including crude, residual, and distillate oils, $F = 2.476 \times 10^{-7}$ dscm/J (9,220 dscf/million Btu) and $F_c = 0.384 \times 10^{-7}$ scm $CO_2$ /J (1,430 scf $CO_2$ /million Btu).
(v) For bark $F = 2.589 \times 10^{-7}$ dscm/J (9,640 dscf/million Btu) and $F_c = 0.500 \times 10^{-7}$ scm $CO_2$ /J (1,840 scf $CO_2$ / million Btu). For wood residue other than bark $F = 2.492 \times 10^{-7}$ dscm/J (9,280 dscf/million Btu) and Fc $= 0.494 \times 10^{-7}$ scm $CO_2$ /J (1,860 scf $CO_2$ / million Btu).
(5) The owner or operator may use the following equation to determine an F factor (dscm/J or dscf/million Btu) on a dry basis (if it is desired to calculate F on a wet basis, consult the Administrator) or $F_c$ factor (scm $CO_2$ /J, or scf $CO_2$ /million Btu) on either basis in lieu of the F or $F_c$ factors specified in 40 CFR 60.45(f)(4):

$$F = 10^6 \frac{[227.2\ (\text{pct. H}) + 95.5\ (\text{pct. C}) + 35.6\ (\text{pct. S}) + (\text{pct. N}) - 28.7\ (\text{pct. O})]}{\text{GCV}}$$

$$F_c = \frac{2.0 \times 10^{-5}\ (\text{pct. C})}{\text{GCV (SI units)}}$$

$$F = 10^6 \frac{3.64(\%H) + 1.53(\%C) + 0.57(\%S) + 0.14(\%N) - 0.46(\%O)}{\text{GCV (English units)}}$$

$$F_c = \frac{20.0(\%C)}{\text{GCV (SI units)}}$$

$$Fc = \frac{321 \times 10^3(\%C)}{\text{GCV (English units)}}$$

(i) H, C, S, N, and O are content by weight of hydrogen, carbon, sulfur, nitrogen, and oxygen (expressed as percent), respectively, as determined on the same basis as GCV by ultimate analysis of the fuel fired, using ASTM method D3178-73 (Reapproved 1979), 89, or D3176-74 or 89 (solid fuels) or computed from results using ASTM method D1137-53 or 75, D1945-64, 76, 91, or 96 or D1946-77 or 90 (Reapproved 1994) (gaseous fuels) as applicable. (These five methods are incorporated by reference-see 40 CFR 60.17.)
(ii) GCV is the gross calorific value (kJ/kg, Btu/lb) of the fuel combusted determined by the ASTM test methods D2015-77 (Reapproved 1978), 96, or D5865-98 for solid fuels and D1826-77 or 94 for gaseous fuels as applicable. (These two methods are incorporated by reference-see 40 CFR 60.17.)
(iii) For affected facilities which fire both fossil fuels and non-fossil fuels, the F or $F_c$ value shall be subject to the Administrator's approval.

(6) For affected facilities firing combinations of fossil fuels or fossil fuels and wood residue, the F or $F_c$ factors determined by paragraphs 40 CFR 60.45(f)(4) or (f)(5) shall be prorated in accordance with the applicable formula as follows:

$$F = \sum_{i=1}^{n} X_i F_i \quad \text{or} \quad F_c = \sum_{i=1}^{n} X_i (F_c)_i$$

where:

$X_i$ = the fraction of total heat input derived from each type of fuel (e.g. natural gas, bituminous coal, wood residue, etc.)
$F_i$ or $(F_c)_i$ = the applicable F or $F_c$ factor for each fuel type determined in accordance with paragraphs (f)(4) and (f)(5) of this section.
n = the number of fuels being burned in combination.

[40 CFR 60.45(f)]

**Test Methods and Procedures**

**A.22.** In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified in 40 CFR 60.46, except as provided in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in 40 CFR 60.46(d).

[40 CFR 60.46(a)]

**A.23.** Boiler Thermal Efficiency. In conjunction with the initial performance tests, the permittee shall determine the installed boiler's thermal efficiency while combusting 100% wood and also 100% fuel oil.

[Rule 62-4.070(3), F.A.C.]

**A.24.** The owner or operator shall determine compliance with the particulate matter, $SO_2$, and $NO_x$ standards in 40 CFR 60.42, 60.43, and 60.44 as follows:
(1) The emission rate (E) of particulate matter, $SO_2$, or $NO_x$ shall be computed for each run using the following equation:

$E = C F_d (20.9)/(20.9 - \% O_2)$
where:
E = emission rate of pollutant, ng/J (1b/million Btu).
C = concentration of pollutant, ng/dscm (1b/dscf).
$\% O_2$ = oxygen concentration, percent dry basis.
$F_d$ = factor as determined from Method 19.

[40 CFR 60.46(b)(1)]

**A.25.** PM Emissions.

a. For the NSPS limit, EPA Method 5 shall be used to determine the particular matter concentration (C) at affected facilities without wet flue-gas-desulfurization (FGD) systems and EPA Method 5B shall be used to determine the particulate matter concentration (C) after FGD systems. See Specific Condition **A.4.a.**

(i) The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). The probe and filter holder heating systems in the sampling train shall be set to provide an average gas temperature of 160 ± 14 °C (320 ± 25 °F).

(ii) The emission rate correction factor, integrated or grab sampling and analysis procedure of EPA Method 3B shall be used to determine the $O_2$ concentration (%$O_2$). The $O_2$ sample shall be obtained simultaneously with, and at the same traverse points as, the particulate sample. If the grab sampling procedure is used, the $O_2$ concentration for the run shall be the arithmetic mean of the sample $O_2$ sample concentrations at all traverse points.

(iii) If the particulate run has more than 12 traverse points, the $O_2$ traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 $O_2$ traverse points.

[40 CFR 60.46(b)(2)]

b. For the SIP limit, the test method for PM shall be EPA Method 5, incorporated and adopted by reference in Chapter 62-297, F.A.C. See Specific Condition **A.4.b.**

c. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

[Rules 62-296.410(3)(b) & (c), F.A.C.]

d. A compliance test shall be conducted initially and once each federal fiscal year.

e. Within 90 days of first firing spent sulfite liquor, the permittee shall conduct an initial compliance test while firing spent sulfite liquor at permitted capacity. Thereafter, a compliance test while firing spent sulfite liquor shall be conducted if spent sulfite liquor is fired for 400 hours or more during the federal fiscal year.

[Rule 62-297.310(7)(a)4., F.A.C.]

**A.26.** Sulfur Dioxide Emissions.

a. EPA Method 6 shall be used to determine the $SO_2$ concentration.

(i) The sampling site shall be the same as that selected for the particulate sample. The sampling location in the duct shall be at the centroid of the cross section or at a point no closer to the walls than 1 m (3.28 ft). The sampling time and sample volume for each sample run shall be at least 20 minutes and 0.020 dscm (0.71 dscf). Two samples shall be taken during a 1-hour period, with each sample taken within a 30-minute interval.

(ii) The emission rate correction factor, integrated sampling and analysis procedure of EPA Method 3B shall be used to determine the $O_2$ concentration (%$O_2$). The $O_2$ sample shall be taken simultaneously with, and at the same point as, the $SO_2$ sample. The $SO_2$ emission rate shall be computed for each pair of $SO_2$ and $O_2$ samples. The $SO_2$ emission rate (E) for each run shall be the arithmetic mean of the results of the two pairs of samples.

[40 CFR 60.46(b)(4)]

b. A compliance test shall be conducted initially and in accordance with 40 CFR 60.8. Continuous compliance shall be demonstrated by the required emissions monitoring system.

[40 CFR 60.8; and, Rule 62-297.310(7)(a)4., F.A.C.]

**A.27.** Nitrogen Oxides Emissions.

a. EPA Method 7 shall be used to determine the $NO_X$ concentration.

(i) The sampling site and location shall be the same as for the $SO_2$ sample. Each run shall consist of four grab samples, with each sample taken at about 15-minute intervals.

(ii) For each $NO_X$ sample, the emission rate correction factor, grab sampling and analysis procedure of EPA Method 3B shall be used to determine the $O_2$ concentration ($\%O_2$). The sample shall be taken simultaneously with, and at the same point as, the $NO_X$ sample.
(iii) The $NO_X$ emission rate shall be computed for each pair of $NO_X$ and $O_2$ samples. The $NO_X$ emission rate (E) for each run shall be the arithmetic mean of the results of the four pairs of samples.

[40 CFR 60.46(b)(5)]

b. A compliance test shall be conducted initially and in accordance with 40 CFR 60.8. Continuous compliance shall be demonstrated by the required emissions monitoring system.

[40 CFR 60.8; and, Rule 62-297.310(7)(a)4., F.A.C.]

**A.28.** CO Emissions. The test method for carbon monoxide emissions shall be EPA Method 10, incorporated in Chapter 62-297, F.A.C. A compliance test shall be conducted initially and in accordance with 40 CFR 60.8. Continuous compliance shall be demonstrated by the required emissions monitoring system.

[40 CFR 60.8; and, Rules 62-297.401 and 62-297.310(7)(a)4., F.A.C.]

**A.29.** VOC Emissions.
a. The test method for VOC emissions shall be EPA Method 25A, incorporated in Chapter 62-297, F.A.C. A compliance test shall be conducted initially and in accordance with 40 CFR 60.8.; and, once every five years for renewal.

b. Within 90 days of first firing spent sulfite liquor, the permittee shall conduct an initial compliance while firing spent sulfite liquor at permitted capacity. Thereafter, a compliance test while firing spent sulfite liquor shall be conducted prior to renewing the Title V air operation permit.

[40 CFR 60.8; and, Rules 62-297.401 and 62-297.310(7)(a)4., F.A.C.]

**A.30.** Visible Emissions.
a. For the NSPS limit, EPA Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity. Compliance shall be demonstrated by COMS. See Specific Condition **A.11.a.**

[40 CFR 60.11; and, 40 CFR 60.46(b)(3)]

b. For the SIP limit, the test method for visible emissions shall be DEP Method, incorporated in Chapter 62-297, F.A.C. See Specific Conditions **A.11.b.** and **A.36.**

c. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

[Rules 62-296.410(3)(a) & (c), F.A.C.]

d. A compliance test shall be conducted initially and in accordance with 40 CFR 60.8. Continuous compliance shall be demonstrated by COMS.

[40 CFR 60.8; and, Rule 62-297.310(7)(a)4., F.A.C.]

**A.31.** DEP Method 9. The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions:
1. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen second intervals during the required period of observation.
2. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be

the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent opacity, except that an opacity of 40 percent is permissible for not more than two minutes per hour) opacity shall be computed as follows:

a. For the basic part of the standard (i.e., 20 percent opacity) the opacity shall be determined as specified above for a single-valued opacity standard.

b. For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken.

In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at least 90 percent of the observations possible for the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value.

[Rule 62-297.401, F.A.C.]

**A.32.** Fuel Analyses. For Power Boiler No. 6, the following fuel sampling and analysis protocol shall be used:
a. Determine and record the as-fired fuel sulfur content, percent by weight, for liquid fuels using either ASTM D2622-92, ASTM D4294-90, both ASTM D4057-88 and ASTM D129-91, or the latest edition, by analyzing a representative sample of the blended fuel oil following each fuel delivery.
b. Record hourly fuel totalizer readings with calculated hourly feed rates for each fuel fired, the ratio of fuels fired, the density of each fuel, and the percent sulfur content, by weight, of each fuel.
c. The analyses of the No. 6 fuel oil, as received from the supplier in a bill of lading, shall include the following:
   1. Density (ASTM D 1298-80 or the latest edition).
   2. Calorific heat value in Btu per pound (ASTM D 240-76 or the latest edition).
   3. Sulfur content, by weight (ASTM D2622-92, ASTM D4294-90, both ASTM D4057-88 and ASTM D129-91, or the latest edition).
d. On a quarterly basis, an analyses of the wood fuel and spent sulfite liquor shall include the following:
   1. Calorific heat value in Btu per pound (ASTM D2015-77, or the latest edition).
   2. Moisture content (ASTM D2016-74, 83, or the latest edition).
   3. Sulfur content, by weight (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods: EPA Publication SW-846 Third Edition (November 1986), or the latest edition).

[40 CFR 60, Subpart A]

**A.33.** Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

**A.34.** Operating Rate During Testing.
a. Testing of emissions shall be conducted with each emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions

unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

b. If the new emissions unit is unable to achieve the designed permitted capacity (at least 90%) for the initial tests, then this permit will be revised to reflect the true installed capacity.

[Rule 62-4.070(3), F.A.C.]

**A.35.** Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.

[Rule 62-297.310(3), F.A.C.]

**A.36.** Applicable Test Procedures.

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1 (attached).

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

**A.37.** Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

**A.38.** Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not

be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid fuel for more than 400 hours other than during startup.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a. Did not operate; or

b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

a. Visible emissions, if there is an applicable standard;

b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and

c. Each ~~NESHAP~~ pollutant, if there is an applicable emission standard.

5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid fuel, other than during startup, for a total of more than 400 hours.

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant
emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

**Recordkeeping and Reporting Requirements**

**A.39.** Notification.

a. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department's NED office in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department's NED.

[Rule 62-210.700(6), F.A.C.]

b. If CEMS or COMS data indicates non-compliance, the permittee shall notify the Department's NED office within one working day of such determination.

[Rule 62-4.070(3), F.A.C.]

**A.40.** Plant Operation - Problems. If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Department as soon as possible, but at least within one (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations.

[Rule 62-4.130, F.A.C.]

**A.41.** Test Reports.
(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department's NED on the results of each such test.
(b) The required test report shall be filed with the Department's NED as soon as practical but no later than 45 days after the last sampling run of each test is completed.
(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department's NED to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

**A.42.** Monthly records shall be kept of the quantity of "on-specification" used oil fired in these emissions units. The above records shall be maintained in a form suitable for inspection, retained for a minimum of five years, and be made available upon request. See Specific Conditions **A.13.** and **A.48.**

[Rule 62-213.440(1)(b)2.b., F.A.C.; and, 40 CFR 279.61 and 761.20(e)]

**A.43.** The permittee shall include in the "Annual Operating Report for Air Pollutant Emitting Facility" a summary of the "on-specification" used oil fired in the No. 6 Power Boiler during the calendar year. See Specific Conditions **A.13.** and **A.47.**

[Rule 62-213.440(1)(b)2.b., F.A.C.]

**A.44.** NSPS Excess Emission and Monitoring System Performance Reports. Excess emission and monitoring system performance reports shall be submitted to the Administrator for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in Sec. 60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:
(1) Opacity. Excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported.
(2) Sulfur dioxide. Excess emissions for affected facilities are defined as:
(i) Any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of sulfur dioxide as measured by a continuous monitoring system exceed the applicable standard established under 40 CFR 60.43. See Specific Condition **A.5.a.(1).**
(3) Nitrogen oxides. Excess emissions for affected facilities using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards under 40 CFR 60.44. See Specific Condition **A.6.a.(2).**

[40 CFR 60.45(g)(1), (2) & (3)]
**A.45.** Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

[40 CFR 60.8(a)]

**A.46.** Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator:
(1) Specifies or approves, in specific cases, the use of a reference method with minor changes in methodology;
(2) Approves the use of an equivalent method;
(3) Approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance;
(4) Waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard; or
(5) Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in 40 CFR 60.8 shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

[40 CFR 60.8(b)(1), (2), (3), (4) & (5)]

**A.47.** Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations

during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

[40 CFR 60.8(c)]

**A.48.** The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems , etc) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.

[40 CFR 60.8(d)]

**A.49.** The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such facility. This includes
    (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and
    (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
(2) Safe sampling platform(s).
(3) Safe access to sampling platform(s).
(4) Utilities for sampling and testing equipment.

[40 CFR 60.8(e)(1), (2), (3) & (4)]

**A.50.** Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[40 CFR 60.8(f)]

**B. <u>No. 6 Batch Digester</u>.**

**B.1.** The new No. 6 batch digester is in operation and included in with the "batch digesters" under Emissions Unit 005, Vent Gas Scrubber and Direct Contact Condenser", and is subject to the terms and conditions established for this emissions unit in Title V permit, No. 0890004-011-AV, specifically in Subsection G., which is incorporated by reference.

{Emission Unit 005 includes the vent gas scrubber (wet scrubber), which controls emissions from numerous vents from the cooking acid plant, the red stock washers, the unwashed stock tank, the spent sulfite liquor storage tanks, the spent sulfite liquor washer area, the digesters, and the blow pits. The scrubber is a packed bed containing 10 feet of packing consisting of two packed sections. The lower section is designed for sulfur dioxide emissions control via gas absorption using alkaline scrubbing media (soda ash, sodium hydroxide, etc.). The spent scrubber media is bled first to other closed sources to make maximum use of the alkali to remove sulfur dioxide, and then to sewer via closed piping to number 1 Pump Station. The sulfur dioxide concentration in the stack is continuously measured with a CMS.

The upper packed section of the vent gas scrubber is designed to condense methanol from the gas stream by direct contact with fresh well water, i.e. the Direct Contact Condenser. This is a once through process. The condensed methanol held in the water is sent to the biological effluent treatment system for treatment in order to comply with the requirements of 40 CFR 63, Subpart S.}

**C. Multiple Effect Evaporators (3 Bodies).**

**C.1.** The permittee is authorized to install three (3) new Multiple Effect Evaporators (MEEs) bodies, which are refurbished existing units. They will form a new train to be used to increase the solids concentration of weak HCE, a byproduct stream from the manufacturing process that can be used at Kraft mills as a sodium source. All of the MEEs will vent through a common condenser used to collect methanol and then vented to the atmosphere via the sulfur dioxide recovery scrubber for the recovery boiler. The new bodies will be lumped in with the two sets of MEEs and will now be described as "three" sets of MEEs under Emissions Unit 021, and subject to the terms and conditions established for this emissions unit in Title V permit, No. 0890004-011-AV, specifically in Subsection G., which is incorporated by reference.

{Emissions Unit 021 includes the Evaporator Vents Methanol Condenser System. The steam that is used to eject the vent gases from the two sets of multiple effect evaporators along with the evaporator vent gases themselves, are piped to a pre-condenser which condenses the steam followed by the main condenser which condenses the methanol. The water used to condense the steam and methanol is reclaimed from the biological effluent treatment system after the methanol has been digested.

The condensate from the pre-condenser and the main condenser are sewered to the biological effluent treatment system via the Number 3 Pump Station for compliance with the 40 CFR 63, Subpart S requirements.

The non-condensable gases from the main condenser are sent to the multi-stage wet scrubber/Brinks Demister at the Recovery boiler (Emissions Unit No. 006).}

**D. Facility.**

**D.1.** Capacity.
a. Except as provided below, the facility's production shall not exceed 162,000 air dried metric tons (ADMT) per consecutive 12-months, rolling total.
b. Upon successful installation and submittal of the engineering report of the HCE blow heat recovery system to control VOC emissions from all of the HCE cells, the facility's production shall not exceed 175,000 ADMT per consecutive 12-months, rolling total.

[Rules 62-4.070(3), 210.200(PTE) and 62-212.400(5), F.A.C.]

**D.2.** The application indicates the following preliminary schedule for commencing construction:

| Date | Activity |
|---|---|
| February 2006 | Add a new HCE washer press roll |
| February 2007 | Begin first improvements to pulp machine (drying and head-box) |
| | Add a new HCE evaporator train |
| February 2008 | Install a new HCE blow heat recovery system to control all HCE cells |
| | Add a new HCE cell |
| | Install a new HCE washer |
| | Begin second improvements to pulp machine (drying and speed increase) |
| | Install a new post-HCE washer |

* It is noted that some of the later changes are contingent on the success of the earlier stages.

**D.3.** The permittee is authorized to perform the following construction and work:

a. add a new HCE washer press roll;
b. begin first improvements to pulp machine (drying and head-box);
c. add a new HCE evaporator train; install a new HCE blow heat recovery system to control all HCE cells;
d. add a new HCE cell;
e. install a new HCE washer; begin second improvements to pulp machine (drying and speed increase); and,
f. install a new post-HCE washer.

The permittee shall obtain prior written approval for any substantial changes to the work described above and in the application for this project.

**D.4.** Within fourteen (14) days of completing each of the above stages of work, the permittee shall provide a written notice of the following:

a. type of work;
b. date completed;
c. deviations form original proposal; and,
d. a discussion of any emissions impacts.

**D.5.** Attached to each required Annual Operating Report, the permittee shall provide a summary of the following to the compliance authority:

a. a summary of work performed to date;
b. a summary of work remaining;
c. a preliminary schedule for completing any remaining work; and,
d. the current production capacity of the mill (ADMT per year).

**D.6.** Performance tests.

a. Prior to increasing plant production beyond 162,000 ADMT per year, the permittee shall install a new HCE blow heat recovery system designed to reduce VOC emissions by 60% from all HCE cells. Upon successful completion of this system, the permittee shall conduct an engineering study to determine the effectiveness of this system in capturing and reducing VOC emissions to achieve designed efficiency. A test protocol shall be submitted to the Department for review and approval prior to commencing the engineering study. Within 60 days of completing the engineering study, the permittee shall submit a report summarizing: the final installed design, material flow rates, emissions, emissions capture, emissions control, and any necessary adjustments.

[Rule 62-4.070(3), F.A.C.]

**E. Miscellaneous.**

**E.1.** Report of Actual Emissions. The permittee shall maintain and submit actual annual emissions for a period of 5 years following completion of each project phase. Emissions related to demand growth that could have been accommodated prior to the project must be shown and discussed. This requirement shall be fulfilled by submittal of a report in conjunction with the required Annual Operating Report.

[Rule 62-4.070(3) and 62-212.400(5), F.A.C.]

**E.2.** Testing While Burning TDF. A one-time test shall be conducted while burning the maximum percentage of TDF expected using EPA Method 29 pursuant to 40 CFR 60, Appendix A, and Chapter 62-297, F.A.C.

[Rule 62-4.070(3) and Chapter 62-297, F.A.C.; and, 40 CFR 60, Appendix A]

**F. Bleach Plant.**

**F.1.** The dissolving-grade bleaching system shall achieve compliance with the bleach plant provisions of 40 CFR 63.445 *as expeditiously as practicable*, but in no event later than 4 years from the issuance of this air construction permit.

[40 CFR 63.440(d)(2) and 63.445]

**G. Temporary Trial Burn of Effluent Treatment System Solids for No. 6 Power Boiler**

This section authorizes a temporary trial burn of effluent treatment system solids in the No. 6 Power Boiler to gather emissions and operational data. The results may later be used in an application for a permanent request to allow the firing of effluent treatment system solids.

**G.1.** Authorization: The permittee is authorized to conduct a temporary trial burn of effluent treatment system solids in the No. 6 Power Boiler (EU-022). Primary and secondary sludges are the only authorized solids that may be burned during the trial. Both sludges must be pressed to approximately 70% solids by weight or less. Up to 500 oven-dried tons of effluent treatment system solids may be fired during the trial burn. [Application No. 0890004-021-AC]

**G.2.** Notification: At least 15 days prior to conducting the tests, the permittee shall provide a schedule of the testing program to the Compliance Authority. The Compliance Authority may waive the 15-day advance notice requirement. The schedule shall be updated as necessary. [Application No. 0890004-021-AC]

**G.3.** Emissions Tests: Based on existing continuous emissions monitoring system (CEMS) data, the permittee shall monitor $SO_2$, $NO_x$, opacity, CO, and oxygen. During the trial burn, the permittee shall conduct three stack test runs to monitor PM, VOC, dioxins, hydrogen chloride, HAP metals, mercury and boiler ash. Tests shall be conducted under the maximum expected firing rates. The maximum firing rates during the tests will be used to determine the maximum allowable firing rates for any future permanent authorization. [Application No. 0890004-021-AC]

**G.4.** Test Schedule: The testing program shall commence upon first fire of effluent treatment system solids. All tests shall be completed within 30 days of first fire. If the permit has not expired, the permittee may request additional time from the Bureau of Air Regulation to complete the testing program. [Application No. 0890004-021-AC]

**G.5.** Report: Within 60 days of completing the testing program, the permittee shall submit a report summarizing the following: test program and procedures, data collection methods, tested configurations, analytical results, and a conclusion. A copy of the report shall be submitted to the Compliance Authority. [Application No. 0890004-021-AC]

## APPENDIX SS-1, STACK SAMPLING FACILITIES (version dated 10/07/96)

Stack Sampling Facilities Provided by the Owner of an Emissions Unit. This section describes the minimum requirements for stack sampling facilities that are necessary to sample point emissions units. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. Emissions units must provide these facilities at their expense. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

(a) Permanent Test Facilities. The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.

(b) Temporary Test Facilities. The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.

(c) Sampling Ports.

1. All sampling ports shall have a minimum inside diameter of 3 inches.
2. The ports shall be capable of being sealed when not in use.
3. The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
4. For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.
5. On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

(d) Work Platforms.

1. Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
2. On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
3. On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
4. All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toeboard, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

(e) Access to Work Platform.

1. Ladders to the work platform exceeding 15 feet in length shall have safety cages or, fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.

2. Walkways over free-fall areas shall be equipped with safety rails and toeboards.

(f) Electrical Power.

1. A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.

2. If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

(g) Sampling Equipment Support.

1. A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.

a. The bracket shall be a standard 3 inch x 3 inch x one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.

b. A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.

c. The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.

2. A complete monorail or dualrail arrangement may be substituted for the eyebolt and bracket.

3. When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

[Rule 62-297.310(6), F.A.C.]

## TABLE 297.310-1 CALIBRATION SCHEDULE
## (version dated 10/07/96)

[Note: This table is referenced in Rule 62-297.310, F.A.C.]

| ITEM | MINIMUM CALIBRATION FREQUENCY | REFERENCE INSTRUMENT | TOLERANCE |
|---|---|---|---|
| Liquid in glass thermometer | Annually | ASTM Hg in glass ref. thermometer or equivalent, or thermometric points | +/-2% |
| Bimetallic thermometer | Quarterly | Calib. liq. in glass thermometer | 5 degrees F |
| Thermocouple | Annually | ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer | 5 degrees F |
| Barometer | Monthly | Hg barometer or NOAA station | +/-1% scale |
| Pitot Tube | When required or when damaged | By construction or measurements in wind tunnel D greater than 16" and standard pitot tube | See EPA Method 2, Fig. 2-2 & 2-3 |
| Probe Nozzles | Before each test or when nicked, dented, or corroded | Micrometer | +/-0.001" mean of at least three readings Max. deviation between readings .004" |
| Dry Gas Meter and Orifice Meter | 1. Full Scale: When received, When 5% change observed, Annually<br>2. One Point: Semiannually | Spirometer or calibrated wet test or dry gas test meter | 2% |
| | 3. Check after each test series | Comparison check | 5% |

[electronic file name: 297310-1.doc]

**Harvey, Mary**

**From:** Harvey, Mary
**Sent:** Friday, April 18, 2008 2:48 PM
**To:** 'Mr. F.J. Perrett, Rayonier Performance Fibers, LLC'; 'Mr. Dave Rogers, Rayonier Performance Fibers, LLC'; 'Mr. Dave Tudor, Rayonier Performance Fibers, LLC'; 'Mr. David Buff, Golder Associates, Inc.'; 'Ms. Kathleen Forney, EPA Region 4'; Kirts, Christopher
**Cc:** Branum, Corrie; Walker, Elizabeth (AIR); Gibson, Victoria
**Subject:** RAYONIER PERFORMANCE FIBERS, LLC - PROJECT #0890004-021-AC-FINAL
**Attachments:** 0890004.021.AC.F_pdf.zip

**Tracking:**

| Recipient | Read |
|---|---|
| 'Mr. F.J. Perrett, Rayonier Performance Fibers, LLC' | |
| 'Mr. Dave Rogers, Rayonier Performance Fibers, LLC' | |
| 'Mr. Dave Tudor, Rayonier Performance Fibers, LLC' | |
| 'Mr. David Buff, Golder Associates, Inc.' | |
| 'Ms. Kathleen Forney, EPA Region 4' | |
| Kirts, Christopher | |
| Branum, Corrie | Read: 4/18/2008 2:50 PM |
| Walker, Elizabeth (AIR) | |
| Gibson, Victoria | Read: 4/18/2008 2:50 PM |

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site:
http://www.adobe.com/products/acrobat/readstep.html.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

## Harvey, Mary

**From:** Jack.Perrett@rayonier.com
**Sent:** Friday, April 18, 2008 2:57 PM
**To:** Harvey, Mary
**Subject:** Re: RAYONIER PERFORMANCE FIBERS, LLC - PROJECT #0890004-021-AC-FINAL

Mary,

We received the permit.

Thank you,

Jack Perrett

## Harvey, Mary

**From:** David.Rogers@rayonier.com
**Sent:** Friday, April 18, 2008 3:27 PM
**To:** Harvey, Mary
**Cc:** Kirts, Christopher; Branum, Corrie; Mr. Dave Tudor, Rayonier Performance Fibers, LLC; Mr. David Buff, Golder Associates, Inc.; Walker, Elizabeth (AIR); Ms. Kathleen Forney, EPA Region 4; Mr. F.J. Perrett, Rayonier Performance Fibers, LLC; Gibson, Victoria
**Subject:** Re: RAYONIER PERFORMANCE FIBERS, LLC - PROJECT #0890004-021-AC-FINAL

**Attachments:** 0890004.021.AC.F_pdf.zip

0890004.021.AC.F _pdf.zip (577 ...

We received the email of the final permit. Thank you.

David Rogers
Manager, Environmental Operations
Rayonier Fernandina Mill

"Harvey, Mary" <Mary.Harvey@dep.state.fl.us>

04/18/2008 02:48 PM

To "Mr. F.J. Perrett, Rayonier Performance Fibers, LLC" <jack.perrett@rayonier.com>, "Mr. Dave Rogers, Rayonier Performance Fibers, LLC" <david.rogers@rayonier.com>, "Mr. Dave Tudor, Rayonier Performance Fibers, LLC" <david.tudor@rayonier.com>, "Mr. David Buff, Golder Associates, Inc." <dbuff@golder.com>, "Ms. Kathleen Forney, EPA Region 4" <Forney.Kathleen@epa.gov>, "Kirts, Christopher" <Christopher.Kirts@dep.state.fl.us>

cc "Branum, Corrie" <Corrie.Branum@dep.state.fl.us>, "Walker, Elizabeth \(AIR\)" <Elizabeth.Walker@dep.state.fl.us>, "Gibson, Victoria" <Victoria.Gibson@dep.state.fl.us>

Subject RAYONIER PERFORMANCE FIBERS, LLC - PROJECT #0890004-021-AC-FINAL

Dear Sir/Madam:

## Harvey, Mary

**From:** Branum, Corrie
**To:** Harvey, Mary
**Sent:** Friday, April 18, 2008 2:49 PM
**Subject:** Read: RAYONIER PERFORMANCE FIBERS, LLC - PROJECT #0890004-021-AC-FINAL

Your message

| | |
|---|---|
| To: | 'Mr. F.J. Perrett, Rayonier Performance Fibers, LLC'; 'Mr. Dave Rogers, Rayonier Performance Fibers, LLC'; 'Mr. Dave Tudor, Rayonier Performance Fibers, LLC'; 'Mr. David Buff, Golder Associates, Inc.'; 'Ms. Kathleen Forney, EPA Region 4'; Kirts, Christopher |
| Cc: | Branum, Corrie; Walker, Elizabeth (AIR); Gibson, Victoria |
| Subject: | RAYONIER PERFORMANCE FIBERS, LLC - PROJECT #0890004-021-AC-FINAL |
| Sent: | 4/18/2008 2:48 PM |

was read on 4/18/2008 2:50 PM.

## Harvey, Mary

**From:** Gibson, Victoria
**To:** Harvey, Mary
**Sent:** Friday, April 18, 2008 2:50 PM
**Subject:** Read: RAYONIER PERFORMANCE FIBERS, LLC - PROJECT #0890004-021-AC-FINAL

Your message

| | |
|---|---|
| To: | 'Mr. F.J. Perrett, Rayonier Performance Fibers, LLC'; 'Mr. Dave Rogers, Rayonier Performance Fibers, LLC'; 'Mr. Dave Tudor, Rayonier Performance Fibers, LLC'; 'Mr. David Buff, Golder Associates, Inc.'; 'Ms. Kathleen Forney, EPA Region 4'; Kirts, Christopher |
| Cc: | Branum, Corrie; Walker, Elizabeth (AIR); Gibson, Victoria |
| Subject: | RAYONIER PERFORMANCE FIBERS, LLC - PROJECT #0890004-021-AC-FINAL |
| Sent: | 4/18/2008 2:48 PM |

was read on 4/18/2008 2:50 PM.

## Harvey, Mary

**From:** Kirts, Christopher
**To:** Harvey, Mary
**Sent:** Wednesday, April 23, 2008 8:25 AM
**Subject:** Read: RAYONIER PERFORMANCE FIBERS, LLC - PROJECT #0890004-021-AC-FINAL

Your message

| | |
|---|---|
| To: | 'Mr. F.J. Perrett, Rayonier Performance Fibers, LLC'; 'Mr. Dave Rogers, Rayonier Performance Fibers, LLC'; 'Mr. Dave Tudor, Rayonier Performance Fibers, LLC'; 'Mr. David Buff, Golder Associates, Inc.'; 'Ms. Kathleen Forney, EPA Region 4'; Kirts, Christopher |
| Cc: | Branum, Corrie; Walker, Elizabeth (AIR); Gibson, Victoria |
| Subject: | RAYONIER PERFORMANCE FIBERS, LLC - PROJECT #0890004-021-AC-FINAL |
| Sent: | 4/18/2008 2:48 PM |

was read on 4/23/2008 8:25 AM.

**Harvey, Mary**

**From:** Buff, Dave [DBuff@GOLDER.com]
**Sent:** Monday, April 21, 2008 9:30 AM
**To:** Harvey, Mary
**Subject:** RE: RAYONIER PERFORMANCE FIBERS, LLC - PROJECT #0890004-021-AC-FINAL

David A. Buff, P.E., Q. E. P.
Golder Associates Inc.
Phone: (352)336-5600 x 545
Fax: (352)336-6603 Mobile: (352)514-5600
E-Mail: dbuff@golder.com



**From:** Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]
**Sent:** Friday, April 18, 2008 2:48 PM
**To:** Mr. F.J. Perrett, Rayonier Performance Fibers, LLC; Mr. Dave Rogers, Rayonier Performance Fibers, LLC; Mr. Dave Tudor, Rayonier Performance Fibers, LLC; Buff, Dave; Ms. Kathleen Forney, EPA Region 4; Kirts, Christopher
**Cc:** Branum, Corrie; Walker, Elizabeth (AIR); Gibson, Victoria
**Subject:** RAYONIER PERFORMANCE FIBERS, LLC - PROJECT #0890004-021-AC-FINAL

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: http://www.adobe.com/products/acrobat/readstep.html.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

# Rayonier

*Performance Fibers*

*Fernandina Mill*

April 8, 2008



**Certified Mail, Return Receipt Requested**

Ms. Corrie Branum
Florida Dept. of Environmental Protection
Bureau of Air Regulation
Division of Air Resource Management
2600 Blair Stone Road, M.S. 5505
Tallahassee, FL 32399-2400

Re: Public Notice of Intent to Issue an Air Construction Permit
Rayonier Performance Fibers, Fernandina Mill
0890004-21-AC

Dear Ms. Branum:

Attached is a tear sheet of the Public Notice of Intent to Issue an Air Construction Permit that was published in the Fernandina News-Leader on April 2, 2008.

If you have any questions, please contact David Rogers at 904-277-1346 or david.rogers@rayonier.com.

Yours very truly,

David W. Rogers
Manager, Environmental Operations

**PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT**

Florida Department of Environmental Protection
Division of Air Resource Management, Bureau of Air Regulation
Draft Permit No. 0890004-021-AC
Rayonier Performance Fibers, LLC
Fernandina Beach Dissolving Sulfite Pulp Mill
Nassau County, Florida

Applicant: The applicant for this project is Rayonier Performance Fibers, LLC. The applicant's authorized representative and mailing address is: F.J. Perrett, General Manager, Rayonier Performance Fibers, LLC, Fernandina Beach Dissolving Sulfite Pulp Mill, Post Office Box 2002, Fernandina Beach, FL 32035.

Facility Location: Rayonier Performance Fibers, LLC operates the existing Fernandina Beach Mill, which is a dissolving sulfite pulp mill located in Nassau County at The Foot of Gum Street in Fernandina Beach, Florida.

Project: Rayonier Performance Fibers, LLC requests the following revisions to air Permit No. 0890004-018-AC for the recently constructed No. 6 Power Boiler located at the Fernandina Beach: an increase in the steam production rates while maintaining the original maximum heat input rates; authorization to fire spent sulfite liquor; removal of the federal industrial boiler provisions in Subpart DDDDD of 40 CFR Part 63, which have been vacated; and authorization to conduct a trial burn of effluent treatment system solids. The No. 6 Power Boiler includes the following air pollution control equipment: a settling chamber and 4-field electrostatic precipitator to remove particulate matter emissions; an alkaline wet scrubber to reduce acid gas emissions; staged combustion and flue gas recirculation to control nitrogen oxides emissions; and the capability to add a selective non-catalytic reduction system for the additional control of nitrogen oxides emissions. The facility is required to continuously monitor and record emissions of the following pollutants: carbon monoxide, nitrogen oxides, sulfur dioxide and opacity. For the recently constructed and commissioned boiler, the changes are not expected to result in increased emissions.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available on the following web site: http://www.dep.state.fl.us/air/eproducts/apds/default.asp.

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be post-marked by the close of business (5:00 p.m.), on or before the end of this 14-day period by the Permitting Authority at the above address. If written comments result in a significant change to the Draft Permit, the Permitting Authority will issue a revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 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 (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority'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 rights will be affected by the agency determination; (c) A statement of when and how the petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority'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, F.A.C.

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

Mediation: Mediation is not available for this proceeding.

1t 04-02-2008
6514

FLORIDA'S OLDEST WEEKLY NEWSPAPER

NEWS LEADER

*Published Weekly*
**511 Ash Street/P.O. Box 766 (904) 261-3696**
**Fernandina Beach, Nassau County, Florida 32034**

STATE OF FLORIDA
COUNTY OF NASSAU:

Before the undersigned authority personally appeared
**Michael B. Hankins**
Who on oath says that he is the Advertising Director of the Fernandina Beach News-Leader, a weekly newspaper published at Fernandina Beach in Nassau County, Florida; that the attached copy of advertisement, being a Legal Notice in the matter of

**RAYONIER**
**Public Notice of Intent to Issue Air Permit**

Was published in said newspaper in the issues of

**04/02/08**
**Ref. #6514**

Affiant further says that the said Fernandina Beach News-Leader is a newspaper published at Fernandina Beach, in said Nassau County, Florida and that the said newspaper has heretofore been continuously published in said Nassau County, Florida, each week and has been entered as second class mail matter at the post office in Fernandina Beach in said Nassau County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and Affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Michael B. Hankins

Sworn to and subscribed before me
**This 2nd day of April A.D. 2008.**

Robert O. Fiege

Robert O. Fiege, Notary Public

Personally Known

ROBERT O. FIEGE
MY COMMISSION # DD317112
EXPIRES: May 31, 2008
1-800-3-NOTARY
Fl. Notary Discount Assoc. Co.

RECEIVED
APR 10 2008
BUREAU OF AIR REGULATION

# Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
*Governor*

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary


March 19, 2008

F.J. Perrett, General Manager
Rayonier Performance Fibers, LLC
Post Office Box 2002
Fernandina Beach, FL 32035

Re: Draft Air Permit No. 0890004-021-AC
Rayonier Performance Fibers, LLC
Fernandina Beach Dissolving Sulfite Pulp Mill
No. 6 Power Boiler Permit Revision

Dear Mr. Perrett:

On December 17, 2007, you submitted an application requesting minor revisions to Power Boiler No. 6 in air construction Permit No. 0890004-018-AC, which is located at the Fernandina Beach Mill. In addition, you requested authorization for a trial burn of effluent treatment systems solids in this boiler. Enclosed are the following documents.

- The Technical Evaluation and Preliminary Determination summarizes the technical review of the application and provides the rationale for making the preliminary determination to issue a Draft Permit.
- The proposed Draft Permit includes the specific conditions that regulate the emissions units.
- The Written Notice of Intent to Issue Air Permit provides important information regarding: the intent to issue an air permit for the proposed project; the requirements for publishing a Public Notice of the intent to issue an air permit; the procedures for submitting comments on the Draft Permit; the process for filing a petition for an administrative hearing; and the availability of mediation.
- The Public Notice of Intent to Issue Air Permit is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project.

If you have any questions, please contact the Project Engineer, Corrie Branum, at 850/921-8968.

Sincerely,

Trina L Vielhauer

Trina Vielhauer, Chief
Bureau of Air Regulation

Enclosures

TLV/jfk/cb

## WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

*In the Matter of an*
*Application for Air Permit by:*

Rayonier Performance Fibers, LLC
Post Office Box 2002
Fernandina Beach, FL 32035

*Authorized Representative:*
F.J. Perrett, General Manager

Draft Air Permit No. 0890004-021-AC
Fernandina Beach Mill
No. 6 Power Boiler
Miscellaneous Permit Revisions
Nassau County, Florida

**Facility Location**: Rayonier Performance Fiber, LLC operates the existing Fernandina Beach Mill, which is an existing dissolving sulfite pulp mill located in Nassau County at The Foot of Gum Street in Fernandina Beach, Florida.

**Project**: The applicant requests the following revisions to air Permit No. 0890004-018-AC for the recently constructed No. 6 Power Boiler located at the Fernandina Beach: an increase in the steam production rates while maintaining the original maximum heat input rates; authorization to fire spent sulfite liquor; removal of the federal industrial boiler provisions in Subpart DDDDD of 40 CFR Part 63, which has been vacated; and authorization to conduct a trial burn of effluent treatment system solids. Details of the project are provided in the application and the enclosed Technical Evaluation and Preliminary Determination.

**Permitting Authority**: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

**Project File**: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above.

**Notice of Intent to Issue Permit**: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

**Public Notice**: Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the

activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

**Comments**: The Permitting Authority will accept written comments concerning the Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be post-marked by the close of business (5:00 p.m.), on or before the end of this 14-day period by the Permitting Authority at the above address. If written comments result in a significant change to the Draft Permit, the Permitting Authority will issue a revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

**Petitions**: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this Written Notice of Intent to Issue Air Permit. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the attached Public Notice or within 14 days of receipt of this Written Notice of Intent to Issue Air Permit, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 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 (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority'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 when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority'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, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected

by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

**Mediation**: Mediation is not available in this proceeding.

Executed in Tallahassee, Florida.

Trina Vielhauer, Chief
Bureau of Air Regulation

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this Written Notice of Intent to Issue Air Permit package (including the Public Notice, the Technical Evaluation and Preliminary Determination and the Draft Permit) was sent by electronic mail with received receipt requested before the close of business on 3/20/08 to the persons listed below.

Mr. F.J. Perrett, Rayonier Performance Fibers, LLC (jack.perrett@rayonier.com)
Mr. Dave Rogers, Rayonier Performance Fibers, LLC (david.rogers@rayonier.com)
Mr. Dave Tudor, Rayonier Performance Fibers, LLC (david.tudor@rayonier.com)
Mr. David Buff, Golder Associates, Inc. (dbuff@golder.com)
Ms. Kathleen Forney, EPA Region 4 (Forney.Kathleen@epa.gov)
Mr. Chris Kirts, NED Office (Christopher.Kirts@dep.state.fl.us)

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

(Clerk) 3/20/08 (Date)

**PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT**

Florida Department of Environmental Protection
Division of Air Resource Management, Bureau of Air Regulation
Draft Permit No. 0890004-021-AC
Rayonier Performance Fibers, LLC
Fernandina Beach Dissolving Sulfite Pulp Mill
Nassau County, Florida

**Applicant**: The applicant for this project is Rayonier Performance Fibers, LLC. The applicant's authorized representative and mailing address is: F.J. Perrett, General Manager, Rayonier Performance Fibers, LLC, Fernandina Beach Dissolving Sulfite Pulp Mill, Post Office Box 2002, Fernandina Beach, FL, 32035.

**Facility Location**: Rayonier Performance Fibers, LLC operates the existing Fernandina Beach Mill, which is a dissolving sulfite pulp mill located in Nassau County at The Foot of Gum Street in Fernandina Beach, Florida.

**Project**: Rayonier Performance Fibers, LLC requests the following revisions to air Permit No. 0890004-018-AC for the recently constructed No. 6 Power Boiler located at the Fernandina Beach: an increase in the steam production rates while maintaining the original maximum heat input rates; authorization to fire spent sulfite liquor; removal of the federal industrial boiler provisions in Subpart DDDDD of 40 CFR Part 63, which have been vacated; and authorization to conduct a trial burn of effluent treatment system solids. The No. 6 Power Boiler includes the following air pollution control equipment: a settling chamber and 4-field electrostatic precipitator to remove particulate matter emissions; an alkaline wet scrubber to reduce acid gas emissions; staged combustion and flue gas recirculation to control nitrogen oxides emissions; and the capability to add a selective non-catalytic reduction system for the additional control of nitrogen oxides emissions. The facility is required to continuously monitor and record emissions of the following pollutants: carbon monoxide, nitrogen oxides, sulfur dioxide and opacity. For the recently constructed and commissioned boiler, the changes are not expected to result in increased emissions.

**Permitting Authority**: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

**Project File**: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available on the following web site: http://www.dep.state.fl.us/air/eproducts/apds/default.asp.

**Notice of Intent to Issue Air Permit**: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

**(Public Notice to be Published in the Newspaper)**

## PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

**Comments**: The Permitting Authority will accept written comments concerning the Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be post-marked by the close of business (5:00 p.m.), on or before the end of this 14-day period by the Permitting Authority at the above address. If written comments result in a significant change to the Draft Permit, the Permitting Authority will issue a revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

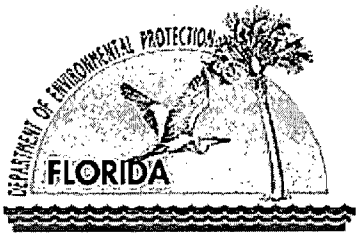
**Petitions**: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 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 (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority'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 rights will be affected by the agency determination; (c) A statement of when and how the petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority'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, F.A.C.

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

**Mediation**: Mediation is not available for this proceeding.

**(Public Notice to be Published in the Newspaper)**




# TECHNICAL EVALUATION

# &

# PRELIMINARY DETERMINATION

## PROJECT

Draft Permit No. 0890004-021-AC
No. 6 Power Boiler, Miscellaneous Revisions

## APPLICANT

Rayonier Performance Fibers, LLC
Fernandina Beach Dissolving Sulfite Pulp Mill
ARMS Facility ID No. 0890004

## COUNTY

Nassau County, Florida

## PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
New Source Review Section
2600 Blair Stone Road, MS#5505
Tallahassee, Florida 32399-2400

March 19, 2008

## 1. GENERAL PROJECT INFORMATION

### Facility Description and Location

Rayonier Performance Fibers, LLC operates an existing Dissolving Sulfite Pulp Mill (SIC No. 2611) located in Nassau County at the Foot of Gum Street in Fernandina Beach, Florida. The UTM coordinates are Zone 14, 454.7 km East and 3392.2 km North. The facility is an acid sulfite based pulp mill using ammonia as a base chemical for the manufacture of dissolving pulps. This plant produces approximately ten different grades of pulp, which are used in products such as plastics, photographic film, LCD screens, paint, cigarette filters, pharmaceuticals, food productions, cosmetics, and textiles. The mill produces approximately 150,000 tons of performance fibers annually. The plant currently consists of a Power Boiler No. 6 (EU-022), a Vent Gas Scrubber and Direct Contact Condenser (EU-005), a Recovery Boiler (EU-006), a Molten Sulfur Storage and Handling facility (EU-007), a Biological Effluent Treatment System (EU-010) and an Evaporator Vents Methanol Condenser System (EU-021).

### Regulatory Categories

- The facility is a major source of hazardous air pollutants (HAP).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, Florida Administrative Code (F.A.C.).
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

### Project Description

The Department issued Permit No. 0890004-021-AC to authorize installation of new Power Boiler No. 6 and permanent shut down of Power Boiler Nos. 1 – 3. Construction of Power Boiler No. 6 is complete, satisfactory compliance tests have been conducted and an application to revise the Title V operation permit submitted to the Northeast District Office. Based on the installed equipment, the applicant requests the following revisions to Permit No. 0890004-021-AC for Power Boiler No. 6: an increase in the steam rates while maintaining the original maximum heat input rates; authorization to fire spent sulfite liquor; removal of the Boiler MACT provisions in Subpart DDDDD of 40 CFR Part 63; and authorization for a trial burn of effluent treatment system solids. This project affects only Power Boiler No. 6 (EU-022).

## 2. APPLICABLE REGULATIONS

### State Regulations

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the F.A.C. This project is subject to the applicable rules and regulations defined in the following Chapters of the F.A.C.: 62-4 (Permitting Requirements); 62-204 (Ambient Air Quality Requirements, Prevention of Significant Deterioration (PSD) Increments, and Federal Regulations Adopted by Reference); 62-210 (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms); 62-212 (Preconstruction Review, PSD Review and BACT, and Non-attainment Area Review and LAER); 62-213 (Title V Air Operation Permits for Major Sources of Air Pollution); 62-296 (Emission Limiting Standards); and 62-297 (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures).

### Federal Regulations

The facility is subject to applicable federal provisions regarding air quality as established by the Environmental Protection Agency (EPA) in Title 40 of the Code of Federal Regulations (CFR). In general, these regulations establish: New Source Performance Standards (NSPS) for new, modified or reconstructed units; National Emissions Standards for Hazardous Air Pollutants (NESAHP) regulated by pollutant for existing, new, or

reconstructed units; and NESAHP regulated by source category for existing, new, or reconstructed units. Federal regulations are adopted in Rule 62-204.800, F.A.C. Existing units at the facility are subject to portions of the following regulations in 40 CFR 63: Subpart A (General Provisions); Subpart S (NESHAP for Pulp and Paper Industry); and Subpart MM (NESHAP for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semi Chemical Pulp Mills). The proposed modifications will not change the regulated status of any existing unit.

## 3. PSD APPLICABILITY REVIEW

### General PSD Applicability

The Department regulates major stationary sources in accordance with Florida's PSD program pursuant to Rule 62-212.400, F.A.C. A PSD preconstruction review is required in areas that are currently in attainment with the state and federal Ambient Air Quality Standards (AAQS) or areas designated as "unclassifiable" for these regulated pollutants. As defined in Rule 62-210.200, F.A.C., a facility is considered a "major stationary source" if it emits or has the potential to emit 5 tons per year of lead, 250 tons per year or more of any PSD pollutant, or 100 tons per year or more of any PSD pollutant and the facility belongs to one of the 28 listed PSD major facility categories.

For major stationary sources, PSD applicability is based on emissions thresholds known as the "significant emission rates" as defined in Rule 62-210.200, F.A.C. Emissions of PSD pollutants from a project exceeding these rates are considered "significant" and the Best Available Control Technology (BACT) must be employed to minimize emissions of each PSD pollutant. Although a facility may be "major" for only one PSD pollutant, a project must include BACT controls for any PSD pollutant that exceeds the corresponding significant emission rate. In addition, applicants must provide an Air Quality Analysis that evaluates the predicted air quality impacts resulting from the project for each PSD pollutant.

### PSD Applicability for the Project

The project is located in Nassau County, which is in an area that is currently in attainment with the state and federal AAQS or otherwise designated as unclassifiable. The facility is an existing dissolving sulfite pulp mill, which is one of the 28 listed PSD major facility categories, and emits or has the potential to emit 100 tons per year or more of at least one PSD pollutant. Therefore, the facility is a major stationary source and the project is subject to a PSD applicability review. The original project to install Power Boiler No. 6 included the permanent shutdown of Power Boilers 1-3, which allowed the original project to avoid PSD preconstruction review. The requested revisions do not result in any emissions increases and this project is not subject to PSD preconstruction review.

## 4. DEPARTMENT'S PROJECT REVIEW

### Increase in Steam Production Rate

Condition A.1 of original Permit No. 0890004-018-AC established the following steam production limits and heat input limits for the No. 6 Power Boiler: 310,000 lb/hour of steam and 525 MMBtu/hour heat input rate, based on 24-hour averages; and 265,000 lb/hour of steam and 450 MMBtu/hour heat input rate, based on 12-month rolling averages. The maximum steam production rates were calculated from the maximum heat input rates based on an assumed boiler thermal efficiency of 65% for the new boiler. The permit required performance tests to determine the actual thermal efficiency, which indicated a 70% thermal efficiency. To account for the higher actual installed thermal efficiency, the applicant requests approximately a 8% increase in the steam production rates to correspond to the maximum heat input rates as follows: 330,000 lb/hour of steam based on a 24-hour average; and 286,000 lb/hour of steam based on a 12-month rolling average. The request is reasonable and the permit will be revised accordingly. The current heat input rates will not change. Since this is simply a correction for the actual installed thermal efficiency of the new boiler there are no emissions increases from this change.

**Burning Spent Sulfite Liquor**

Power Boiler No. 6 is currently authorized to fire No. 6 fuel oil with a maximum sulfur content of 2.5% by weight. Fuel oil is fired primarily during startup, shutdown or as a supplemental fuel during solid fuel feed upsets. The applicant requests authorization to also fire spent sulfite liquor, which is the chemical material that contains various organic impurities removed from the wood chip after the cooking cycle is complete. The spent sulfite liquor will be fired through the burner system.

The No. 6 Power Boiler includes the following air pollution control equipment: staged combustion and flue gas recirculation (FGR) to reduce nitrogen oxides ($NO_X$) emissions; a large settling chamber followed by an electrostatic precipitator (ESP) to remove particulate matter (PM); and a wet alkaline scrubber to control acid gases. In addition, compliance will be demonstrated by data collected from continuous emissions monitoring systems (CEMS) for sulfur dioxide ($SO_2$), $NO_X$, carbon monoxide (CO) and opacity. In addition, the unit is set up for the installation of selective non-catalytic reduction (SNCR) to further control $NO_X$ emissions, if necessary.

With the existing boiler and control systems, Rayonier believes that up to 1200 gph of this liquor can be fired without increasing any emissions when compared to firing No. 6 fuel oil and while complying with the most stringent emissions standards currently specified in the permit, including:

| Pollutant | Emissions Standards |
|---|---|
| CO | 157.5 lbs/hour based on a 30-day rolling CEMS average (equivalent to 0.3 lb/MMBtu heat input)<br>591.3 tons per consecutive 12-month rolling total based on all CEMS data collected |
| $NO_X$ | 0.30 lb/MMBtu heat input based on a 3-hour CEMS average<br>380.0 tons per consecutive 12-month rolling total based on all CEMS data collected |
| Opacity | 20% opacity (6-minute average) except for one 6-minute period per hour $\leq$ 27% opacity based on COMS data |
| PM | 0.07 lb/MMBtu heat input as determined by stack tests in accordance with EPA Methods 5 or 17 |
| $SO_2$ | 0.80 lb/MMBtu based on a 3-hour CEMS average<br>210.0 tons per consecutive 12-month rolling total based on all CEMS data collected |
| VOC | 0.002 lb/MMBtu heat input as determined by stack tests in accordance with EPA Method 25A |

The maximum sulfur content of spent sulfite liquor is estimated to be 5.5% by weight. To comply with the short-term $SO_2$ standards, a 70% reduction will be necessary from the wet alkali scrubber, which is achievable with the existing control system. To comply with the annual $SO_2$ emissions cap, the permittee must manage the fuels and/or achieve additional $SO_2$ control. The Department approves this request. Additional compliance tests will be required for PM and volatile organic compounds (VOC) while firing spent sulfite liquor. Compliance with the $SO_2$, $NO_X$, CO and opacity standards shall continue to be demonstrated by CEMS data.

**Removal of Boiler MACT Provisions, Subpart DDDDD of 40 CFR Part 63**

When the original permit was written, Power Boiler No. 6 was subject to the industrial boiler MACT provisions in Subpart DDDDD of 40 CFR 63 for existing units. However, EPA has since vacated this rule. Rayonier requests that the Department remove these provisions from the permit. The Department approves the request and the corresponding conditions will be removed. However, EPA may promulgate a new standard that may require future changes.

**Trial Burn of Effluent Treatment System Solids**

The mill operates an effluent treatment system for recycling water at the plant. The system removes solids that consist of unbleached screening fiber fines. The applicant requests a temporary trial period in which to gather operational and emissions data while firing effluent treatment system solids. The Department will approve the request contingent on the following conditions.

**G.1.** Authorization: The permittee is authorized to conduct a temporary trial burn of effluent treatment system solids in the No. 6 Power Boiler (EU-022). Primary and secondary sludges are the only authorized solids that may be burned during the trial. Both sludges must be pressed to approximately 70% solids by weight or less. Up to 500 oven-dried tons of effluent treatment system solids may be fired during the trial burn. [Application No. 0890004-021-AC]

**G.2.** Notification: At least 15 days prior to conducting the tests, the permittee shall provide a schedule of the testing program to the Compliance Authority. The Compliance Authority may waive the 15-day advance notice requirement. The schedule shall be updated as necessary. [Application No. 0890004-021-AC]

**G.3.** Emissions Tests: Based on existing continuous emissions monitoring system (CEMS) data, the permittee shall monitor $SO_2$, $NO_x$, opacity, CO, and oxygen. During the trial burn, the permittee shall conduct three stack test runs to monitor PM, VOC, dioxins, hydrogen chloride, HAP metals, mercury and boiler ash. Tests shall be conducted under the maximum expected firing rates. The maximum firing rates during the tests will be used to determine the maximum allowable firing rates for any future permanent authorization. [Application No. 0890004-021-AC]

**G.4.** Test Schedule: The testing program shall commence upon first fire of effluent treatment system solids. All tests shall be completed within 30 days of first fire. If the permit has not expired, the permittee may request additional time from the Bureau of Air Regulation to complete the testing program. [Application No. 0890004-021-AC]

**G.5.** Report: Within 60 days of completing the testing program, the permittee shall submit a report summarizing the following: test program and procedures, data collection methods, tested configurations, analytical results, and a conclusion. A copy of the report shall be submitted to the Compliance Authority. [Application No. 0890004-021-AC]

Once the tests are conducted, the applicant will review the results and may apply for a modification of the air construction permit to allow the permanent firing of effluent treatment system solids. The test results from this trial with be used to determine permanent future maximum firing rates.

**Miscellaneous**

The following minor changes will also be included:

- Update the placard page and add a new page to describe the original project and subsequent revisions.
- Add a footer identifying the page numbers.
- Upon final issuance, Section A of the original permit will be renumbered accordingly with the changes that have been made.

## 5. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the Draft Permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the Draft Permit. Corrie Branum is the project engineer responsible for reviewing the application and drafting the permit changes. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

# DRAFT PERMIT REVISION

**PERMITTEE**

Rayonier Performance Fibers, LLC
The Foot of Gum Street
Fernandina Beach, Florida 32035-1309

*Authorized Representative*:
Mr. F.J. Perrett, General Manager

Air Permit No. 0890004-021-AC
Expires: March 1, 2009
Fernandina Beach Mill
No. 6 Power Boiler
Miscellaneous Revisions

**FACILITY AND PROJECT**

Rayonier Performance Fibers, LLC operates the Fernandina Beach Mill, which is an existing dissolving sulfite pulp mill (SIC No. 2611) located in Nassau County, at The Foot of Gum Street in Fernandina Beach, Florida. The UTM map coordinates are: Zone 17; 454.7 km East; and, 3392.2 km North.

Original air construction Permit No. 0890004-018-AC was issued to authorize: an increase in the permitted throughput capacity for the facility operations; installation of the new No. 6 Power Boiler to replace existing Nos. 1-3 Power Boilers; installation of three evaporator bodies to evaporate moisture from hot caustic extract; and to recognize the production of the No. 6 Batch Digester. This project is a revision of the original air construction permit to: increase the recognized maximum steam production rates; authorize spent sulfite liquor as an approved fuel; remove the industrial boiler MACT provisions (Subpart DDDDD, 40 CFR Part 63); and authorize a trial burn of effluent treatment system solids in the No. 6 Power Boiler. For more information on these projects refer to the project description found on the next page.

This air construction permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and 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 hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

**ATTACHMENTS**

Appendix SS-1, Stack Sampling Facilities
Table 297.310-1, Calibration Schedule

(DRAFT)

Joseph Kahn, Director
Division of Air Resource Management

Effective Date

JK/tlv/cb

## PROJECT DESCRIPTIONS

### Permit No. 0890004-018-AC, Original Air Construction Permit

Original air construction Permit No. 0890004-018-AC authorized: an increase in the permitted throughput capacity for the facility operations; installation of the new No. 6 Power Boiler to replaces existing Nos. 1-3 Power Boilers; installation of three evaporator bodies to evaporate moisture from hot caustic extract (HCE); and specification of the production of the No. 6 Batch Digester. The increase in production will occur in two stages and depends on the installation of some additional equipment including: addition of a new HCE washer press roll; first improvements to pulp machine (drying and head-box); addition of a new HCE evaporator train; installation of a new HCE blow heat recovery system to control all HCE cells; addition of a new HCE cell; installation of a new HCE washer; second improvements to pulp machine (drying and speed increase); and installation of a new post-HCE washer. The No. 6 Power Boiler is a refurbished coal-fired boiler that contains the following controls: settling chamber (ash hopper), 4-field electrostatic precipitator, alkaline wet scrubber, staged combustion, flue gas recirculation, and the capability to add a selective non-catalytic reduction system.

### Air Permit No. 0890004-021-AC, Revised Air Construction Permit

This project revises the original air construction permit for the No. 6 Power Boiler to: authorize increases the steam production limits without changes to the maximum heat input rates to reflect the actual thermal efficiency of the boiler; authorize the firing of spent sulfite liquor to be an authorized fuel; remove the industrial boiler MACT provisions (Subpart DDDDD, 40 CFR Part 63) that have been vacated by the EPA; and authorize a trial burn of effluent treatment system solids.

***{Note: For the following pages of the revised draft permit, additions are shown with double underline and deletions with ~~strikethrough~~. Also, the numbering of the permit conditions was not changed in the draft permit for ease of reference in the related documents. These will be updated as necessary in the final permit.}***

**GENERAL CONDITIONS:**

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 the conditions.

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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any 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 of 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.

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.

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 permitted to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and 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.

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 any record 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.

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 non-compliance, 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.

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.

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.

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.

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.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)

( ) Determination of Prevention of Significant Deterioration (PSD)

(X) Compliance with New Source Performance Standards (NSPS)

~~(X) Compliance with National Emission Standards for Hazardous Air Pollutants/ Maximum Available Control Technology (MACT)~~

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 for 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:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurement;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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.

**SPECIFIC CONDITIONS:**

**A. No. 6 Power Boiler.**

| E.U. ID No. | Brief Description |
|---|---|
| 022 | Bubbling Fluidized Bed No. 6 Power Boiler with a Settling Chamber followed by an ESP for PM emissions control and a Wet Alkali Scrubber for $SO_2$ emissions control |

Emissions Unit 022 identifies the No. 6 Power Boiler, which is a converted existing power boiler. It will be firing mostly biomass (green bark, chips, knots, fines and landscape waste), tires, No. 2 fuel oil for startup, No. 6 fuel oil (max. sulfur content of 2.5%, by weight), spent sulfite liquor and small amounts of facility-generated on-spec used oil (to be blended with the No. 6 fuel oil). The boiler was originally constructed in 1983 as a traveling grate coal-fired boiler.

The converted boiler will include staged combustion and flue gas recirculation (FGR) to reduce NOx emissions. Due to the planned conversion, there is some uncertainty associated with the emissions characteristics. A selective non-catalytic reduction (SNCR) system may be installed to control NOx emissions. This would generally consist of an ammonia tank, pumps, piping, compressed air delivery, injectors, and a control system.

Particulate matter emissions will be controlled with a large settling chamber followed by an electrostatic precipitator (ESP). Large ash particles settle out in the chamber and are removed from the bottom hopper by a screw conveyor system. The design includes a four-field ESP with collector plates and rigid electrodes. Each field will have a dedicated transformer/rectifier (T/R) set and ash hopper. Ash will be removed by a screw conveyor system.

Acid gases will be controlled by a wet alkaline scrubber located after the ESP and induced draft fan. The wet scrubber will spray approximately 4000 gpm of re-circulated alkaline scrubber water over a series of chevrons and louver-type packings to reduce acid gas emissions. The design pressure drop across the system will be approximately 2 inches of water column. Emissions exhaust at a volumetric flow rate of 183,421 acfm and a temperature of 150° F through the single wet scrubber stack that will be approximately 10 feet in diameter and 190 feet above ground level.

{Permitting note(s): This emissions unit is regulated under: 40 CFR 60, Subpart D; ~~and, 40 CFR 63, Subpart DDDDD (by 09/13/07),~~ adopted and incorporated by reference in Rule 62-204.800, F.A.C.}

***The following specific conditions apply to the emissions unit listed above:***

**General**

A.0. General.
a. Power Boilers Nos. 1, 2 and 3 shall be permanently shutdown once Power Boiler No. 6 becomes commercially operational and has been compliance tested.
[Rules 62-4.070(3) and 62-212.400(5), F.A.C.]

~~b. By September 13, 2007, Power Boiler No. 6 shall be in compliance with the requirements of 40 CFR 63, Subparts A and DDDDD (including Appendices A and B), which are a part of the Title V Air Operation Permit, No. 0890004-011-AV, and incorporated by reference.~~

[Rules 62-4.070(3)~~ and 62-204.800~~, F.A.C.~~; and, 40 CFR 63.7495(b)~~]

c. References/Acronyms.
1. SIP: Florida's State Implementation Plan.
2. NSPS: New Source Performance Standards.
3. NESHAP: National Emission Standards for Hazardous Air Pollutants.
4. AC: Air Construction Permit.
5. PSD NSR: Prevention of Significant Deterioration New Source Review.
6. CEMS: continuous emissions monitoring system.
7. COMS: continuous opacity monitoring system.

d. Unless otherwise stated, the "Administrator" is the Department's "Secretary" or its designee.

e. Control Equipment.

1. To control particulate matter, the permittee shall install a settling chamber (or equivalent) followed by a 4-field electrostatic precipitator designed to achieve at least the emissions standards specified in this permit.
2. To control acid gases, the permittee shall install a wet alkaline scrubber designed to achieve at least the emissions standards specified in this permit.
3. To control nitrogen oxides, the converted boiler shall be designed with staged combustion and include flue gas recirculation (FGR). In addition, the permittee is authorized to install (as necessary) a selective non-catalytic reduction system (SNCR) with ammonia injection to achieve at least the emissions standards specified in this permit.

[Rule 62-4.070(3), F.A.C.]

**Operational Parameters**

**A.1.** Permitted Capacity. The maximum heat input rates are:

a. The maximum heat input rate is ~~continuous steam production rate, 24-hour average, is 310,000 lbs/hr based on~~ 525 MMBtu/hour based in a 24-hour average, ~~heat input~~ which is approximately 330,000 lb/hour of steam production. Initial and annual compliance testing shall be conducted within 90% of this permitted steam rate. If the initial compliance tests cannot be performed at this level, the AC will be modified to reflect the actual installed capacity; and,

b. The maximum annual ~~steam production~~ heat input rate is ~~265,000 lbs/hr based on~~ 450 MMBtu/hour ~~heat input~~ which is approximately 286,000 lb/hr of steam production. This will require recordkeeping on a 12-month rolling average basis.

[Rules 62-4.070(3), 62-204.800 and 62-212.200 (PTE), F.A.C.; and, application received September 12, 2005]

**A.2.** Methods of Operation. This boiler may be fired with:

a. Biomass, consisting of green bark, knots, chips, fines and landscape waste.
b. Tire derived fuel (TDF).
c. No. 6 fuel oil with a maximum sulfur content of 2.5%, by weight, during startup, shutdown, or as a temporary alternate fuel during solid fuel feed upsets.
d. Facility-generated on-specification used oil with a maximum sulfur content of 2.5%, by weight~~, and~~ shall be blended with the No. 6 fuel oil or spent sulfite liquor prior to firing.
e. No. 2 fuel oil for startup.
f. Spent sulfite liquor with a maximum sulfur content of 5.5%, by weight, for startup, shutdown, or as a temporary alternate fuel during solid fuel feed upsets. The maximum firing rate is 1200 gph of this fuel.

[~~application received September 12, 2005~~ Application Nos. 0890004-018-AC and 0890004-021-AC; Rule 62-710.210, F.A.C.; and, 40 CFR Part 279]

**A.3.** Hours of Operation. The hours of operation are not limited, i.e., 8,760 hours/year.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, application received September 12, 2005]

**Emission Limits and Standards**

*{Permitting Note: Unless otherwise specified, the averaging times for these specific conditions A.4. and/thru A.11. are based on the specified averaging time of the applicable test method. The standards apply to all authorized fuels.}*

A.4. Particulate Matter (PM).

a. As determined by an EPA Method 5 or 17 compliance test, PM emissions shall not exceed 0.07 lb/MMBtu heat input; nor 36.75 lbs/hr and 138.0 TPY.

[~~NESHAP; application received September 12, 2005~~ Application Nos. 0890004-018-AC and 0890004-021-AC; and Rule 62-4.070(3), F.A.C.; ~~40 CFR 63.7500(a)(1); Table 1 to Subpart DDDDD of Part 63 – Emissions Limits and Work Practice Standards: #9.a.; and, 40 CFR 63.7520(b); Table 5 to Subpart DDDDD of Part 63 – Performance Testing Requirements: #1.e.~~]

b. As determined by an EPA Method 5 or 5B compliance test, no owner or operator shall cause to be discharged into the atmosphere from any affected facility any gases which:

(1) Contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel or fossil fuel and wood residue; nor 52.5 lbs/hr.

[NSPS; and, 40 CFR 60.42(a)(1)]

c. As determined by an EPA Method 5 compliance test, PM emissions shall not exceed 0.2 lb/MMBtu heat input of carbonaceous fuel plus 0.1 lb/MMBtu heat input of fossil fuel; nor 105 lbs/hr.

[SIP; and, Rule 62-296.410(2)(b)(2. and Chapter 62-297, F.A.C.]

**A.5.** Sulfur Dioxide ($SO_2$).

a. As determined by CEMS data, no owner or operator shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of:

(1) 340 nanograms per joule heat input (0.80 lb per million Btu and 420 lbs/hr) derived from liquid fossil fuel or liquid fossil fuel and wood residue, and measured as any three-hour period (arithmetic average of three contiguous one-hour periods).

[NSPS; 40 CFR 60.43(a)(1); 40 CFR 60.45(g)(2); ~~applicant requested~~ Application Nos. 0890004-018-AC and 0890004-021-AC; and, Rule 62-212.400(2)(g), F.A.C.]

b. In order to escape PSD NSR requirements and as determined by CEMS data, $SO_2$ emissions shall not exceed 210.0 tons per consecutive 12-month rolling total. All valid CEMS data (including startups, shutdowns and malfunctions) shall be used to determine compliance with this limit.

[Rules 62-4.160(2), 62-210.200(PTE), and 62-212.400(2)(g), F.A.C.; ~~application received September 12, 2005~~ Application Nos. 0890004-018-AC and 0890004-021-AC; and, supplemental information received November 7, 2005]

**A.6.** Nitrogen Oxides (NOx).

a. As determined by CEMS data, no owner or operator shall cause to be discharged into the atmosphere from any affected facility any gases which contain nitrogen oxides, expressed as $NO_2$, in excess of:

(2) 129 nanograms per joule heat input (0.30 lb per million Btu and 101.20 lbs/hr), and measured as any three-hour period (arithmetic average of three contiguous one-hour periods).

[NSPS; 40 CFR 60.44(a)(2); 40 CFR 60.45(g)(3); ~~applicant requested~~ Application Nos. 0890004-018-AC and 0890004-021-AC; and, Rule 62-212.400(2)(g), F.A.C.]

b. When different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) is determined by proration using the following formula:

$$PS_{NOx} = \frac{w(260)+x(86)+y(130)+z(300)}{w+x+y+z}$$

where:

$PS_{NOx}$ = is the prorated standard for nitrogen oxides when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired;

w = is the percentage of total heat input derived from lignite;

x = is the percentage of total heat input derived from gaseous fossil fuel;
y = is the percentage of total heat input derived from liquid fossil fuel; and,
z = is the percentage of total heat input derived from solid fossil fuel (except lignite).

[NSPS; and, 40 CFR 60.44(b)]

c. In order to escape PSD NSR requirements and as determined by CEMS data, NOx emissions shall not exceed 380.0 tons per consecutive 12-month rolling total. All valid CEMS data (including startups, shutdowns and malfunctions) shall be used to determine compliance with this limit.

[NSPS; ~~applicant requested~~ Application Nos. 0890004-018-AC and 0890004-021-AC; 40 CFR 60.45(g); and, Rule 62-212.400(2)(g), F.A.C.]

**A.7.** Carbon Monoxide (CO). As determined by CEMS data, CO emissions shall not exceed 157.5 lbs/hr, 30-day rolling average; nor, 591.3 tons per consecutive 12-month rolling total. These limits are based on 0.3 lb/MMBtu heat input. All valid CEMS data (including startups, shutdowns and malfunctions) shall be used to determine compliance with this limit.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, ~~application received September 12, 2005~~ Application Nos. 0890004-018-AC and 0890004-021-AC]

**A.8.** Volatile Organic Compounds (VOC). As determined by an EPA Method 25A compliance test, VOC emissions shall not exceed 0.002 lb/MMBtu heat input; nor 1.05 lbs/hr and 3.94 TPY.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; ~~application received September 12, 2005; and, supplemental information received November 7, 2005~~ Application Nos. 0890004-018-AC and 0890004-021-AC]

~~**A.9.** Hydrogen Chloride. As determined by an EPA Method 26A compliance test, hydrogen chloride emissions shall not exceed 0.09 lb/MMBtu heat input. In accordance with the NESHAP, 40 CFR 63, Subpart DDDDD requirements, the permittee shall demonstrate compliance with this standard by September 13, 2007, or within 60 days of initial startup, whichever is later.~~

~~[NESHAP; 40 CFR 63.7495(b); 40 CFR 63.7500(a)(1); Table 1 to Subpart DDDDD of Part 63 – Emissions Limits and Work Practice Standards: #9.b.; and, 40 CFR 63.7520(b); Table 5 to Subpart DDDDD of Part 63 – Performance Testing Requirements: #3.e.]~~

~~**A.10.** Mercury. As determined by an EPA Method 29 or 101A compliance test, mercury emissions shall not exceed 0.000009 lb/MMBtu heat input. In accordance with the NESHAP, 40 CFR 63, Subpart DDDDD requirements, the permittee shall demonstrate compliance with this standard by September 13, 2007, or within 60 days of initial startup, whichever is later.~~

~~[NESHAP; 40 CFR 63.7495(b); and, 40 CFR 63.7500(a)(1); Table 1 to Subpart DDDDD of Part 63 – Emissions Limits and Work Practice Standards: #9.c.; 40 CFR 63.7520(b); Table 5 to Subpart DDDDD of Part 63 – Performance Testing Requirements: #4.e.; 40 CFR 60, Appendix A; and, 40 CFR 61, Appendix B]~~

**A.11.** Visible Emissions.
a. As determined by COMS data, no owner or operator shall cause to be discharged into the atmosphere from any affected facility any gases which:

(2) Exhibit greater than 20 percent opacity (6-minute average) except for one six-minute period per hour of not more than 27 percent opacity.

[NSPS; 40 CFR 60.42(a)(2); and, 40 CFR 60.45(g)(1)-Application Nos. 0890004-018-AC and 0890004-021-AC]

b. As determined by a DEP Method 9 compliance test, visible emissions shall not exceed 30 percent opacity except that a density of 40 percent opacity is permissible for not more than two minutes in any one hour.

[SIP; and, Rule 62-296.410(2)(b)1. and Chapter 62-297, F.A.C.]

**A.12.** Fuel Oil Sulfur Content. As determined by a lab analysis, the sulfur content of the as-fired No. 6 fuel oil shall not exceed 2.5 percent, by weight and spent sulfite liquor shall not exceed 5.5 percent, by weight.

[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.; and Application Nos. 0890004-018-AC and 0890004-021-AC]

**A.13.** "On-Specification" Used Oil. The burning of "on-specification" used oil is allowed at this facility in accordance with all other conditions of this permit and the following additional conditions:
a. Only "on-specification" used oil generated by the facility shall be fired in this emissions unit. The "on-specification" used oil shall be blended with the No. 6 fuel oil prior to firing. "On-specification" used oil is defined as that which meets the 40 CFR 279 (Standards for the Management of Used Oil) specifications listed below. Used oil that does not meet all of the following specifications is considered "off-specification" oil and shall not be fired. See Specific Conditions **A.47.** and **A.48.**

| CONSTITUENT / PROPERTY * | ALLOWABLE LEVEL |
|---|---|
| Arsenic | 5 ppm maximum |
| Cadmium | 2 ppm maximum |
| Chromium | 10 ppm maximum |
| Lead | 100 ppm maximum |
| Total Halogens | 1000 ppm maximum |
| Flash Point | 100 °F minimum |
| PCBs | less than 50 ppm |

* As determined by approved methods specified in EPA Publication SW-846 (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods).

[40 CFR 279.11]

b. Upon request, a certification shall be provided that the used oil (prior to blending with the No. 6 fuel oil) complies with the limits listed above, the provisions of 40 CFR 279 and 761, and shall be recorded and retained on file.
c. "On-specification" used oil may be fired as follows:
1. Any time provided the maximum concentration of PCBs is less than 2 ppm. The analysis and recordkeeping apply to each amount prior to blending even if to be blended with 90% virgin oil.
2. Only during normal operating temperature and not during startup and shutdown if the maximum concentration of $2 \leq PCB \leq 50$ ppm.

[40 CFR 279 and 761; and, Rule 62-4.070(3), F.A.C.]

**Excess Emissions**

*{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS ~~or NESHAP~~ provision.}*

**A.14.** SIP Excess Emissions – Allowed. Excess emissions resulting from startup, shutdown or malfunction shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.]

**A.15.** SIP Excess Emissions – Prohibited. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.]

**A.16.** NSPS Excess Emissions. Excess emission and monitoring system performance reports shall be submitted to the Administrator for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in Sec. 60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:
(1) Opacity. Excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported.
(2) Sulfur dioxide. Excess emissions for affected facilities are defined as:
(i) Any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of sulfur dioxide as measured by a continuous monitoring system exceed the applicable standard under 40 CFR 60.43.
(3) Nitrogen oxides. Excess emissions for affected facilities using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards under 40 CFR 60.44.

[40 CFR 60.45(g)]

**Monitoring of Operations**

**A.17.** Determination of Process Variables.
(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

**A.18.** Steam Monitoring. The permittee shall continuously monitor the steam production rate to demonstrate compliance with the requirements of this permit.

[Rule 62-4.070(3), F.A.C.]

~~**A.19.** Electrostatic Precipitator-Wet Scrubber Control System: PM. By September 13, 2007, the owner or operator must maintain the minimum voltage and secondary current or total power input of the electrostatic precipitator at or above the operating limits established during the performance test according to 40 CFR 63.7530(c) and Table 7, 40 CFR 63, Subpart DDDDD, that demonstrated compliance with the applicable emission limit for particulate matter. See Specific Condition **A.4.c.**~~

~~[40 CFR 63.7500(a)(2); Table 2 to Subpart DDDDD of Part 63 – Emissions Limits and Work Practice Standards: #3.b.]~~

~~**A.20.** Mercury. By September 13, 2007, the owner or operator must comply with the following:
a. Electrostatic Precipitator-Wet Scrubber Control System. Maintain the minimum voltage and secondary current or total power input of the electrostatic precipitator at or above the operating limits established during the performance~~

~~test according to 40 CFR 63.7530(c) and Table 7, 40 CFR 63, Subpart DDDDD, that demonstrated compliance with the applicable emission limits for mercury. See Specific Condition **A.10.**~~
~~b. Fuel Analysis. Maintain the fuel type or fuel mixture such that the mercury emission rates calculated according to 40 CFR 63.7530(d)(4) is less than the applicable emission limits for mercury. See Specific Condition **A.10.**~~

~~[40 CFR 63.7500(a)(2); Table 3 to Subpart DDDDD of Part 63 – Emissions Limits and Work Practice Standards: #3.b. and #6, respectively]~~

~~**A.21.** Hydrogen Chloride. By September 13, 2007, the owner or operator must comply with the following:~~
~~a. Wet Scrubber Control System: Maintain the minimum scrubber effluent pH, pressure drop, and liquid flow-rate at or above the operating levels established during the performance test according to 40 CFR 63.7530(c) and Table 7, 40 CFR 63, Subpart DDDDD, that demonstrated compliance with the applicable emission limit for hydrogen chloride. See Specific Condition **A.9.**~~
~~b. Fuel Analysis: Maintain the fuel type or fuel mixture such that the hydrogen chloride emission rate calculated according to 40 CFR 63.7530(d)(3) is less than the applicable emission limit for hydrogen chloride. See Specific Condition **A.9.**~~

~~[40 CFR 63.7500(a)(2); Table 4 to Subpart DDDDD of Part 63 – Emissions Limits and Work Practice Standards: #1 and #3, respectively]~~

**Continuous Monitoring Requirements**

**A.22.** Each owner or operator shall install, calibrate, maintain, and operate continuous monitoring systems for measuring the opacity of emissions, sulfur dioxide emissions, nitrogen oxides emissions, carbon monoxide emissions and oxygen, in accordance with 40 CFR 60.13, 40 CFR 60.45, and 40 CFR 60, Appendices B and F.

[40 CFR 60.13; 40 CFR 60.45(a); 40 CFR 60, Appendices B and F; Rule 62-4.070(3), F.A.C.; and, application project No. 0890004-018-AC]

**A.23.** The owner or operator shall install, calibrate, maintain, and operate a continuous flow monitoring system in accordance with 40 CFR 60, Performance Specification 6 of Appendix B and Procedure 1 of Appendix F.

[Application project No. 0890004-018-AC; and, 40 CFR 60, Appendices B and F]

**A.24.** For performance evaluations under 40 CFR 60.13(c) and calibration checks under 40 CFR 60.13(d), the following procedures shall be used:
(1) Methods 6, 7, and 3B, as applicable, shall be used for the performance evaluations of sulfur dioxide and nitrogen oxides continuous monitoring systems. Acceptable alternative methods for Methods 6, 7, and 3B are given in 40 CFR 60.46(d).
(2) Sulfur dioxide or nitric oxide, as applicable, shall be used for preparing calibration gas mixtures under Performance Specification 2 of Appendix B to 40 CFR 60.
(3) For affected facilities burning fossil fuel(s), the span value for a continuous monitoring system measuring the opacity of emissions shall be 80, 90, or 100 percent and for a continuous monitoring system measuring sulfur oxides or nitrogen oxides the span value shall be determined as follows:

[In parts per million]

| Fossil fuel | Span value for sulfur dioxide | Span value for nitrogen oxides |
|---|---|---|
| Gas | {1} | 500 |
| Liquid | 1,000 | 500 |
| Solid | 1,500 | 1000 |
| Combinations | 1,000y + 1,500z | 500(x+y) + 1,000z |

{1}Not applicable.

where:
x = the fraction of total heat input derived from gaseous fossil fuel, and
y = the fraction of total heat input derived from liquid fossil fuel, and
z = the fraction of total heat input derived from solid fossil fuel.

(4) All span values computed under 40 CFR 60.45(c)(3) for burning combinations of fossil fuels shall be rounded to the nearest 500 ppm.
(5) For a fossil fuel-fired steam generator that simultaneously burns fossil fuel and non-fossil fuel, the span value of all continuous monitoring systems shall be subject to the Administrator's approval.

[40 CFR 60.45(c)]

**A.25.** For any continuous monitoring system installed under 40 CFR 60.45(a), the following conversion procedures shall be used to convert the continuous monitoring data into units of the applicable standards (ng/J, lb/million Btu):
(1) When a continuous monitoring system for measuring oxygen is selected, the measurement of the pollutant concentration and oxygen concentration shall each be on a consistent basis (wet or dry). Alternative procedures approved by the Administrator shall be used when measurements are on a wet basis. When measurements are on a dry basis, the following conversion procedure shall be used:

$E = CF[20.9/(20.9\text{-percent } O_2)]$

where:

E, C, F, and % $O_2$ are determined under 40 CFR 60.45(f).

[40 CFR 60.45(e)]

**A.26.** The values used in the equation under 40 CFR 60.45(e)(1) is derived as follows:
(1) E = pollutant emissions, ng/J (lb/million Btu).
(2) C = pollutant concentration, ng/dscm (lb/dscf), determined by multiplying the average concentration (ppm) for each one-hour period by $4.15 \times 10^{-4}$ M ng/dscm per ppm ($2.59 \times 10^{-9}$ M lb/dscf per ppm) where M = pollutant molecular weight, g/g-mole (lb/lb-mole). M = 64.07 for sulfur dioxide and 46.01 for nitrogen oxides.
(3) % $O_2$, %$CO_2$ = oxygen or carbon dioxide volume (expressed as percent), determined with equipment specified under 40 CFR 60.45(a).
(4) F, $F_c$ = a factor representing a ratio of the volume of dry flue gases generated to the calorific value of the fuel combusted (F), and a factor representing a ratio of the volume of carbon dioxide generated to the calorific value of the fuel combusted ($F_c$), respectively. Values of F and $F_c$ are given as follows:
(iii) For liquid fossil fuels including crude, residual, and distillate oils, $F = 2.476 \times 10^{-7}$ dscm/J (9,220 dscf/million Btu) and $F_c = 0.384 \times 10^{-7}$ scm $CO_2$ /J (1,430 scf $CO_2$ /million Btu).
(v) For bark $F = 2.589 \times 10^{-7}$ dscm/J (9,640 dscf/million Btu) and $F_c = 0.500 \times 10^{-7}$ scm $CO_2$ /J (1,840 scf $CO_2$ / million Btu). For wood residue other than bark $F = 2.492 \times 10^{-7}$ dscm/J (9,280 dscf/million Btu) and Fc $= 0.494 \times 10^{-7}$ scm $CO_2$ /J (1,860 scf $CO_2$ / million Btu).
(5) The owner or operator may use the following equation to determine an F factor (dscm/J or dscf/million Btu) on a dry basis (if it is desired to calculate F on a wet basis, consult the Administrator) or $F_c$ factor (scm $CO_2$ /J, or scf $CO_2$ /million Btu) on either basis in lieu of the F or $F_c$ factors specified in 40 CFR 60.45(f)(4):

$$F = 10^6 \frac{[227.2\ (\text{pct. H}) + 95.5\ (\text{pct. C}) + 35.6\ (\text{pct. S}) + (\text{pct. N}) - 28.7\ (\text{pct. O})]}{\text{GCV}}$$

$$F_c = \frac{2.0 \times 10^{-5}\ (\text{pct. C})}{\text{GCV (SI units)}}$$

$$F = 10^6 \frac{3.64(\%H) + 1.53(\%C) + 0.57(\%S) + 0.14(\%N) - 0.46(\%O)}{\text{GCV (English units)}}$$

$F_c = \frac{20.0(\%C)}{GCV \text{ (SI units)}}$

$Fc = \frac{321 \times 10^3(\%C)}{GCV \text{ (English units)}}$

(i) H, C, S, N, and O are content by weight of hydrogen, carbon, sulfur, nitrogen, and oxygen (expressed as percent), respectively, as determined on the same basis as GCV by ultimate analysis of the fuel fired, using ASTM method D3178-73 (Reapproved 1979), 89, or D3176-74 or 89 (solid fuels) or computed from results using ASTM method D1137-53 or 75, D1945-64, 76, 91, or 96 or D1946-77 or 90 (Reapproved 1994) (gaseous fuels) as applicable. (These five methods are incorporated by reference-see 40 CFR 60.17.)
(ii) GCV is the gross calorific value (kJ/kg, Btu/lb) of the fuel combusted determined by the ASTM test methods D2015-77 (Reapproved 1978), 96, or D5865-98 for solid fuels and D1826-77 or 94 for gaseous fuels as applicable. (These two methods are incorporated by reference-see 40 CFR 60.17.)
(iii) For affected facilities which fire both fossil fuels and non-fossil fuels, the F or $F_c$ value shall be subject to the Administrator's approval.

(6) For affected facilities firing combinations of fossil fuels or fossil fuels and wood residue, the F or $F_c$ factors determined by paragraphs 40 CFR 60.45(f)(4) or (f)(5) shall be prorated in accordance with the applicable formula as follows:

$$F = \sum_{i=1}^{n} X_i F_i \quad \text{or} \quad F_c = \sum_{i=1}^{n} X_i (F_c)_i$$

where:

$X_i$ = the fraction of total heat input derived from each type of fuel (e.g. natural gas, bituminous coal, wood residue, etc.)
$F_i$ or $(F_c)_i$ = the applicable F or $F_c$ factor for each fuel type determined in accordance with paragraphs (f)(4) and (f)(5) of this section.
n = the number of fuels being burned in combination.

[40 CFR 60.45(f)]

**Test Methods and Procedures**

**A.27.** In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified in 40 CFR 60.46, except as provided in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in 40 CFR 60.46(d).

[40 CFR 60.46(a)]

**A.28.** Boiler Thermal Efficiency. In conjunction with the initial performance tests, the permittee shall determine the installed boiler's thermal efficiency while combusting 100% wood and also 100% fuel oil.

[Rule 62-4.070(3), F.A.C.]

**A.29.** The owner or operator shall determine compliance with the particulate matter, $SO_2$, and $NO_x$ standards in 40 CFR 60.42, 60.43, and 60.44 as follows:
(1) The emission rate (E) of particulate matter, $SO_2$, or $NO_x$ shall be computed for each run using the following equation:

$$E = C F_d (20.9)/(20.9 - \% O_2)$$

where:
E = emission rate of pollutant, ng/J (1b/million Btu).
C = concentration of pollutant, ng/dscm (1b/dscf).
% $O_2$ = oxygen concentration, percent dry basis.
$F_d$ = factor as determined from Method 19.

[40 CFR 60.46(b)(1)]

**A.30.** PM Emissions.
a. For the NSPS limit, EPA Method 5 shall be used to determine the particular matter concentration (C) at affected facilities without wet flue-gas-desulfurization (FGD) systems and EPA Method 5B shall be used to determine the particulate matter concentration (C) after FGD systems. See Specific Condition **A.4.a.**

(i) The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). The probe and filter holder heating systems in the sampling train shall be set to provide an average gas temperature of 160 ± 14 °C (320 ± 25 °F).
(ii) The emission rate correction factor, integrated or grab sampling and analysis procedure of EPA Method 3B shall be used to determine the $O_2$ concentration (%$O_2$). The $O_2$ sample shall be obtained simultaneously with, and at the same traverse points as, the particulate sample. If the grab sampling procedure is used, the $O_2$ concentration for the run shall be the arithmetic mean of the sample $O_2$ sample concentrations at all traverse points.
(iii) If the particulate run has more than 12 traverse points, the $O_2$ traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 $O_2$ traverse points.

[40 CFR 60.46(b)(2)]

b. For the SIP limit, the test method for PM shall be EPA Method 5, incorporated and adopted by reference in Chapter 62-297, F.A.C. See Specific Condition **A.4.b.**
c. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

[Rules 62-296.410(3)(b) & (c), F.A.C.]

d. A compliance test shall be conducted initially and once each federal fiscal year.

e. Within 90 days of first firing spent sulfite liquor, the permittee shall conduct an initial compliance test while firing spent sulfite liquor at permitted capacity. Thereafter, a compliance test while firing spent sulfite liquor shall be conducted if spent sulfite liquor is fired for 400 hours or more during the federal fiscal year.

[Rule 62-297.310(7)(a)4., F.A.C.]

**A.31.** Sulfur Dioxide Emissions.
a. EPA Method 6 shall be used to determine the $SO_2$ concentration.

(i) The sampling site shall be the same as that selected for the particulate sample. The sampling location in the duct shall be at the centroid of the cross section or at a point no closer to the walls than 1 m (3.28 ft). The sampling time and sample volume for each sample run shall be at least 20 minutes and 0.020 dscm (0.71 dscf). Two samples shall be taken during a 1-hour period, with each sample taken within a 30-minute interval.
(ii) The emission rate correction factor, integrated sampling and analysis procedure of EPA Method 3B shall be used to determine the $O_2$ concentration (%$O_2$). The $O_2$ sample shall be taken simultaneously with, and at the same point as, the $SO_2$ sample. The $SO_2$ emission rate shall be computed for each pair of $SO_2$ and $O_2$ samples. The $SO_2$ emission rate (E) for each run shall be the arithmetic mean of the results of the two pairs of samples.

[40 CFR 60.46(b)(4)]

b. A compliance test shall be conducted initially and in accordance with 40 CFR 60.8. Continuous compliance shall be demonstrated by the required emissions monitoring system.

[40 CFR 60.8; and, Rule 62-297.310(7)(a)4., F.A.C.]

**A.32.** Nitrogen Oxides Emissions.
a. EPA Method 7 shall be used to determine the $NO_X$ concentration.
(i) The sampling site and location shall be the same as for the $SO_2$ sample. Each run shall consist of four grab samples, with each sample taken at about 15-minute intervals.
(ii) For each $NO_X$ sample, the emission rate correction factor, grab sampling and analysis procedure of EPA Method 3B shall be used to determine the $O_2$ concentration (%$O_2$). The sample shall be taken simultaneously with, and at the same point as, the $NO_X$ sample.
(iii) The $NO_X$ emission rate shall be computed for each pair of $NO_X$ and $O_2$ samples. The $NO_X$ emission rate (E) for each run shall be the arithmetic mean of the results of the four pairs of samples.

[40 CFR 60.46(b)(5)]

b. A compliance test shall be conducted initially and in accordance with 40 CFR 60.8. Continuous compliance shall be demonstrated by the required emissions monitoring system.

[40 CFR 60.8; and, Rule 62-297.310(7)(a)4., F.A.C.]

**A.33.** CO Emissions. The test method for carbon monoxide emissions shall be EPA Method 10, incorporated in Chapter 62-297, F.A.C. A compliance test shall be conducted initially and in accordance with 40 CFR 60.8. Continuous compliance shall be demonstrated by the required emissions monitoring system.

[40 CFR 60.8; and, Rules 62-297.401 and 62-297.310(7)(a)4., F.A.C.]

**A.34.** VOC Emissions.
a. The test method for VOC emissions shall be EPA Method 25A, incorporated in Chapter 62-297, F.A.C. A compliance test shall be conducted initially and in accordance with 40 CFR 60.8.; and, once every five years for renewal.

b. Within 90 days of first firing spent sulfite liquor, the permittee shall conduct an initial compliance while firing spent sulfite liquor at permitted capacity. Thereafter, a compliance test while firing spent sulfite liquor shall be conducted prior to renewing the Title V air operation permit.

[40 CFR 60.8; and, Rules 62-297.401 and 62-297.310(7)(a)4., F.A.C.]

**A.35.** Visible Emissions.
a. For the NSPS limit, EPA Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity. Compliance shall be demonstrated by COMS. See Specific Condition **A.11.a.**

[40 CFR 60.11; and, 40 CFR 60.46(b)(3)]

b. For the SIP limit, the test method for visible emissions shall be DEP Method, incorporated in Chapter 62-297, F.A.C. See Specific Conditions **A.11.b.** and **A.36.**
c. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

[Rules 62-296.410(3)(a) & (c), F.A.C.]

d. A compliance test shall be conducted initially and in accordance with 40 CFR 60.8. Continuous compliance shall be demonstrated by COMS.

[40 CFR 60.8; and, Rule 62-297.310(7)(a)4., F.A.C.]

**A.36.** DEP Method 9. The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions:
1. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen second intervals during the required period of observation.
2. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent opacity, except that an opacity of 40 percent is permissible for not more than two minutes per hour) opacity shall be computed as follows:
   a. For the basic part of the standard (i.e., 20 percent opacity) the opacity shall be determined as specified above for a single-valued opacity standard.
   b. For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken.

   In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at least 90 percent of the observations possible for the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value.

[Rule 62-297.401, F.A.C.]

**A.37.** Fuel Analyses. For Power Boiler No. 6, the following fuel sampling and analysis protocol shall be used:
a. Determine and record the as-fired fuel sulfur content, percent by weight, for liquid fuels using either ASTM D2622-92, ASTM D4294-90, both ASTM D4057-88 and ASTM D129-91, or the latest edition, by analyzing a representative sample of the blended fuel oil following each fuel delivery.
b. Record hourly fuel totalizer readings with calculated hourly feed rates for each fuel fired, the ratio of fuels fired, the density of each fuel, and the percent sulfur content, by weight, of each fuel.
c. The analyses of the No. 6 fuel oil, as received from the supplier in a bill of lading, shall include the following:
   1. Density (ASTM D 1298-80 or the latest edition).
   2. Calorific heat value in Btu per pound (ASTM D 240-76 or the latest edition).
   3. Sulfur content, by weight (ASTM D2622-92, ASTM D4294-90, both ASTM D4057-88 and ASTM D129-91, or the latest edition).
d. On a quarterly basis, an analyses of the wood fuel and spent sulfite liquor shall include the following:
   1. Calorific heat value in Btu per pound (ASTM D2015-77, or the latest edition).
   2. Moisture content (ASTM D2016-74, 83, or the latest edition).
   3. Sulfur content, by weight (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods: EPA Publication SW-846 Third Edition (November 1986), or the latest edition).

[40 CFR 60, Subpart A]

**A.38.** Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

**A.39.** Operating Rate During Testing.
a. Testing of emissions shall be conducted with each emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

b. If the new emissions unit is unable to achieve the designed permitted capacity (at least 90%) for the initial tests, then this permit will be revised to reflect the true installed capacity.

[Rule 62-4.070(3), F.A.C.]

**A.40.** Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.

[Rule 62-297.310(3), F.A.C.]

**A.41.** Applicable Test Procedures.
(a) Required Sampling Time.
1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
(b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.
(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.
(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1 (attached).
(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

**A.42.** Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

**A.43.** Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid fuel for more than 400 hours other than during startup.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a. Did not operate; or

b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

a. Visible emissions, if there is an applicable standard;

b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and

c. Each ~~NESHAP~~ pollutant, if there is an applicable emission standard.

5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid fuel, other than during startup, for a total of more than 400 hours.

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant
emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

**Recordkeeping and Reporting Requirements**

**A.44.** Notification.

a. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department's NED office in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department's NED.

[Rule 62-210.700(6), F.A.C.]

b. If CEMS or COMS data indicates non-compliance, the permittee shall notify the Department's NED office within one working day of such determination.

[Rule 62-4.070(3), F.A.C.]

**A.45.** Plant Operation - Problems. If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Department as soon as possible, but at least within one (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations.

[Rule 62-4.130, F.A.C.]

**A.46.** Test Reports.
(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department's NED on the results of each such test.
(b) The required test report shall be filed with the Department's NED as soon as practical but no later than 45 days after the last sampling run of each test is completed.
(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department's NED to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.

21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

**A.47.** Monthly records shall be kept of the quantity of "on-specification" used oil fired in these emissions units. The above records shall be maintained in a form suitable for inspection, retained for a minimum of five years, and be made available upon request. See Specific Conditions **A.13.** and **A.48.**

[Rule 62-213.440(1)(b)2.b., F.A.C.; and, 40 CFR 279.61 and 761.20(e)]

**A.48.** The permittee shall include in the "Annual Operating Report for Air Pollutant Emitting Facility" a summary of the "on-specification" used oil fired in the No. 6 Power Boiler during the calendar year. See Specific Conditions **A.13.** and **A.47.**

[Rule 62-213.440(1)(b)2.b., F.A.C.]

**A.49.** NSPS Excess Emission and Monitoring System Performance Reports. Excess emission and monitoring system performance reports shall be submitted to the Administrator for each six-month period in the calendar year. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. Each excess emission and MSP report shall include the information required in Sec. 60.7(c). Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:
(1) Opacity. Excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported.
(2) Sulfur dioxide. Excess emissions for affected facilities are defined as:
(i) Any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of sulfur dioxide as measured by a continuous monitoring system exceed the applicable standard established under 40 CFR 60.43. See Specific Condition **A.5.a.(1).**
(3) Nitrogen oxides. Excess emissions for affected facilities using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards under 40 CFR 60.44. See Specific Condition **A.6.a.(2).**

[40 CFR 60.45(g)(1), (2) & (3)]
**A.50.** Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

[40 CFR 60.8(a)]

**A.51.** Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator:
(1) Specifies or approves, in specific cases, the use of a reference method with minor changes in methodology;
(2) Approves the use of an equivalent method;
(3) Approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance;
(4) Waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard; or

(5) Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in 40 CFR 60.8 shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

[40 CFR 60.8(b)(1), (2), (3), (4) & (5)]

**A.52.** Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

[40 CFR 60.8(c)]

**A.53.** The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems , etc) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.

[40 CFR 60.8(d)]

**A.54.** The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such facility. This includes
    (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and
    (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
(2) Safe sampling platform(s).
(3) Safe access to sampling platform(s).
(4) Utilities for sampling and testing equipment.

[40 CFR 60.8(e)(1), (2), (3) & (4)]

**A.55.** Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[40 CFR 60.8(f)]

**B. <u>No. 6 Batch Digester</u>.**

**B.1.** The new No. 6 batch digester is in operation and included in with the "batch digesters" under Emissions Unit 005, Vent Gas Scrubber and Direct Contact Condenser", and is subject to the terms and conditions established for this emissions unit in Title V permit, No. 0890004-011-AV, specifically in Subsection G., which is incorporated by reference.

{Emission Unit 005 includes the vent gas scrubber (wet scrubber), which controls emissions from numerous vents from the cooking acid plant, the red stock washers, the unwashed stock tank, the spent sulfite liquor storage tanks, the spent sulfite liquor washer area, the digesters, and the blow pits. The scrubber is a packed bed containing 10 feet of packing consisting of two packed sections. The lower section is designed for sulfur dioxide emissions control via gas absorption using alkaline scrubbing media (soda ash, sodium hydroxide, etc.). The spent scrubber media is bled first to other closed sources to make maximum use of the alkali to remove sulfur dioxide, and then to sewer via closed piping to number 1 Pump Station. The sulfur dioxide concentration in the stack is continuously measured with a CMS.

The upper packed section of the vent gas scrubber is designed to condense methanol from the gas stream by direct contact with fresh well water, i.e. the Direct Contact Condenser. This is a once through process. The condensed methanol held in the water is sent to the biological effluent treatment system for treatment in order to comply with the requirements of 40 CFR 63, Subpart S.}

**C. Multiple Effect Evaporators (3 Bodies).**

**C.1.** The permittee is authorized to install three (3) new Multiple Effect Evaporators (MEEs) bodies, which are refurbished existing units. They will form a new train to be used to increase the solids concentration of weak HCE, a byproduct stream from the manufacturing process that can be used at Kraft mills as a sodium source. All of the MEEs will vent through a common condenser used to collect methanol and then vented to the atmosphere via the sulfur dioxide recovery scrubber for the recovery boiler. The new bodies will be lumped in with the two sets of MEEs and will now be described as "three" sets of MEEs under Emissions Unit 021, and subject to the terms and conditions established for this emissions unit in Title V permit, No. 0890004-011-AV, specifically in Subsection G., which is incorporated by reference.

{Emissions Unit 021 includes the Evaporator Vents Methanol Condenser System. The steam that is used to eject the vent gases from the two sets of multiple effect evaporators along with the evaporator vent gases themselves, are piped to a pre-condenser which condenses the steam followed by the main condenser which condenses the methanol. The water used to condense the steam and methanol is reclaimed from the biological effluent treatment system after the methanol has been digested.

The condensate from the pre-condenser and the main condenser are sewered to the biological effluent treatment system via the Number 3 Pump Station for compliance with the 40 CFR 63, Subpart S requirements.

The non-condensable gases from the main condenser are sent to the multi-stage wet scrubber/Brinks Demister at the Recovery boiler (Emissions Unit No. 006).}

**D. Facility.**

**D.1.** Capacity.
a. Except as provided below, the facility's production shall not exceed 162,000 air dried metric tons (ADMT) per consecutive 12-months, rolling total.
b. Upon successful installation and submittal of the engineering report of the HCE blow heat recovery system to control VOC emissions from all of the HCE cells, the facility's production shall not exceed 175,000 ADMT per consecutive 12-months, rolling total.

[Rules 62-4.070(3), 210.200(PTE) and 62-212.400(5), F.A.C.]

**D.2.** The application indicates the following preliminary schedule for commencing construction:

| Date | Activity |
|---|---|
| February 2006 | Add a new HCE washer press roll |
| February 2007 | Begin first improvements to pulp machine (drying and head-box) |

| | |
|---|---|
| | Add a new HCE evaporator train |
| February 2008 | Install a new HCE blow heat recovery system to control all HCE cells |
| | Add a new HCE cell |
| | Install a new HCE washer |
| | Begin second improvements to pulp machine (drying and speed increase) |
| | Install a new post-HCE washer |

* It is noted that some of the later changes are contingent on the success of the earlier stages.

**D.3.** The permittee is authorized to perform the following construction and work:
a. add a new HCE washer press roll;
b. begin first improvements to pulp machine (drying and head-box);
c. add a new HCE evaporator train; install a new HCE blow heat recovery system to control all HCE cells;
d. add a new HCE cell;
e. install a new HCE washer; begin second improvements to pulp machine (drying and speed increase); and,
f. install a new post-HCE washer.

The permittee shall obtain prior written approval for any substantial changes to the work described above and in the application for this project.

**D.4.** Within fourteen (14) days of completing each of the above stages of work, the permittee shall provide a written notice of the following:
a. type of work;
b. date completed;
c. deviations form original proposal; and,
d. a discussion of any emissions impacts.

**D.5.** Attached to each required Annual Operating Report, the permittee shall provide a summary of the following to the compliance authority:
a. a summary of work performed to date;
b. a summary of work remaining;
c. a preliminary schedule for completing any remaining work; and,
d. the current production capacity of the mill (ADMT per year).

**D.6.** Performance tests.
a. Prior to increasing plant production beyond 162,000 ADMT per year, the permittee shall install a new HCE blow heat recovery system designed to reduce VOC emissions by 60% from all HCE cells. Upon successful completion of this system, the permittee shall conduct an engineering study to determine the effectiveness of this system in capturing and reducing VOC emissions to achieve designed efficiency. A test protocol shall be submitted to the Department for review and approval prior to commencing the engineering study. Within 60 days of completing the engineering study, the permittee shall submit a report summarizing: the final installed design, material flow rates, emissions, emissions capture, emissions control, and any necessary adjustments.

[Rule 62-4.070(3), F.A.C.]

**E. Miscellaneous.**

**E.1.** Report of Actual Emissions. The permittee shall maintain and submit actual annual emissions for a period of 5 years following completion of each project phase. Emissions related to demand growth that could have been accommodated prior to the project must be shown and discussed. This requirement shall be fulfilled by submittal of a report in conjunction with the required Annual Operating Report.

[Rule 62-4.070(3) and 62-212.400(5), F.A.C.]

**E.2.** Testing While Burning TDF. A one-time test shall be conducted while burning the maximum percentage of TDF expected using EPA Method 29 pursuant to 40 CFR 60, Appendix A, and Chapter 62-297, F.A.C.

[Rule 62-4.070(3) and Chapter 62-297, F.A.C.; and, 40 CFR 60, Appendix A]

**F. Bleach Plant.**

**F.1.** The dissolving-grade bleaching system shall achieve compliance with the bleach plant provisions of 40 CFR 63.445 *as expeditiously as practicable*, but in no event later than 4 years from the issuance of this air construction permit.

[40 CFR 63.440(d)(2) and 63.445]

**G. Temporary Trial Burn of Effluent Treatment System Solids for No. 6 Power Boiler**

This section authorizes a temporary trial burn of effluent treatment system solids in the No. 6 Power Boiler to gather emissions and operational data. The results may later be used in an application for a permanent request to allow the firing of effluent treatment system solids.

**G.1.** Authorization: The permittee is authorized to conduct a temporary trial burn of effluent treatment system solids in the No. 6 Power Boiler (EU-022). Primary and secondary sludges are the only authorized solids that may be burned during the trial. Both sludges must be pressed to approximately 70% solids by weight or less. Up to 500 oven-dried tons of effluent treatment system solids may be fired during the trial burn. [Application No. 0890004-021-AC]

**G.2.** Notification: At least 15 days prior to conducting the tests, the permittee shall provide a schedule of the testing program to the Compliance Authority. The Compliance Authority may waive the 15-day advance notice requirement. The schedule shall be updated as necessary. [Application No. 0890004-021-AC]

**G.3.** Emissions Tests: Based on existing continuous emissions monitoring system (CEMS) data, the permittee shall monitor $SO_2$, $NO_x$, opacity, CO, and oxygen. During the trial burn, the permittee shall conduct three stack test runs to monitor PM, VOC, dioxins, hydrogen chloride, HAP metals, mercury and boiler ash. Tests shall be conducted under the maximum expected firing rates. The maximum firing rates during the tests will be used to determine the maximum allowable firing rates for any future permanent authorization. [Application No. 0890004-021-AC]

**G.4.** Test Schedule: The testing program shall commence upon first fire of effluent treatment system solids. All tests shall be completed within 30 days of first fire. If the permit has not expired, the permittee may request additional time from the Bureau of Air Regulation to complete the testing program. [Application No. 0890004-021-AC]

**G.5.** Report: Within 60 days of completing the testing program, the permittee shall submit a report summarizing the following: test program and procedures, data collection methods, tested configurations, analytical results, and a conclusion. A copy of the report shall be submitted to the Compliance Authority. [Application No. 0890004-021-AC]

## TABLE 297.310-1 CALIBRATION SCHEDULE
## (version dated 10/07/96)

[Note: This table is referenced in Rule 62-297.310, F.A.C.]

| ITEM | MINIMUM CALIBRATION FREQUENCY | REFERENCE INSTRUMENT | TOLERANCE |
|---|---|---|---|
| Liquid in glass thermometer | Annually | ASTM Hg in glass ref. thermometer or equivalent, or thermometric points | +/-2% |
| Bimetallic thermometer | Quarterly | Calib. liq. in glass thermometer | 5 degrees F |
| Thermocouple | Annually | ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer | 5 degrees F |
| Barometer | Monthly | Hg barometer or NOAA station | +/-1% scale |
| Pitot Tube | When required or when damaged | By construction or measurements in wind tunnel D greater than 16" and standard pitot tube | See EPA Method 2, Fig. 2-2 & 2-3 |
| Probe Nozzles | Before each test or when nicked, dented, or corroded | Micrometer | +/-0.001" mean of at least three readings Max. deviation between readings .004" |
| Dry Gas Meter and Orifice Meter | 1. Full Scale: When received, When 5% change observed, Annually<br>2. One Point: Semiannually | Spirometer or calibrated wet test or dry gas test meter | 2% |
| | 3. Check after each test series | Comparison check | 5% |

[electronic file name: 297310-1.doc]

## APPENDIX SS-1, STACK SAMPLING FACILITIES (version dated 10/07/96)

Stack Sampling Facilities Provided by the Owner of an Emissions Unit. This section describes the minimum requirements for stack sampling facilities that are necessary to sample point emissions units. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. Emissions units must provide these facilities at their expense. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

(a) Permanent Test Facilities. The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.

(b) Temporary Test Facilities. The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.

(c) Sampling Ports.

1. All sampling ports shall have a minimum inside diameter of 3 inches.

2. The ports shall be capable of being sealed when not in use.

3. The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.

4. For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.

5. On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

(d) Work Platforms.

1. Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.

2. On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.

3. On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.

4. All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toeboard, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

(e) Access to Work Platform.

1. Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.

2. Walkways over free-fall areas shall be equipped with safety rails and toeboards.

(f) Electrical Power.

1. A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.

2. If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

(g) Sampling Equipment Support.

1. A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.

a. The bracket shall be a standard 3 inch x 3 inch x one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.

b. A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.

c. The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.

2. A complete monorail or dualrail arrangement may be substituted for the eyebolt and bracket.

3. When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

[Rule 62-297.310(6), F.A.C.]

# Florida Department of Environmental Protection

**Memorandum**

TO: Trina Vielhauer, Bureau of Air Regulation
THROUGH: Jeff Koerner, New Source Review Section JK
FROM: Corrie Branum, New Source Review Section CB
DATE: March 19, 2008
SUBJECT: Draft Air Permit No. 0890004-021-AC
Rayonier Performance Fibers, LLC
Fernandina Beach Dissolving Sulfite Pulp Mill
No. 6 Power Boiler, Miscellaneous Permit Revisions

Attached for your review are the following items:

- Written Notice of Intent to Issue Air Permit;
- Public Notice of Intent to Issue Air Permit;
- Technical Evaluation and Preliminary Determination;
- Draft Permit; and
- P.E. Certification.

The purpose of this project is to revise original air construction permit No. 0890004-018-AC for the No. 6 Power Boiler to: increase the steam production limit; authorize the firing of spent sulfur liquor; remove the Boiler MACT provisions of Subpart DDDDD in 40 CFR Part 63; and authorize a temporary trial burn of effluent treatment system solids. The Bureau of Air Regulation is the permitting authority for this project because the original project included a PSD netting analysis. I recommend your approval of the attached draft permit for this project.

Attachments

TLV/jfk/cb

**Harvey, Mary**

**From:** Harvey, Mary
**Sent:** Thursday, March 20, 2008 2:03 PM
**To:** 'Mr. F.J. Perrett, Rayonier Performance Fibers, LLC'; 'Mr. Dave Rogers, Rayonier Performance Fibers, LLC'; 'Mr. Dave Tudor, Rayonier Performance Fibers, LLC'; 'Mr. David Buff, Golder Associates, Inc.'; 'Ms. Kathleen Forney, EPA Region 4'; Kirts, Christopher
**Cc:** Branum, Corrie; Walker, Elizabeth (AIR); Gibson, Victoria
**Subject:** Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC
**Attachments:** 0890004.021.AC.D_pdf.zip

**Tracking:**

| Recipient | Delivery | Read |
|---|---|---|
| 'Mr. F.J. Perrett, Rayonier Performance Fibers, LLC' | | |
| 'Mr. Dave Rogers, Rayonier Performance Fibers, LLC' | | |
| 'Mr. Dave Tudor, Rayonier Performance Fibers, LLC' | | |
| 'Mr. David Buff, Golder Associates, Inc.' | | |
| 'Ms. Kathleen Forney, EPA Region 4' | | |
| Kirts, Christopher | Delivered: 3/20/2008 2:03 PM | |
| Branum, Corrie | Delivered: 3/20/2008 2:03 PM | Read: 3/20/2008 2:03 PM |
| Walker, Elizabeth (AIR) | Delivered: 3/20/2008 2:03 PM | |
| Gibson, Victoria | Delivered: 3/20/2008 2:03 PM | Read: 3/20/2008 2:19 PM |

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: http://www.adobe.com/products/acrobat/readstep.html.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

## Harvey, Mary

**From:** Buff, Dave [DBuff@GOLDER.com]
**To:** undisclosed-recipients
**Sent:** Thursday, March 20, 2008 2:24 PM
**Subject:** Read: Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC

Your message

To: DBuff@GOLDER.com
Subject:

was read on 3/20/2008 2:24 PM.

## Harvey, Mary

**From:** Branum, Corrie
**To:** Harvey, Mary
**Sent:** Thursday, March 20, 2008 2:04 PM
**Subject:** Read: Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC

Your message

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| To: | 'Mr. F.J. Perrett, Rayonier Performance Fibers, LLC'; 'Mr. Dave Rogers, Rayonier Performance Fibers, LLC'; 'Mr. Dave Tudor, Rayonier Performance Fibers, LLC'; 'Mr. David Buff, Golder Associates, Inc.'; 'Ms. Kathleen Forney, EPA Region 4'; Kirts, Christopher |
| Cc: | Branum, Corrie; Walker, Elizabeth (AIR); Gibson, Victoria |
| Subject: | Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC |
| Sent: | 3/20/2008 2:03 PM |

was read on 3/20/2008 2:03 PM.

## Harvey, Mary

**From:** Gibson, Victoria
**To:** Harvey, Mary
**Sent:** Thursday, March 20, 2008 2:19 PM
**Subject:** Read: Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC

Your message

| | |
|---|---|
| To: | 'Mr. F.J. Perrett, Rayonier Performance Fibers, LLC'; 'Mr. Dave Rogers, Rayonier Performance Fibers, LLC'; 'Mr. Dave Tudor, Rayonier Performance Fibers, LLC'; 'Mr. David Buff, Golder Associates, Inc.'; 'Ms. Kathleen Forney, EPA Region 4'; Kirts, Christopher |
| Cc: | Branum, Corrie; Walker, Elizabeth (AIR); Gibson, Victoria |
| Subject: | Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC |
| Sent: | 3/20/2008 2:03 PM |

was read on 3/20/2008 2:19 PM.

## Harvey, Mary

**From:** Branum, Corrie
**To:** Harvey, Mary
**Sent:** Thursday, March 20, 2008 2:04 PM
**Subject:** Read: Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC

Your message

| | |
|---|---|
| To: | 'Mr. F.J. Perrett, Rayonier Performance Fibers, LLC'; 'Mr. Dave Rogers, Rayonier Performance Fibers, LLC'; 'Mr. Dave Tudor, Rayonier Performance Fibers, LLC'; 'Mr. David Buff, Golder Associates, Inc.'; 'Ms. Kathleen Forney, EPA Region 4'; Kirts, Christopher |
| Cc: | Branum, Corrie; Walker, Elizabeth (AIR); Gibson, Victoria |
| Subject: | Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC |
| Sent: | 3/20/2008 2:03 PM |

was read on 3/20/2008 2:03 PM.

## Harvey, Mary

**From:** Forney.Kathleen@epamail.epa.gov
**Sent:** Thursday, March 20, 2008 2:07 PM
**To:** Harvey, Mary
**Subject:** Re: FW: Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC

thanks

Katy R. Forney
Air Permits Section
EPA - Region 4
61 Forsyth St., SW
Atlanta, GA 30303

Phone: 404-562-9130
Fax: 404-562-9019

"Harvey, Mary" <Mary.Harvey@dep.state.fl.us>
03/20/2008 02:04 PM

To: Kathleen Forney/R4/USEPA/US@EPA
cc:
Subject: FW: Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on this link to the DEP Customer Survey. Thank you in advance for completing the survey.

From: Harvey, Mary
Sent: Thursday, March 20, 2008 2:03 PM
To: 'Mr. F.J. Perrett, Rayonier Performance Fibers, LLC'; 'Mr. Dave Rogers, Rayonier Performance Fibers, LLC'; 'Mr. Dave Tudor, Rayonier Performance Fibers, LLC'; 'Mr. David Buff, Golder Associates, Inc.'; 'Ms. Kathleen Forney, EPA Region 4'; Kirts, Christopher
Cc: Branum, Corrie; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC

Dear Sir/Madam:

## Harvey, Mary

**From:** Kirts, Christopher
**To:** Harvey, Mary
**Sent:** Friday, March 21, 2008 8:36 AM
**Subject:** Read: Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC

Your message

| | |
|---|---|
| To: | 'Mr. F.J. Perrett, Rayonier Performance Fibers, LLC'; 'Mr. Dave Rogers, Rayonier Performance Fibers, LLC'; 'Mr. Dave Tudor, Rayonier Performance Fibers, LLC'; 'Mr. David Buff, Golder Associates, Inc.'; 'Ms. Kathleen Forney, EPA Region 4'; Kirts, Christopher |
| Cc: | Branum, Corrie; Walker, Elizabeth (AIR); Gibson, Victoria |
| Subject: | Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC |
| Sent: | 3/20/2008 2:03 PM |

was read on 3/21/2008 8:36 AM.

## Harvey, Mary

**From:** David.Rogers@rayonier.com
**Sent:** Thursday, March 20, 2008 2:33 PM
**To:** Harvey, Mary
**Cc:** Kirts, Christopher; Branum, Corrie; Mr. Dave Tudor, Rayonier Performance Fibers, LLC; Mr. David Buff, Golder Associates, Inc.; Walker, Elizabeth (AIR); Ms. Kathleen Forney, EPA Region 4; Mr. F.J. Perrett, Rayonier Performance Fibers, LLC; Gibson, Victoria
**Subject:** Re: Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC

**Attachments:** 0890004.021.AC.D_pdf.zip

0890004.021.AC.D _pdf.zip (644 ...

The Rayonier Fernandina Mill received the draft permit package. Thank you.

David Rogers
Manager, Environmental Operations
Rayonier Fernandina Mill

"Harvey, Mary" <Mary.Harvey@dep.state.fl.us>

03/20/2008 02:02 PM

To "Mr. F.J. Perrett, Rayonier Performance Fibers, LLC" <jack.perrett@rayonier.com>, "Mr. Dave Rogers, Rayonier Performance Fibers, LLC" <david.rogers@rayonier.com>, "Mr. Dave Tudor, Rayonier Performance Fibers, LLC" <david.tudor@rayonier.com>, "Mr. David Buff, Golder Associates, Inc." <dbuff@golder.com>, "Ms. Kathleen Forney, EPA Region 4" <Forney.Kathleen@epa.gov>, "Kirts, Christopher" <Christopher.Kirts@dep.state.fl.us>

cc "Branum, Corrie" <Corrie.Branum@dep.state.fl.us>, "Walker, Elizabeth \(AIR\)" <Elizabeth.Walker@dep.state.fl.us>, "Gibson, Victoria" <Victoria.Gibson@dep.state.fl.us>

Subject Draft Permit No. 0890004-021-AC-DRAFT - Rayonier Performance Fibers, LLC

## P.E. CERTIFICATION STATEMENT

**PERMITTEE**

Rayonier Performance Fibers, LLC
The Foot of Gum Street
Fernandina Beach, Florida 32035-1309

Draft Air Permit No. 0890004-021-AC
Fernandina Beach Mill
No. 6 Power Boiler Revisions
Nassau, Florida

**PROJECT DESCRIPTION**

Original air construction Permit No. 0890004-018-AC was issued to authorize: an increase in the permitted throughput capacity for the facility operations; installation of the new No. 6 Power Boiler to replaces existing Nos. 1-3 Power Boilers; installations of three evaporator bodies to evaporate moisture from hot caustic extract; and to recognize the production of the No. 6 Batch Digester. The original project included a PSD netting analysis and was not subject to PSD preconstruction review. The new project is a revision of the original air construction permit to: increase the recognized maximum steam production rates; authorize spent sulfite liquor as an approved fuel; remove the industrial boiler MACT provisions (Subpart DDDDD, 40 CFR Part 63); and authorize a trial burn of effluent treatment system solids in the No. 6 Power Boiler. These are considered minor revisions and are not subject to PSD preconstruction review. See the Technical Evaluation and Preliminary Determination for additional details.

***I HEREBY CERTIFY*** *that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including, but not limited to, the electrical, mechanical, structural, hydrological, geological, and meteorological features).*

Jeffery F. Koerner, P.E.
Registration Number: 49441

4-16-08
(Date)

# Rayonier

*Performance Fibers*

*Fernandina Mill*

December 14, 2007

RECEIVED
DEC 17 2007
BUREAU OF AIR REGULATION

**DHL #24963576654**

Mr. Jeff Koerner
Division of Air Resources
Department of Environmental Protection
2600 Blair Stone Road
MS 5505
Tallahassee, FL 32399-2400

RE: Number 6 Power Boiler (PB6)
Modification of Construction Permit No. 0890004-018-AC

Dear Mr. Koerner:

The above referenced permits have been issued to Rayonier Performance Fibers LLC, Fernandina Beach, Dissolving Sulfite Pulp Mill permitting the relocation and operation of a used boiler, designated No. 6 power boiler. These permits also permitted an increase in production. This application is not requesting any modifications to the provisions of that production increase. This application requests four minor modifications to (1) add the No. 6 boiler to the existing Title V permit; (2) modify the construction permit to allow an increase in the steaming rate up to the rate expected given the permitted heat input and the efficiency measured as required by that permit; (3) allow the use of Spent Sulfite Liquor (SSL) as a fuel replacing some No. 6 fossil fuel oil; (4) remove the now remanded and vacated provisions of boiler MACT. In addition to these modifications, a trial of burning waste treatment system is requested. The trial plan is appended to the application.

Simultaneous processing of the construction and the Title V operating permit is being requested because these modifications are fairly simple, noncontroversial and Rayonier would like to save the time of separate processing. These are minor modifications because there will be no change to the emissions limits affecting PSD pollutants (criteria pollutants). The only change in limits is to remove the now vacated boiler MACT limits for PM, Hg and HCl. The limit on steam produced will increase from 310,000 to 330,000 lbs/hour on a 24 hour average and from 265,000 to 286,000 lbs/hour on an annual average. But the steam limit has no emission impact as explained later. Spent sulfite liquor is added as a fuel to cover those emergencies when the recovery boiler has malfunctioned and is being repaired. The addition of methylene chloride is now required because the mill has changed one of its pulp testing methods to one that uses that substance and that use causes an emission from a new emission unit, a lab hood vent, at greater than 1000 lbs/year.

**Increase in short and long term steaming rate.**
Condition A.1.a of the construction permit limits the maximum 24 hour average continuous steam production rate to 310,000 lbs/hr based on 525 MMBtu/hr heat input. Condition A.1.b. limits the maximum 12 month rolling average steam production rate to 265,000 lbs/hr based on 450 MMBtu/hr heat input. Condition A.28 required the determination of boiler thermal efficiency on 100 percent wood and 100 percent oil.

The application was made assuming a heat efficiency of 65% while burning wood, the predominate fuel. The efficiency determination required by Condition A.28 reported 70 percent heat efficiency while burning wood and 84 percent on oil. A 525 MMBtu/hr heat input from wood should enable 330,000 lb/hr of steam of 900 psi steam. Likewise, 450 MMBtu heat input should yield 286,000 lbs/hr steam on a 12 month rolling average basis. A calculation sheet is attached to this letter presenting these calculations.

All steam limits could be removed since they do not figure in the calculation of emissions. The mill does monitor steam produced and can calculate heat input from that data as a surrogate means to continuously monitor compliance. However, heat input is determined for compliance purposes by f-factors, measurements taken during stack testing and continuous $O_2$ measurements. If there is an applicable requirement for retaining the steaming limits and they can not be removed, at least they should be raised to 330,000 lb/hr 24 hour average and 286,000 lb/hr 12 month rolling average.

**Burning Spent Sulfite Liquor (SSL)**
Spent Sulfite Liquor, also known as red liquor, is the chemical material containing the various organic impurities removed from the wood chip after the cooking cycle is completed. Chemical constituents of the wood such as lignin, tannin and resins are dissolved in the sulfite cooking liquor as ammonium lignosulfonate.

There is reason to believe that up to 1200 gallons per hour of SSL can be fired to No 6 boiler without increasing any after control emissions of any pollutant. The Proximate and ultimate analyses of SSL are given in Attachment 7 of the permit. The existing $SO_2$ reduction device will only need to achieve a capture of about 70 percent to avoid increasing emissions over the permit given the sulfur content of SSL. This capture efficiency is easily achievable with the existing wet alkali scrubbers. Experience with burning SSL in the recovery boiler indicates that the ammonia in the SSL is instrumental in reducing $NO_x$ emissions below that expected based simply on the nitrogen content of the fuel. CO and VOC are well controlled by the furnace design and type which isn't changing. The SSL will replace No. 6 oil and thus will reduce fossil fuel usage and therefore greenhouse gases will decrease. There is $SO_2$, $NO_x$, and CO continuous mass emission monitoring on this boiler. These alone will ensure the existing permit limits will not be exceeded.

**Removal of Boiler MACT Provisions (40 CFR Part 63, Subpart DDDDD)**
This application does not recite the history of the Boiler MACT provisions, referenced above. This rule has been remanded to the EPA and vacated. A letter dated August 6, 2007 from Florida Department of Environmental Protection advised Permittees whose permits reference the vacated rule to apply for removal of the provisions based on this vacated rule. Conditions A.0.b, A.4.a, A 5.a, A.9, A.10, A19, A.20 and A.21, all reference the vacated rule and should be removed.

**Effluent Treatment System Solids Burning Trial**
The mill is interested in determining whether its effluent treatment system solids (sludge) could displace purchased bark as a fuel for power boiler number 6. To this end a sludge burning trial plan has been attached. Over 60% of the sludge is unbleached screening fiber fines which are similar to knots in composition. These fines are already part of the materials approved for burning in No. 6 boiler. There is a high probability of success of the trial based on the composition of the sludge and the bubbling fluidized bed design of the boiler. The parameters to be monitored and tested during the trial are included in the plan. Based on the results of the trial, the mill may request a revision of the Title V permit to allow displacement of bark or other bio-fuels with sludge at defined addition levels. The mill is requesting that the Department review the trial plan and inform Rayonier of the mechanism needed to receive approval for it. It is preferable that this be considered separately from the permit modifications requested.

If you have questions regarding this application please contact either Dave Rogers, (904)277-1346, email: david.rogers@rayonier.com or Dave Tudor (904)277-1452, email: david.tudor@rayonier.com.

Sincerely,

F. J. Perrett
General Manager

## ATTACHMENT TO DECEMBER 14, 2007 LETTER FOR PERMIT MODIFICATION

### Original Application

Emissions calculated on the basis of 525 mmBtu/hour heat input which yields 310,000 lb steam /hour at 65% efficiency

$$\frac{\text{310 lb steam/hour x 1100 Btu/lb}}{\text{0.65 efficiency}} = \text{524.6 mmBtu/hour}$$

Annual limit was based on emissions from 450 mmBtu/hour heat input which yields 265,000 lb steam/hour.

$$\frac{\text{265,000 lb steam/hour x 1100 Btu/lb}}{\text{0.65 efficiency}} = \text{448,461rounded to 450 mmBtu/hour}$$

### Modification Application

Keeping the same heat input and emissions 525 mmBtu/hour heat input yields 340,000 lb steam/hour at 70% efficiency.

$$\frac{\text{525,000,000 Btu/hour x 0.70 efficiency}}{\text{1100 Btu/lb}} = \text{334,000 lb steam/hour}$$

Annually 450 mmBtu/hour heat input yields 286,000 lbs steam/hour at 70% efficiency.

$$\frac{\text{450,000,000 Btu/hour x 0.70 efficiency}}{\text{1100 Btu/lb}} = \text{286,000 lb steam/hour}$$

# APPLICATION TABLE OF CONTENTS

# 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 a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

**Air Operation Permit** – Use this form to apply for:

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

**Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option)** – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

**To ensure accuracy, please see form instructions.**

**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...<br>Street Address or Other Locator: **Foot of Gum Street**<br>City: **Fernandina Beach** County: **Nassau** Zip Code: **32034** | |
| 5. Relocatable Facility?<br>☐ Yes ☒ No | 6. Existing Title V Permitted Facility?<br>☒ Yes ☐ No |

**Application Contact**

| |
|---|
| 1. Application Contact Name: **David E. Tudor** |
| 2. Application Contact Mailing Address...<br>Organization/Firm: **Rayonier Inc.**<br>Street Address: **Post Office Box 2002**<br>City: **Fernandina Beach** State: **FL** Zip Code: **32035** |
| 3. Application Contact Telephone Numbers...<br>Telephone: **(904) 277 - 1452** ext. Fax: **(904) 277 - 1411** |
| 4. Application Contact Email Address: **david.tudor@rayonier.com** |

**Application Processing Information (DEP Use)**

| | |
|---|---|
| 1. Date of Receipt of Application: | 12/17/07 |
| 2. Project Number(s): | 0890004 - 021 - AC |
| 3. PSD Number (if applicable): | |

## APPLICATION INFORMATION

| | |
|---|---|
| 4. Siting Number (if applicable): | |

## APPLICATION INFORMATION

**Purpose of Application**

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

**Air Construction Permit**

[x] Air construction permit.

**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**

**This application is for a four minor changes in construction permit No. 0890004-018-AC.**
**(1) add No. 6 boiler to the existing Title V permit**
**(2) to increase the steaming limit on No. 6 boiler to reflect the heat efficiency determined in required efficiency tests. The efficiency used for the original application was lower that determined by test. Therefore, without changing the heat input more steam can be produced without a change in emissions or emission limits.**
**(3) The addition of SSL, a sulfite pulping liquor as an auxiliary fuel to replace No. 6 fossil fuel oil.**
**(4) To remove the provisions of 40 CFR Part 63 Subpart DDDDD which has been remanded and vacated by the District of Columbia Federal District Court.**

## APPLICATION INFORMATION

**Scope of Application**

| Emissions Unit ID Number | Description of Emissions Unit | Air Permit Type | Air Permit Proc. Fee |
|---|---|---|---|
| **PB06** | **Bubbling Bed 450 mmBtu/hr boiler** | **AC & AV** | **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**

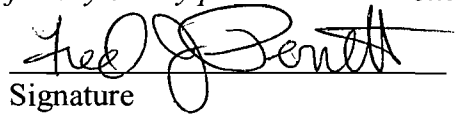
2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **Rayonier Performance Fibers LLC**
   Street Address: **Post Office Box 2002**
   City: **Fernandina Beach** State: **FL** Zip Code: **32035**

3. Owner/Authorized Representative Telephone Numbers...
   Telephone: **(904)277-1405** ext. Fax: **(904)277-1411**

4. Owner/Authorized Representative Email Address: **jack.perrett@rayonier.com**

5. Owner/Authorized Representative Statement:

   *I, the undersigned, am the owner or authorized representative of the facility 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 requirements identified in this application to which the facility 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.*



Signature

11-14-07

Date

## APPLICATION INFORMATION

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

1. Application Responsible Official Name:
   **F. J. Perrett**

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):

   [X] 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.

   [ ] For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

   [ ] For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

   [ ] The designated representative at an Acid Rain source.

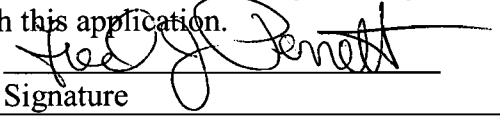
3. Application Responsible Official Mailing Address...
   Organization/Firm: **Rayonier Performance Fibers LLC**
   Street Address: **P. O. Box 2002**
   City: **Fernandina Beach** State: **FL** Zip Code: **32035**

4. Application Responsible Official Telephone Numbers...
   Telephone: ( **904** )**277-1405** - ext. Fax: ( **904** )**277-1411**

5. Application Responsible Official Email Address: **jack.perrett@rayonier.com**

6. Application Responsible Official Certification:

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.



Signature

11-14-07
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: **6241 N.W. 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653**
3. Professional Engineer Telephone Numbers...
   Telephone: **(325)336-5600** ext. **545** Fax: **(352)336-6603**
4. Professional Engineer Email Address: **dbuff@golder.com**
5. Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein*, that:*

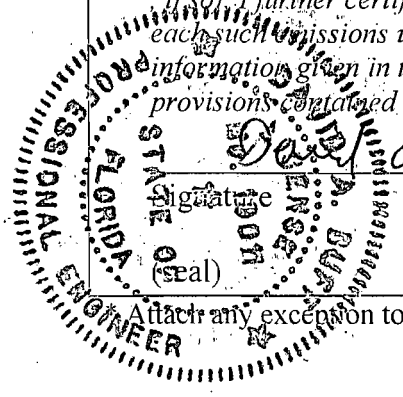
*(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and*

*(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.*

*(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, 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.*

*(4) If the purpose of this application is to obtain an air construction permit (check here [X], 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 ☐, 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.*

*(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 ☐, 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.*




David A. Buff
Signature (seal)

12/14/07
Date

* Attach any exception to certification statement.

# II. FACILITY INFORMATION

## A. GENERAL FACILITY INFORMATION

**Facility Location and Type**

| | | | |
|---|---|---|---|
| 1. Facility UTM Coordinates...<br>Zone **14** East (km) **454.7**<br>North (km) **3392.2** | | 2. Facility Latitude/Longitude...<br>Latitude (DD/MM/SS)<br>Longitude (DD/MM/SS) | |
| 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:<br>**David Rogers** |
| 2. Facility Contact Mailing Address...<br>Organization/Firm: **Rayonier Performance Fibers LLC**<br>Street Address: **Post Office Box 2002**<br>City: **Fernandina Beach** State: **FL** Zip Code: **32035** |
| 3. Facility Contact Telephone Numbers:<br>Telephone: **( 904)277-1346** ext. Fax: **(904)261-0333** |
| 4. Facility Contact Email 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:<br>**F. J. Perrett** |
| 2. Facility Primary Responsible Official Mailing Address...<br>Organization/Firm: **Rayonier Performance Fibers LLC**<br>Street Address: **P. O. Box 2002**<br>City: **Fernandina Beach** State: **FL** Zip Code: **32035** |
| 3. Facility Primary Responsible Official Telephone Numbers...<br>Telephone: **( 904 )277-1405** ext. Fax: **( 904 ) 277-1411** |
| 4. Facility Primary Responsible Official Email Address: **jack.perrett@rayonier.com** |

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

## FACILITY INFORMATION

**List of Pollutants Emitted by Facility**

| 1. Pollutant Emitted | 2. Pollutant Classification | 3. Emissions Cap [Y or N]? |
|---|---|---|
| **See Attachment 3** | | |
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## 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 Nos. Under Cap (if not all units) | 4.Hourly Cap (lb/hr) | 5.Annual Cap (ton/yr) | 6. Basis for Emissions Cap |
|---|---|---|---|---|---|
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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)
[X] Attached, Document ID: **Attachment 1** [ ] 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)
[X] Attached, Document ID: **Attachment 2** [ ] 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)
[ ] Attached, Document ID:_____ [x] Previously Submitted, Date: **11/6/2002**

**Additional Requirements for Air Construction Permit Applications**

1. Area Map Showing Facility Location:
[X] Attached, Document ID: **Attachment 4** [ ] Not Applicable (existing permitted facility)

2. Description of Proposed Construction or Modification:
[X] Attached, Document ID: **Included in cover letter with this application**

3. Rule Applicability Analysis:
[X] Attached, Document ID: **Included in cover letter with this application**

4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
[ ] Attached, Document ID:_____ [X] Not Applicable (no exempt units at facility)

5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.):
[ ] Attached, Document ID:_____ [x] Not Applicable

6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.):
[ ] Attached, Document ID:_____ [X] Not Applicable

7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.):
[ ] Attached, Document ID:_____ [X] Not Applicable

8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.):
[ ] Attached, Document ID:_____ [X] Not Applicable

9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.):
[ ] Attached, Document ID:_____ [X] Not Applicable

10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
[ ] Attached, Document ID:_____ [X] Not Applicable

## FACILITY INFORMATION

**Additional Requirements for FESOP Applications**

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
☐ Attached, Document ID:_____ [X] 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:_____ [X] 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:_____
[X] 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 On site but Not Required to be Individually Listed
[X] Not Applicable

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

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

**Additional Requirements Comment**

# III. EMISSIONS UNIT INFORMATION - PB06

**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 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 for air permit. 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 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/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. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** 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 construction permitting and insignificant emissions units 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 ] of [1 ]**

## *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.)

[X] 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)

[X] 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: **This emission unit is a fluidized bed boiler burning a variety of fuels but mostly waste wood and bark. The boiler was constructed in 1983 and has not been reconstructed in this conversion.**

3. Emissions Unit Identification Number: **PB06**

| 4.Emissions Unit Status Code: **C** | 5. Commence Construction Date: **11/2005** | 6.Initial Startup Date: **12/2006** | 7.Emissions Unit Major Group SIC Code: **2611** | 8. Acid Rain Unit? [ ] Yes [X] No |
|---|---|---|---|---|

9. Package Unit:**NA**
Manufacturer: Model Number:

10. Generator Nameplate Rating: **NA** MW

11. Emissions Unit Comment:

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:

**The particulate emissions from this boiler are controlled by a large settling chamber followed by a large ESP capable of achieving 0.07 lb/mmBtu PM emissions. Sulfur dioxide emissions are controlled by an alkaline scrubber. The boiler relies mostly on staged combustion, flue gas recirculation and boiler design to achieve the $NO_x$ limits. Should it be necessary to lower $NO_x$ emissions to achieve the annual Cap, the boiler is designed to receive an SNCR system.**

2. Control Device or Method Code(s):**005,010, 129, 204. 025, 026, possibly 032**

## *B. EMISSIONS UNIT CAPACITY INFORMATION*

**(Optional for unregulated emissions units.)**

**Emissions Unit Operating Capacity and Schedule**

| | |
|---|---|
| 1. Maximum Process or Throughput Rate: **NA** | |
| 2. Maximum Production Rate: **NA** | |
| 3. Maximum Heat Input Rate: **525** million Btu/hr **See comment below.** | |
| 4. Maximum Incineration Rate: **NA** pounds/hr<br>tons/day | |
| 5. Requested Maximum Operating Schedule: | |
| **24** hours/day | **7** days/week |
| **52** weeks/year | **8760** hours/year |
| 6. Operating Capacity/Schedule Comment:<br>**Maximum Heat Input Rate Comment: The annual average operating rate will not exceed 450 mmBtu/h. However, a maximum heat input rate of 525 mmBtu/hr will be needed for periods when the only other boiler at the facility is down.** | |

## 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: **PB06** | 2. Emission Point Type Code: **1** | |
| 3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **This is a single bubbling fluidized bed power boiler burning mostly biomass to produce steam for electrical generation and manufacturing process use. The emission exhaust through a single stack.** | | |
| 4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **PB06** | | |
| 5. Discharge Type Code: **V** | 6. Stack Height: feet **190 above ground** | 7. Exit Diameter: feet **10** |
| 8. Exit Temperature: **150** °F | 9. Actual Volumetric Flow Rate: **183,421** acfm | 10. Water Vapor: **21.3** % |
| 11. Maximum Dry Standard Flow Rate: **144,352** dscfm | 12. Nonstack Emission Point Height: feet **NA** | |
| 13. Emission Point UTM Coordinates... Zone: East (km): North (km): | 14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) **30/39/30** Longitude (DD/MM/SS) **81/28/40** | |
| 15. Emission Point Comment: | | |

## *D. SEGMENT (PROCESS/FUEL) INFORMATION*

**Segment Description and Rate:** Segment **1**_ of **5**_

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **This fuel segment is for green bark at about 50% moisture.** | | |
| 2. Source Classification Code (SCC): **10100901** | 3. SCC Units: **tons burned** | |
| 4. Maximum Hourly Rate: **52** | 5. Maximum Annual Rate: **451,425** | 6. Estimated Annual Activity Factor: **NA** |
| 7. Maximum % Sulfur: **0.03** | 8. Maximum % Ash: **2.27** | 9. Million Btu per SCC Unit: **9** |
| 10. Segment Comment: **Approximately 60% is self produced as a byproduct.** | | |

Segment Description and Rate: Segment **2** of **5**

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **This fuel segment is for knots and sidehill fines recovered as process byproduct at about 50% - 60% moisture.** | | |
| 2. Source Classification Code (SCC): **10100901** | 3. SCC Units: **tons burned** | |
| 4. Maximum Hourly Rate: **5.3** | 5. Maximum Annual Rate: **46,269** | 6. Estimated Annual Activity Factor: **NA** |
| 7. Maximum % Sulfur: **0.40** | 8. Maximum % Ash: **0.41** | 9. Million Btu per SCC Unit: **9** |
| 10. Segment Comment: **100% of this fuel is produced as a pulping byproduct.** | | |

## *D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)*

Segment Description and Rate: Segment **3** of **5**

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **This segment is for Tire Derived Fuel.** | | |
| 2. Source Classification Code (SCC): **10100801** | 3. SCC Units: **tons burned** | |
| 4. Maximum Hourly Rate: **3.0** | 5. Maximum Annual Rate: **26,159** | 6. Estimated Annual Activity Factor: **NA** |
| 7. Maximum % Sulfur: **1.85** | 8. Maximum % Ash: **4.78** | 9. Million Btu per SCC Unit: **31** |
| 10. Segment Comment: | | |

Segment Description and Rate: Segment **4** of **5**

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **This segment is for No. 6 oil.** | | |
| 2. Source Classification Code (SCC): **10100401** | 3. SCC Units: **thousand gallons burned** | |
| 4. Maximum Hourly Rate: **1.4** | 5. Maximum Annual Rate: **11,927** | 6. Estimated Annual Activity Factor: **NA** |
| 7. Maximum % Sulfur: **2.5** | 8. Maximum % Ash: **0.12** | 9. Million Btu per SCC Unit: **150** |
| 10. Segment Comment: **This segment includes small amounts of self-generated on-spec used oil.** | | |

## D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment **5** of **5**

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type): **This segment is for spent sulfite liquor concentrated to approximately 60% solids. This material is not listed in the SCC database. An SCC requiring description in the comment was chosen. The proximate and ultimate analysis can be found in the Attachment 7.** | | |
| 2. Source Classification Code (SCC): **10201301** | 3. SCC Units: **Tons Burned** | |
| 4. Maximum Hourly Rate: **6.3** | 5. Maximum Annual Rate: **55,188** | 6. Estimated Annual Activity Factor: **NA** |
| 7. Maximum % Sulfur: **5.5** | 8. Maximum % Ash: **0.93** | 9. Million Btu per SCC Unit: **9.486** |
| 10. Segment Comment: **This is the spent sulfite liquor concentrated to 40% moisture. Preferentially and generally this material is burned in the recovery boiler. But at times when the recovery boiler is inoperable rather than waste the valuable energy in this fuel the applicant wishes to burn it in its new No. 6 bubbling bed boiler.** | | |

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: | | |

## *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** | **005** | **010** | **EL** |
| **PM10** | **010** | | **EL** |
| **SO2** | **129** | | **EL** |
| **$NO_x$** | **025** | **026** | **EL** |
| **CO** | **204** | | **NS** |
| **Pb** | **010** | | **NS** |
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## *F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –*

### POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

| 1. Pollutant Emitted: **PM** | 2. Total Percent Efficiency of Control: **99.9% +** |
|---|---|
| 3.Potential Emissions: **36.75** lb/hour **137.97** tons/year | 4. Synthetically Limited? ☐ Yes [X] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **NA** to tons/year | |
| 6. Emission Factor: **0.07 lb/mmBtu** Reference: **40 CFR 63.7500 Table** | 7. Emissions Method Code: **0** |
| 8. Calculation of Emissions: **hrly: 525 mmBtu/hr x 0.07 lb/mmBtu = 36.75 lbs/hr** **ann: 450 mmBtu/hr x 0.07 lb/mmBtu x 1/2000 tons/lbs x 8760 hr/year = 137.97 TPY** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: | |

## F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -

### ALLOWABLE EMISSIONS

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

**Allowable Emissions** Allowable Emissions **1** of **3**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **RULE 62-296.410(2)(b)(2)** | 2. Future Effective Date of Allowable Emissions: |
| 3. Allowable Emissions and Units: **0.2 lb/mmBTU** | 4. Equivalent Allowable Emissions: **105** lb/hour **394.2** tons/year |
| 5. Method of Compliance: **Settling Chamber followed by Electrostatic Precipitator** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **Normal operating mode this boiler will burn mostly bark and knots. 0.2 lb/mmBtu x 450 mmBtu/hr x 8760/2000 = 394.2 TPY 0.2 lb/mmBtu x 525 mmBtu/hr = 105.0 lb/hr** | |

**Allowable Emissions** Allowable Emissions **2** of **3**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **RULE 40 CFR 60.42** | 2. Future Effective Date of Allowable Emissions: |
| 3. Allowable Emissions and Units: **0.1 lb/mmBtu** | 4. Equivalent Allowable Emissions: **52.5** lb/hour **197.1** tons/year |
| 5. Method of Compliance: **Settling Chamber followed by Electrostatic Precipitator** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **0.1 lb/mmBtu x 450 mmBtu/hr x 8760/2000 = 197.1 TPY 0.1 lb/mmBtu x 525 mmBtu/hr = 52.5 lb/hr** | |

**Allowable Emissions** Allowable Emissions **3** of **3**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **RULE 40.CFR 63.7500** | 2. Future Effective Date of Allowable Emissions: **09/13/2007** |
| 3. Allowable Emissions and Units: **0.07 lb/mmBTU** | 4. Equivalent Allowable Emissions: **36.75** lb/hour **137.97** tons/year |
| 5. Method of Compliance: **Settling Chamber Electrostatic Precipitator** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **0.07 lb/mmBtu x 450 mmBtu/hr x 8760/2000 = 137.97 TPY 0.07 lb/mmBtu x 525 mmBtu/hr = 36.75 lb/hr** | |

## *F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –*

### POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

| 1. Pollutant Emitted: **PM10** | 2. Total Percent Efficiency of Control: **99.9% +** |
|---|---|
| 3.Potential Emissions: **36.75** lb/hour **137.97** tons/year | 4. Synthetically Limited? ☐ Yes [**X**] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **NA** to tons/year | |
| 6. Emission Factor: **0.07 lb/mmBtu** Reference: **assume same as PM** | 7. Emissions Method Code: **0** |

8. Calculation of Emissions:

**hrly: 525 mmBtu/hr x 0.07 lb/mmBtu = 36.75 lbs/hr**

**ann: 450 mmBtu/hr x 0.07 lb/mmBtu x 1/2000 tons/lbs x 8760 hr/year = 137.97 TPY**

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

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

### ALLOWABLE EMISSIONS

**Complete 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): **There are no rule based PM10 emission limits applicable to this boiler. For purposes of calculating emission increases and decreases PM10 is considered equal to PM. The electrostatic precipitator will capture PM10 as well as PM.** | |

**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/ESTIMATED FUGITIVE EMISSIONS

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

| 1. Pollutant Emitted: **SO2** | 2. Total Percent Efficiency of Control: **99** |
|---|---|
| 3.Potential Emissions: **420** lb/hour **220.95** tons/year | 4. Synthetically Limited? [X] Yes [ ] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **NA** to tons/year | |
| 6. Emission Factor: **0.8 lb/mmBtu** Reference: **40 CFR 60.43(1)** | 7. Emissions Method Code: **0** |

8. Calculation of Emissions:

**hrly: 525 mmBtu/hr x 0.8 lb/mmBtu = 420.00 lbs/hr**

**ann: 450 mmBtu/hr x 0.1121 lb/mmBtu x 1/2000 tons/lbs x 8760 hr/year = 220.95 TPY**

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

## F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -

### ALLOWABLE EMISSIONS

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

**Allowable Emissions** Allowable Emissions **1** of **3**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **RULE 40 CFR 60.43** | 2. Future Effective Date of Allowable Emissions: |
| 3. Allowable Emissions and Units: **0.8 lb/mmBtu** | 4. Equivalent Allowable Emissions: **420** lb/hour **1,576.8** tons/year |
| 5. Method of Compliance: **Alkali scrubber** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **0.8 lb/mmBtu x 450 mmBtu/hr x 8760/2000 = 1,576.8 TPY** **0.8 lb/mmBtu x 525 mmBtu/hr = 420 lb/hr** | |

**Allowable Emissions** Allowable Emissions **2** of **3**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** | 2. Future Effective Date of Allowable Emissions: |
| 3. Allowable Emissions and Units: **0.1121 lb/mmBtu** | 4. Equivalent Allowable Emissions: **58.85** lb/hour **220.95** tons/year |
| 5. Method of Compliance: **Alkali scrubber and CEMS for $SO_2$** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **0.1121 lb/mmBtu x 450 mmBtu/hr x 8760/2000 = 220.95 TPY** **0.1121 lb mmBtu x 525 mmBtu/hr = 58.85 lb/hr** **Equivalent hourly and annual emissions are based on an annual averaging time.** | |

**Allowable Emissions** Allowable Emissions **3** of **3**

| | |
|---|---|
| 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/ESTIMATED FUGITIVE EMISSIONS

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

| 1. Pollutant Emitted: **$NO_x$** | 2. Total Percent Efficiency of Control: **See Comment.** |
|---|---|
| 3.Potential Emissions: **157.5** lb/hour **379.95** tons/year | 4. Synthetically Limited? [X] Yes [ ] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **NA** to tons/year | |
| 6. Emission Factor: **0.3 lb/mmBtu** Reference: **Hourly 40 CFR 60.44** | 7. Emissions Method Code: **0** |

8. Calculation of Emissions:

**hrly:**

**525 mmBtu/hr x 0.3 lb/mmBtu = 157.5 lbs/hr**

**annual:**

**450 mmBtu/hr x 0.1928 lb/mmBtu x 8760/2000 = 379.95 TPY**

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

**$NO_x$ control is based on methods and designs that prevent the pollutant from forming, or minimizing the fuel bound $NO_x$ that does form. Therefore it is not possible to calculate a control efficiency as if there were collection of a pollutant.**

## F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -

### ALLOWABLE EMISSIONS

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

**Allowable Emissions** Allowable Emissions **1** of **2**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **RULE 40 CFR 60.44** | 2. Future Effective Date of Allowable Emissions: |
| 3. Allowable Emissions and Units: **0.3 lb/mmBtu** | 4. Equivalent Allowable Emissions: **157.5** lb/hour **591.3** tons/year |
| 5. Method of Compliance: **boiler design, staged combustion and flue gas recirculation** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **0.3 lb/mmBtu x 450 mmBtu/hr x 8760/2000 = 591.3 TPY**<br>**0.3 lb/mmBtu x 525 mmBtu/hr = 157.5 lb/hr** | |

**Allowable Emissions** Allowable Emissions **2** of **2**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** | 2. Future Effective Date of Allowable Emissions: **11/2005** |
| 3. Allowable Emissions and Units: **379.95 tons per year** | 4. Equivalent Allowable Emissions: **101.20** lb/hour **379.95** tons/year |
| 5. Method of Compliance: **CEMS for $NO_x$. The boiler will minimize $NO_x$ formation by furnace design, flue gas recirculation and staged combustion. If these methods are inadequate the boiler is designed to have SNCR installed.** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **0.1928 lb/mmBtu x 450 mmBtu/hr x 8760/2000 = 379.95 TPY**<br>**0.1928 lb/mmBTU x 525 mmBtu/hr = 101.20 lb/hr**<br>**Equivalent hourly and annual emissions are based on an annual averaging time.** | |

**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/ESTIMATED FUGITIVE EMISSIONS

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

| 1. Pollutant Emitted: | 2. Total Percent Efficiency of Control: |
|---|---|
| **CO** | **See Comment.** |

| 3.Potential Emissions: | 4. Synthetically Limited? |
|---|---|
| **105** lb/hour **394.2** tons/year | ☐ Yes [X] No |

| 5. Range of Estimated Fugitive Emissions (as applicable): |
|---|
| **NA** to tons/year |

| 6. Emission Factor: **0.2 lb/mmBtu** Reference: | 7. Emissions Method Code: |
|---|---|

8. Calculation of Emissions:

**hrly: 525 mmBtu/hr x 0.2 lb/mmBtu = 105 lbs/hr**

**annual: 450 mmBtu/hr x 0.2 lb/mmBtu X 8760/2000 = 394.2 TPY**

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

**CO control is based on methods and designs that prevent the pollutant from forming. Therefore it is not possible to calculate a control efficiency as if there were collection of a pollutant.**

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

### ALLOWABLE EMISSIONS

**Complete 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): **There is no rule based emission limit for CO for this boiler. CO emissions for this boiler are significantly less than experienced with the less efficient previous boilers that CO emissions decrease and PSD limits should not be of concern.** | |

**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/ESTIMATED FUGITIVE EMISSIONS

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

| 1. Pollutant Emitted: **Pb** | 2. Total Percent Efficiency of Control: |
|---|---|
| 3.Potential Emissions: **0.38** lb/hour **1.65** tons/year | 4. Synthetically Limited? ☐ Yes [X] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **NA** to tons/year | |
| 6. Emission Factor: **see calculation and comment** Reference: **calculated from NCASI** | 7. Emissions Method Code: |

8. Calculation of Emissions:

**451,425t bark/yr X 0.0073 lb Pb/ton bark = 3,295.4 lbs/yr**
**46,269 t knots/yr x 0.0013 lb Pb/ton knots = 60.2 lb/yr**

**3355.6 lb/yr /8760 = 0.38 lb/hr**

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

**Pb emissions from burning bark and knots are based on the Pb in bark and wood, and assuming all Pb is emitted, where generally it stays with the bottom ash. Further this calculation does not consider the collection efficiency of the ESP. Thus this is a worst case projection.**

## F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -

### ALLOWABLE EMISSIONS

**Complete 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): **There are no regulation based emission limits for Pb applicable to this boiler.** | |

**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**] of [**3**]

## *G. VISIBLE EMISSIONS INFORMATION*

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

**Visible Emissions Limitation:** Visible Emissions Limitation **1** of **2**

| 1. Visible Emissions Subtype: **VE20** | 2. Basis for Allowable Opacity: [X] Rule [ ] Other |
|---|---|
| 3. Allowable Opacity: Normal Conditions: **30** % Exceptional Conditions: **40** % Maximum Period of Excess Opacity Allowed: **2** min/hour | |
| 4. Method of Compliance: **Electrostatic Precipitator** | |
| 5. Visible Emissions Comment: **62-296.410(2)(b)(1)** | |

**Visible Emissions Limitation:** Visible Emissions Limitation **2** of **2**

| 1. Visible Emissions Subtype: **VE20** | 2. Basis for Allowable Opacity: [X] Rule [ ] Other |
|---|---|
| 3. Allowable Opacity: Normal Conditions: **20** % Exceptional Conditions: **27** % Maximum Period of Excess Opacity Allowed: **6** min/hour | |
| 4. Method of Compliance: **Electrostatic Precipitator** | |
| 5. Visible Emissions Comment: **40 CFR 60.42** | |

**Visible Emissions Limitation:** Visible Emissions Limitation of

| 1. Visible Emissions Subtype: | 2. Basis for Allowable Opacity: [ ] Rule [ ] Other |
|---|---|
| 3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour | |
| 4. Method of Compliance: | |
| 5. Visible Emissions Comment: | |

## *H. CONTINUOUS MONITOR INFORMATION*

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

Continuous Monitoring System: Continuous Monitor **1** of **3**

| | |
|---|---|
| 1. Parameter Code: **EM** | 2. Pollutant(s): **$SO_2$** |
| 3. CMS Requirement: ☐ Rule ☐ Other | |
| 4. Monitor Information... Manufacturer: **Teledyne Instruments** Model Number: **100E** Serial Number: **1204** | |
| 5. Installation Date: **12/31/2006** | 6. Performance Specification Test Date: **2/19/2007** |
| 7. Continuous Monitor Comment: **There is a rule requirement for a SO2 CEM (40 CFR 60.45(a)). Also, a SO2 CAP is requested for this boiler to avoid PSD review.** | |

Continuous Monitoring System: Continuous Monitor **2** of **3**

| | |
|---|---|
| 1. Parameter Code: **EM** | 2. Pollutant(s): **$NO_x$** |
| 3. CMS Requirement: ☒ Rule ☐ Other | |
| 4. Monitor Information.. Manufacturer: **Teledyne Instruments** Model Number: **200E** Serial Number: **1285** | |
| 5. Installation Date: **12/31/2006** | 6. Performance Specification Test Date: **2/19/2007** |
| 7. Continuous Monitor Comment: **There is no rule requirement for a $NO_x$ CEM (40 CFR 60.45(b)(3)). However, a $NO_x$ CAP is requested for this boiler to avoid PSD review. This monitor is proposed to document compliance with the emissions CAP.** | |

## *H. CONTINUOUS MONITOR INFORMATION (CONTINUED)*

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

Continuous Monitoring System: Continuous Monitor **3** of **3**

| | |
|---|---|
| 1. Parameter Code: **FLOW** | 2. Pollutant(s): **Volumetric flow rate** |
| 3. CMS Requirement: ☐ Rule | [X] Other |
| 4. Monitor Information... Manufacturer: **SICK MAIHAK** Model Number: **OMD41** | Serial Number: **6148023** |
| 5. Installation Date: **12/31/2006** | 6. Performance Specification Test Date: **2/19/2007** |
| 7. Continuous Monitor Comment: **There is no rule requirement for a flow monitor. However, annual CAPs for $NO_x$ and SO2 are requested for this boiler to avoid PSD review. This monitor is proposed to document compliance with the emissions CAP.** | |

Continuous Monitoring System: Continuous Monitor of

| | |
|---|---|
| 1. Parameter Code: | 2. Pollutant(s): |
| 3. CMS Requirement: ☐ Rule ☐ Other | |
| 4. Monitor Information... Manufacturer: Model Number: | Serial Number: |
| 5. Installation Date: | 6. Performance Specification Test Date: |
| 7. Continuous Monitor Comment: | |

# *I. EMISSIONS UNIT ADDITIONAL INFORMATION*

**Additional Requirements for All Applications, Except as Otherwise Stated**

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)
   [X] Attached, Document ID: 6 previously Submitted, Date ___

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)
   [X] Attached, Document ID: 7 [ ] Previously Submitted, Date _____

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)
   [X] Attached, Document ID: 8 [ ] Previously Submitted, Date _____

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)
   [ ] Attached, Document ID: _____ [X] Previously Submitted, Date _____
   [X] Not Applicable (construction application)

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)
   [X] Attached, Document ID: 9 [ ] Previously Submitted, Date _____
   [ ] Not Applicable

6. Compliance Demonstration Reports/Records
   [ ] Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   [ ] Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [X] Not Applicable
   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.

7. Other Information Required by Rule or Statute
   [ ] Attached, Document ID: _____ [X] Not Applicable

**EMISSIONS UNIT INFORMATION**
Section[1] of [1]

**Additional Requirements for Air Construction Permit Applications**

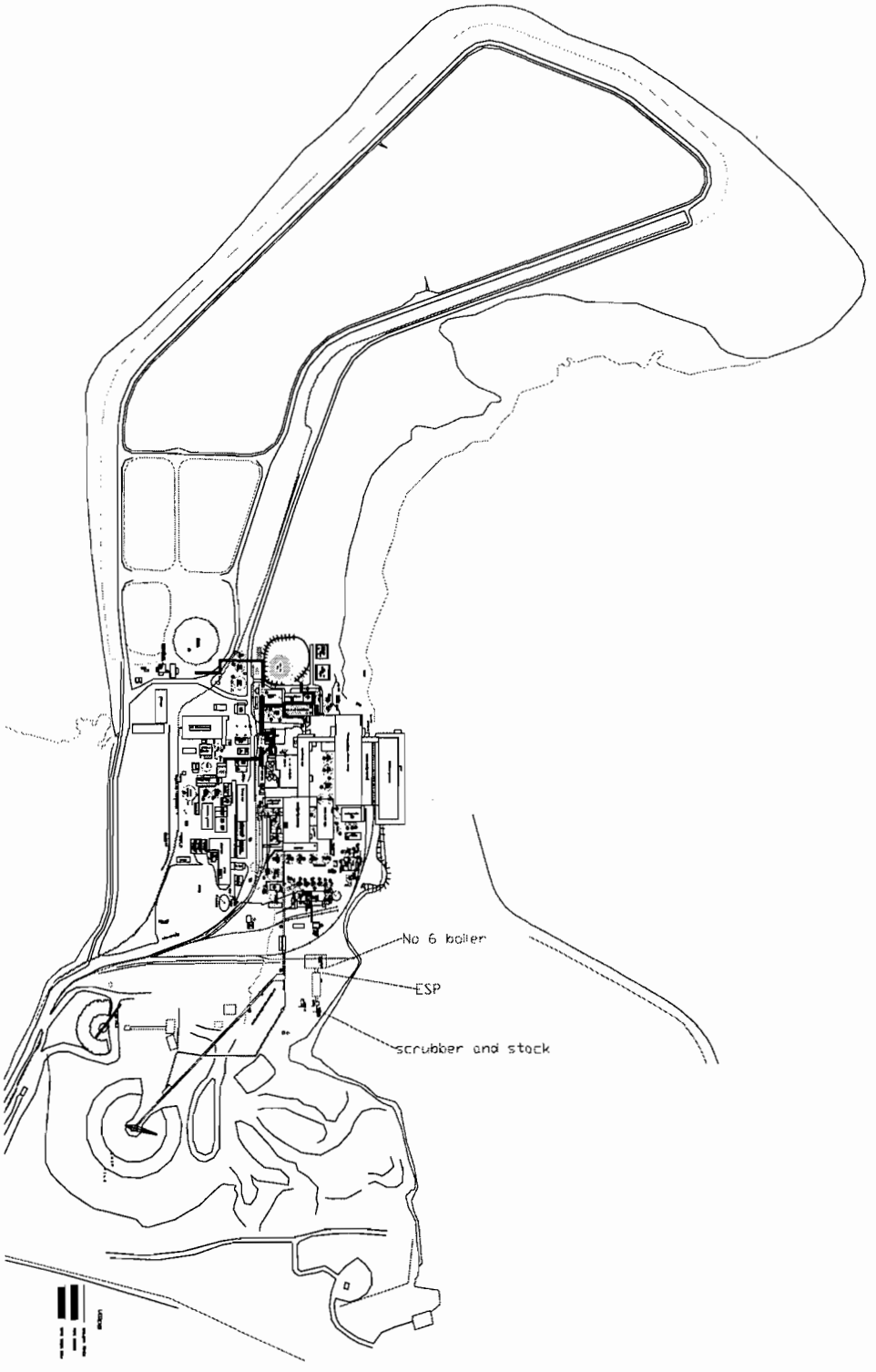
1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

**Additional Requirements for Title V Air Operation Permit Applications**

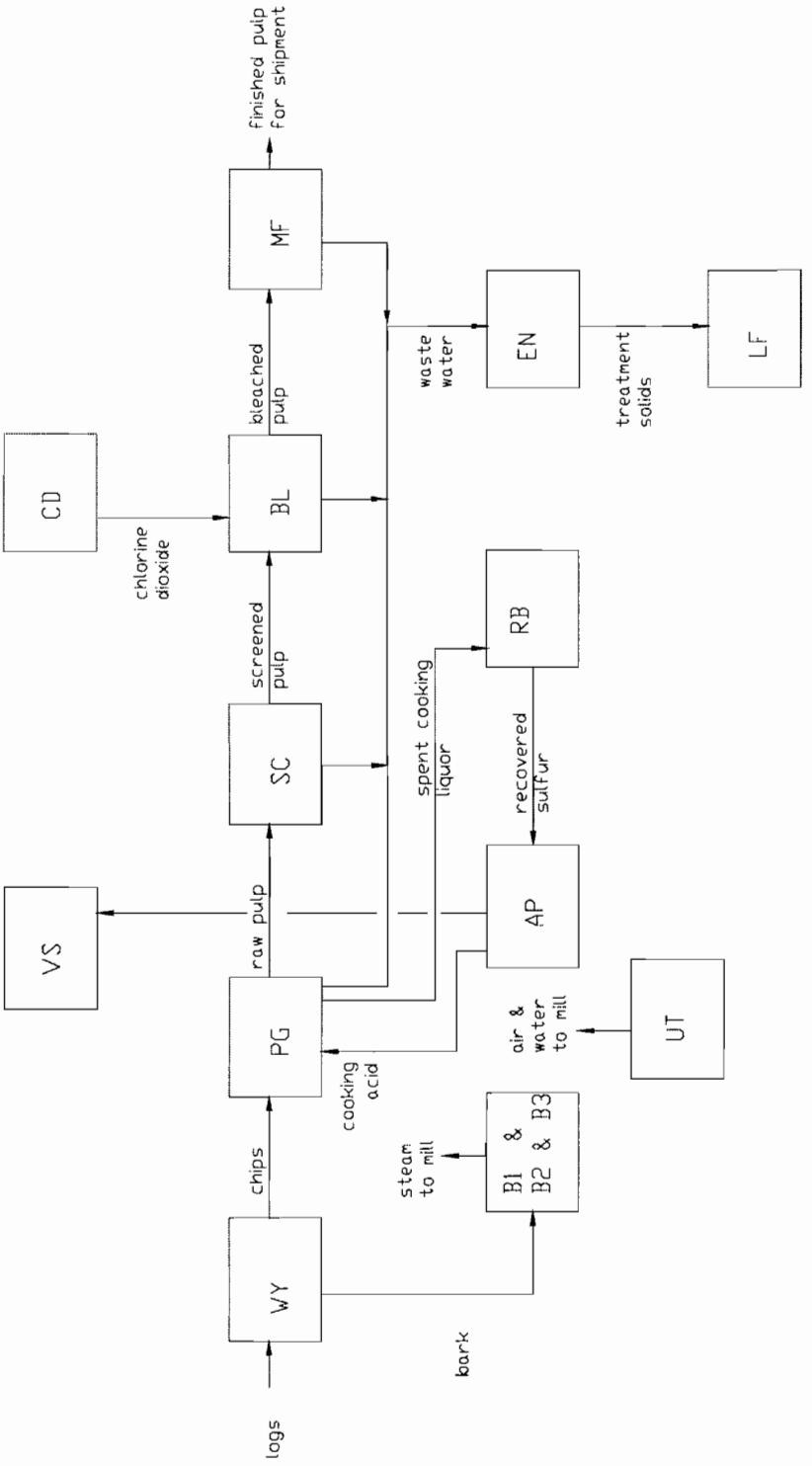
1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID:
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID:_____
     - ☐ Previously Submitted, Date:_____
   - ☒ Not Applicable

**Additional Requirements Comment**

# ATTACHMENT 1 - Facility Plot Plan



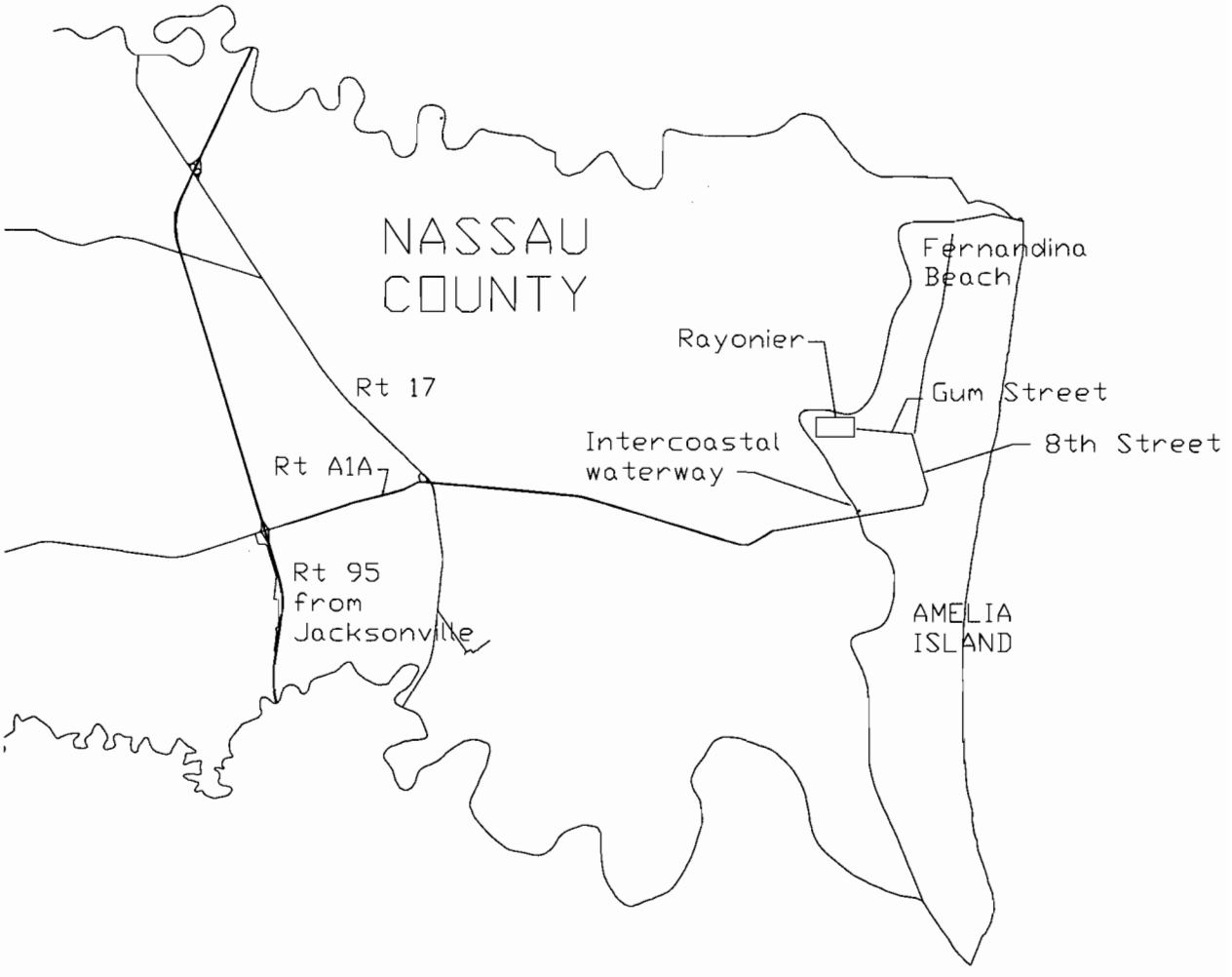
# ATTACHMENT 2 - Facility Flow Diagram



# ATTACHMENT 3 - List of Pollutants Emitted by Facility

| | | | |
|---|---|---|---|
| PM10 | (Particles) | A | N |
| SO2 | (Sulfur Dioixde) | A | N |
| NOx | (Nitrogen Dioxide) | A | Y |
| CO | (Carbon Monoxide) | A | N |
| VOC | (Volatile Organic Compounds) | A | N |
| HAPS | (Total Hazardous Air Pollutant) | A | N |
| H115 | (Methanol) | A | N |
| H038 | (Chlorine) | A | N |
| H043 | (Chloroform) | A | N |
| PB | (Lead) | B | N |
| H047 | (Cobalt) | B | N |
| H120 | (MEK) | A | N |
| H001 | (Acetaldehyde) | A | N |
| H106 | (HCl) | B | N |
| H095 | (Formaldehyde) | B | N |
| H006 | (Acrolein) | B | N |
| H118 | (Chloromethane) | B | N |
| H163 | (Styrene) | B | N |
| CFC | (totalCFCs) | B | N |
| H128 | (Methylene chloride) | B | N |
| H033 | (Carbon Tetrachloride) | B | N |
| H017 | (Benzene) | B | N |
| H123 | (Methyl Isobutyl Ketone) | B | N |
| H169 | (Toluene) | B | N |
| H041 | (Chlorobenzene) | B | N |
| H085 | (Ethyl benzene) | B | N |
| H187 | (Xylene) | B | N |
| H166 | (1,1,2,2-tetrachloroethane) | B | N |
| H061 | (1,4, dichlorobenzene) | B | N |
| H174 | (1,2,4-trichlorobenzene) | B | N |
| H165 | (TCDD) | B | N |
| H2S | (Hydrogen sulfide) | B | N |
| H167 | (Tetrachloroethene) | B | N |
| H176 | (Trichloroethylene) | B | N |
| H119 | (1,1,1-trichloroethane) | B | N |
| H104 | (Hexane) | B | N |
| H0323 | (Carbon disulfide) | B | N |
| H117 | (Bromomethane) | B | N |
| | (Chlorine dioxide) | A | N |
| H113 | (Manganese) | B | N |
| H114 | (Mercury) | B | N |
| H133 | (Nickel) | B | N |
| H148 | (Phosphorous) | B | N |

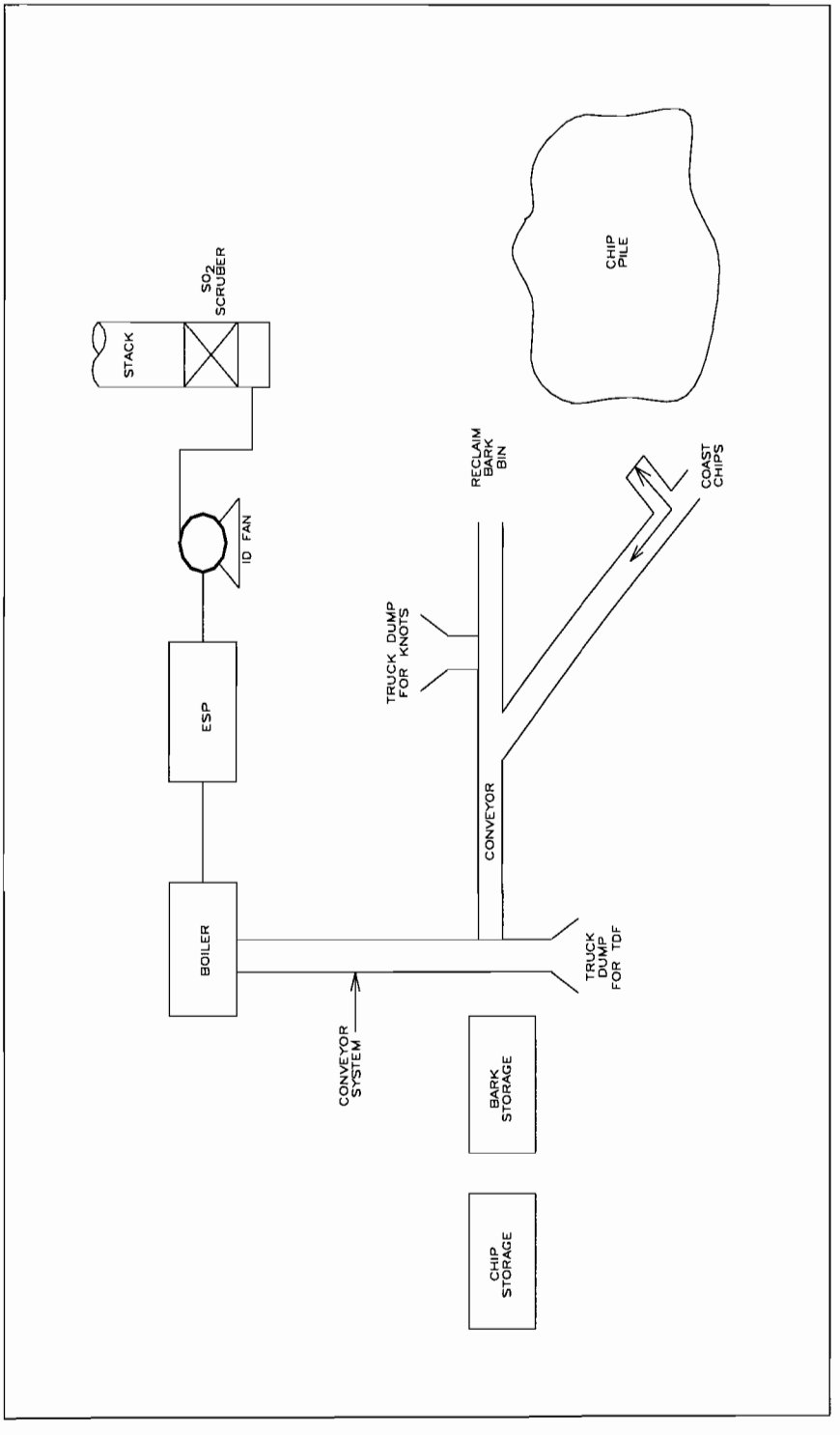
# ATTACHMENT 4 - Area Map



# ATTACHMENT 5 - Description and Rule Applicability Analysis

See Cover Letter with this application for Description and Analysis of these changes to an existing construction permit.

# ATTACHMENT 6 - PB06 Process Flow Diagram



# ATTACHMENT 7 - PB06 Fuel Analysis

Four main fuels will be fired in power boiler No. 6: bark, oil, knots, landscape waste and Tire Derived Fuel. The proximate and ultimate analyses for each is given below.

| Fuel | Bark | Knots | TDF | #6 Fuel Oil | SSL |
|---|---|---|---|---|---|
| **Proximate Analysis** | | | | | |
| Fixed Carbon | 9.95 | 4.94 | 27.5 | | 19.33 |
| Volatiles | 40.19 | 27.71 | 65.5 | | 39.37 |
| Sulfur | 0.03 | 0.40 | 1.85 | | 5.01 |
| Ash | 2.27 | 0.41 | 4.78 | | 0.93 |
| Moisture | 47.59 | 66.94 | 0.37 | | 40.37 |
| | | | | | |
| **Ultimate Analysis** | | | | | |
| Carbon | 28.07 | 19.49 | 83.00 | 85.70 | 28.89 |
| Hydrogen | 3.00 | 2.10 | 7.50 | 10.50 | 3.20 |
| Oxygen | 18.82 | 10.49 | 0.50 | 0.92 | 19.61 |
| Nitrogen | 0.22 | 0.17 | 0.37 | 0.92 | 1.99 |
| Chlorine | 0.01 | 0.01 | | | 0.02 |
| Sulfur | 0.03 | 0.4 | 1.85 | 2.50 | 5.01 |
| Ash | 2.27 | 0.41 | 4.78 | 0.08 | 0.93 |
| Moisture | 47.59 | 66.94 | 2.00 | | 40.37 |

# ATTACHMENT 8 - PB06 Detailed Description of Control Equipment

**Particulate Emission Control Equipment**

Ash Hopper. There is a settling chamber ahead of the electrostatic precipitator. This piece of equipment is referred to as the ash hopper. It allows large particles to settle and reduce the ash and grain loading to the ESP. This hopper has a screw conveyor bottom to remove this ash for disposal.

Electrostatic Precipitator. This unit is a rigid electrode and collector plate design having four fields with a dedicated transformer/rectifier (T/R) set for each field. To minimize re-entrainment each field has its own ash-hopper with a screw conveyor discharge.

An opacity monitor is not required by rule, but one has been installed following the electrostatic precipitator and before the scrubber. This will be used to control boiler operation in addition to other control instruments and equipment. This monitor does not monitor the emissions as they exit the stack because there is a wet scrubber prior to stack top exhaust. The opacity monitor can not operate in a saturated gas stream.

**Sulfur Dioxide Emission Control Equipment**

Alkaline Wet Scrubber. After the Induced Draft Fan there is an $SO_2$ gas scrubber. A spray of 4,000 gpm of recirculated alkaline water cascades from showers over chevrons and louver-type packings. This type scrubber has a low pressure drop of about 2 inches WG. It removes 90% or more of the $SO_2$ in the inlet. The alkalinity of the wood ash also achieves some SO2 capture.

**Nitrogen Oxides Emission Control Equipment**

Initially no collection equipment will be installed, however, provision have been made to install this control equipment. The boiler furnace has been lengthened to increase residence time allowing a lower flame temperature through staged combustion which decreases $NO_x$ formation. Also flame temperature and the rate of oxidation are controlled through flue gas recirculation. Should it be necessary, the boiler is capable of receiving a SNCR installation.

# ATTACHMENT 9 - PB06 Operation and Maintenance Plan

## Number 6 Power Boiler
## Rayonier Performance Fibers, LLC.
## Fernandina Mill

**Brief Description of the Boiler**

No. 6 power boiler is a reconstruction of the Smurfit Jacksonville Mill No. 10 Combustion Engineering [CE VU-40] power boiler originally built in 1982, modified to burn high moisture fuels. No. 6 power boiler has a nominal steam production capacity of 265,000 lb/hr at 900 psig and 875°F. Routinely the boiler burns bark and wood waste. It is capable of supplementing with No. 6 fuel oil to a maximum capability of 310,000 lb/hr steam production when the recovery boiler is out of service. The combustion is accomplished in a Bubbling Fluidized Bed [BFB]. It has the capability of burning bark, wood waste, reject knots, tire derived fuel [TDF] and the mill's on-specification used oil.

In addition to the very efficient BFB combustion, No. 6 power boiler is equipped with a new electrostatic precipitator, a relocated scrubber and the nozzles for a selective non-catalytic reduction [SNCR] system. The SNCR system will not be installed nor operated unless the nitrogen oxide emissions are higher than expected. A new continuous emissions monitoring system [CEMS] is installed to measure opacity, carbon monoxide, sulfur dioxide, nitrogen dioxides and oxygen.

**Maintenance and Inspection**

All systems and equipment are set up for routine preventative maintenance inspections and or calibrations.
Operators inspect all critical equipment for any type of defect on a daily basis. Deficiencies that cannot be corrected by the operator are to be appropriately recorded and reported so that necessary repairs may be made in a timely manner.
A complete inspection of all aspects of the boiler will be made during each maintenance repair shutdown.

The results of the inspections will:
Identify and analyze potentially unsafe conditions during simulated inspections
Recommend corrective action
Detect hidden hazardous conditions during inspections
Communicate findings effectively, both verbally and in writing
The inspections involve ensuring the safe operation of the boiler by performing periodic inspections and by close monitoring of all repair work. The boiler to be installed will be built to a standardized nationwide construction code, the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code.
The inspections will be performed by an inspector commissioned by the National Board of Boiler and Pressure Vessel Inspectors

**Monitoring of Operations and Records**

Records of the duration and occurrence of startups, shutdowns, and malfunctions of the boiler and associated air emission control systems and any period during which the continuous monitoring system is inoperative shall be recorded and the record maintained for a period of five years. A record of boiler downtime due to any maintenance activity shall be maintained.

The continuous emissions monitoring system shall be continuously monitored. When an excursion of a parameter is indicated, corrective action will be immediately initiated.

The daily feed rate of bark & wood waste, No. 6 fuel oil, knots and any other fuel shall be measured and recorded.

# Sulfur Dioxide Emissions Control Systems

**Brief Description of the System**

The oxides of sulfur found in the flue gases are removed with a wet scrubber. The wet scrubber is a venturi type device. Flue gas is accelerated through a nozzle and deluged with a scrubbing liquid. The scrubbing liquid is a solution of caustic soda.

Spray nozzles are arranged in the tower to spray the scrubbing liquor into the flue gas. The spray nozzles are full cone non-clogging nozzles.
When the scrubbing liquor comes in contact with sulfur dioxide in the flue gas, the sulfur dioxide is converted and then removed from the aqueous stream.
The scrubber features a high amount of active surface area with random dumped packing. The packing material breaks the liquid streams into multiple, even surface films that create intimate gas/liquid contact at a low-pressure drop. The Scrubber is expected to remove greater than 90% of the Sulfur Dioxide entering the vessel.

**Maintenance and Inspection**

All systems and equipment are set up for routine preventative maintenance inspections and or calibrations.
Operators inspect all critical equipment for any type of defect on a daily basis. Deficiencies that cannot be corrected by the operator are to be appropriately recorded and reported so that necessary repairs may be made in a timely manner.
A complete inspection of all aspects of the scrubber will be made during each maintenance repair shutdown.
Scrubber spray chambers and nozzles will be inspected regularly to ensure they are not plugged.
The packing section will be inspected often to ensure against solids buildup that would plug portions of the pack.
The scrubber mist eliminator will also be inspected on a regular basis. The catchment on a chevron baffle can become filled with solids, rendering it ineffective.
The scrubber recirculation system will be kept reasonably clean to ensure the solution is capable of gas absorption; to minimize buildup of solids in packed and mist eliminator sections; and to prevent plugging of spray chambers and nozzles.
A continuous addition of water, up to five pct of the total recirculation rate will be added to the recirculation tank and simultaneously overflowed to waste treatment.
The recirculation tank will also be kept clean of sediment. These solids are easily stirred up and will inevitably contribute to plugging of spray nozzles, packing sections and the mist eliminator section.

**Monitoring of Operations and Records**

A log will be maintained of all observations, deviations and corrective actions taken for a period of five years.

The wet scrubber will be equipped with devices to continuously measure the scrubber water flow rate and the differential pressure drop across the scrubber demister pads. The wet scrubber monitoring devices used to continuously measure the scrubber water flow rate and the

differential pressure drop across the scrubber demister pads shall be observed with a frequency of not less than once per day.

Each monitoring device will be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. If the manufacturer's written requirements or recommendations are not available, Rayonier will establish the written procedures.

Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the control device is operating.

# Nitrogen Dioxide Emissions Control Systems

## Selective Non-Catalytic Reduction

Brief Description of the System

The design of the bubbling fluidized bed combustor minimizes nitrogen oxide formation. However, nozzle ports for an SNCR [selective non-catalytic reduction] system are provided on the boiler in case the NOX emissions are higher than expected. The remainder of the SNCR system will be installed only if there are unforeseen problems with NOX emissions.

Maintenance and Inspection

None planned.

Monitoring of Operations and Records

A CEM for nitrogen compounds is installed on the boiler's final emissions. Records of the duration and occurrence of startups, shutdowns, and malfunctions of the boiler and associated air emission control systems and any period during which the continuous monitoring system is inoperative shall be recorded and the record maintained for a period of five years. A record of SNCR downtime due to any maintenance activity shall be maintained if installed.

The continuous emission monitoring system (CEMS) will be installed for the determination of a gas or particulate matter concentration or emission rate using pollutant analyzer measurements and a conversion equation, graph, and computer program to produce results in units of the applicable emission limitation or standard. The system will measure emissions of NOx, SO2, CO2, oxygen and opacity.

The CEM system will comply with all Federal and State requirements that may apply. Specifically, the system complies with 40CFR60. The CEM system will meet all monitoring and reporting requirements outlined in the Title V Permit.

Performance Specifications will be used for evaluating the acceptability of the CEMS at the time of or soon after installation and whenever specified in the regulations. All performance tests must be completed within 30 days after the emission source has begun operation. These reports should contain all pertinent data regarding performance testing.

Quality assurance procedures will be used to evaluate the effectiveness of quality control (QC) and quality assurance (QA) procedures and the quality of data produced by the CEM that will be used for determining compliance with the emission standards on a continuous basis as specified in the applicable regulation.

# Particulate Control Devices

## Electrostatic Precipitator

### Brief Description of the System

The dust laden gases are drawn into one side of the Electrostatic Precipitator Chamber where high voltage electrodes impart a negative charge to the particles entrained in the gas. These negatively charged particles are then attracted to a grounded collecting surface, which is positively charged. The gas then leaves the box up to 99 % cleaner than when it entered. Inside the Electrostatic Precipitator Chamber , the particles from the continuing flow of dust build up on the collecting plates. At periodic intervals, the plates are rapped, causing the particles to fall into hoppers. The particles are then removed from the hoppers, by a rotary screw arrangement. The Design Basis for the Electrostatic Precipitator is listed in the table below:

| | |
|---|---|
| Volume (ACFM) | 240,000 |
| Temperature (°F) | 400 |
| H2O in flue gas (% by vol.) | 15 |
| Inlet to precipitator (gr/dscf) | 2.5 |
| Emission Rate (lbs/MMBTU) | 0.025 |
| Heat Input ( MMBTU/hr) | 450 |

### Maintenance and Inspection

The air emission Electrostatic Precipitator system, and the collection systems are to be inspected daily for leakage, for defects which would affect operation, and for potential defects which would affect operation.

A daily inspection will be performed for the following:

Inspection of rapper operation
Inspection of T-R set operation
Inspection of ash removal system operation

Corrective action measures will be implemented on the occurrence of an abnormal condition. Abnormal conditions will include the following: a T-R set failure, rapper system failure, ash transport system failure, and high ash hopper level.

Each Major Unit Overhaul

Check and correct plate electrode alignment
Inspect for collection surface fouling
Inspect T-R set mechanical condition

Inspect internal structural components

Corrective action measures will be devised and implemented on the occurrence of an abnormal condition. The appropriate measures for remediation will be implemented in a timely manner.

**Monitoring of Operations and Records**

The operator has a graphic display for continuous monitoring of the system and trends of those operating parameter. Appropriate alarms are provided for out of range operations. All meters are set up on the mill's preventative maintenance system for transmitter calibrations. The operator has instantaneous and averaged readouts.

We will maintain a written or electronic record of all inspections and any action resulting from the inspection. Maintenance and inspection records will be kept for five (5) years and available upon request.

An audible Precipitator Malfunction Alarm is available for the operator. The precipitator malfunction alarm will continuously monitor T-R set failure and rapper control malfunction. Corrective action measures will be implemented on the occurrence of a precipitator malfunction alarm. The appropriate measures for remediation will be implemented in a timely manner.

Approximately once each month the data is automatically down loaded, consolidated into 15-minute averages and stored in the mill's data management system. The 15-minute averages are stored for 5 years

# ATTACHMENT 10 - PB06 – Description of Stack Sampling Facilities

The Stack and Sampling Platforms and Ports have been designed at the submittal of this application. However, the stack sampling facilities will meet the Requirements of Appendix SS1 to the Title V Permit. The applicable portions of that document are referenced below.

1. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. Emissions units must provide these facilities at their expense. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E. A permanent stack sampling facility will be installed and maintained.

2. Sampling Ports.
   a. All sampling ports will have a minimum inside diameter of 3 inches.
   b. The ports shall be capable of being sealed when not in use.
   c. The sampling ports will be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.

3. At least two sampling ports, 90 degrees apart, will be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, will be installed. On horizontal circular ducts, the ports will be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.

4. On rectangular ducts, the cross sectional area will be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports will be provided which allow access to each sampling point. The ports will be located so that the probe can be inserted perpendicular to the gas flow.

5 Work Platforms.
   a. Minimum size of the working platform will be 24 square feet in area. Platforms will be at least 3 feet wide.
   b. On circular stacks with 2 sampling ports, the platform will extend at least 110 degrees around the stack.
   c. On circular stacks with more than two sampling ports, the work platform will extend 360 degrees around the stack.
   d. All platforms will be equipped with an adequate safety rail (ropes are not acceptable), toe board, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports will be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

6. Access to Work Platform.
   a. Ladders to the work platform exceeding 15 feet in length will have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.
   b. Walkways over free-fall areas will be equipped with safety rails and toe boards.

7. Electrical Power.
   a. A minimum of two 120-volt AC, 20-amp outlets will be provided at the sampling platform within 20 feet of each sampling port.

b. If extension cords are used to provide the electrical power, they will be kept on the plant's property and be available immediately upon request by sampling personnel.

8. Sampling Equipment Support.

a. A three-quarter inch eyebolt and an angle bracket will be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.

i. The bracket will be a standard 3 inch x 3 inch x one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter will be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket will be located 14 inches above the centerline of the sampling port.

ii. A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt will be located 15 and one-half inches above the centerline of the sampling port.

iii. The three-quarter inch eyebolt will be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt will be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt will be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain will be attached to it to bring the free end of the chain to within safe reach from the platform.

b. A complete monorail or dualrail arrangement may be substituted for the eyebolt and bracket.

c. When the sample ports are located in the top of a horizontal duct, a frame will be provided above the port to allow the sample probe to be secured during the test.
[Rule 62-297.310(6), F.A.C.]

# ATTACHMENT 11 - Effluent Treatment System Solids [Sludge] Burning Trial Plan

The trial will consist of adding two mill-generated sludges to the No. 6 boiler as fuels. One will be primary sludge with no secondary sludge return from the aeration stabilization basin [ASB]. The second will be primary sludge with maximum [~30%] secondary sludge returned from the ASB. Both sludges will be pressed to approximately 70% moisture or less. The boiler operation and total input & output heat rates will be controlled as constant as possible during the different sampling stages of the trial. The mill requests a total of 2 weeks where we will burn sludge in the boiler. The first week will be spent determining the optimal operational method to burn sludge in the boiler. The second week will consist of a trial plan to determine the emissions impact of burning effluent treatment solids. The trial is laid out as follows:

**Trial Monitoring and Sampling Sequence**

Two weeks prior to stack test Day 0: 120-hour operational test burn of sludge at maximum sustainable addition rate (50 ODT/day) to verify boiler operation and ensure that the boiler can run at high load rates while firing sludge.

Day 0 – Stack tester travel day

Day 1 - Pre-trial –Baseline stack test (3 runs) @ maximum steaming rate with no sludge addition.

Day 1 –Post-test add sludge at maximum sustainable rate (50 ODT/day rate)

Day 2 –Test (3 runs) during maximum sustainable sludge addition rate (50 ODT/day rate) at maximum steaming rate on boiler.

Day 2 – Post-test. Switch to adding sludge with secondary solids at maximum sustainable rate (50 ODT/day rate).

Day 3–Test (3 runs) during maximum sustainable sludge addition rate including secondary biosolids (50 ODT/day rate) at maximum steaming rate on boiler.

Day 3 – Post-test remove sludge from boiler.

**Continuous Parameters Monitored**

Sulfur Dioxide Emissions [ppm, lb/hr, lb/MMBTU].
Nitrogen Dioxide Emissions [ppm, lb/hr, lb/MMBTU].
Opacity [%].
Carbon Monoxide [ppm, lb/hr, lb/MMBTU].
Oxygen [%].

Flu gas velocity [cuft/min]
Flue gas temperature [degF]
Heat input rate via f-factor.
Steam production [lb/hr].
Steam temperature [degF].
Steam pressure [psig].
ESP total power (Watts)
Scrubber recirculation rate(gpm) and pH

**Three Stack Tests – Parameters for each**

Particulate Matter [Test method 5/5B]
VOC [Test method 25A]
Dioxins [Test method 23]
Hydrogen Chloride [Test method 26]
HAP metals (arsenic, beryllium, cadmium, chromium, lead, manganese, nickel & selenium) [Test method 29]
Mercury [Method 101A, 29 or ASTM D-6784-02]
Dioxin/Furan in sludge and boiler ash

**Measured Parameters**

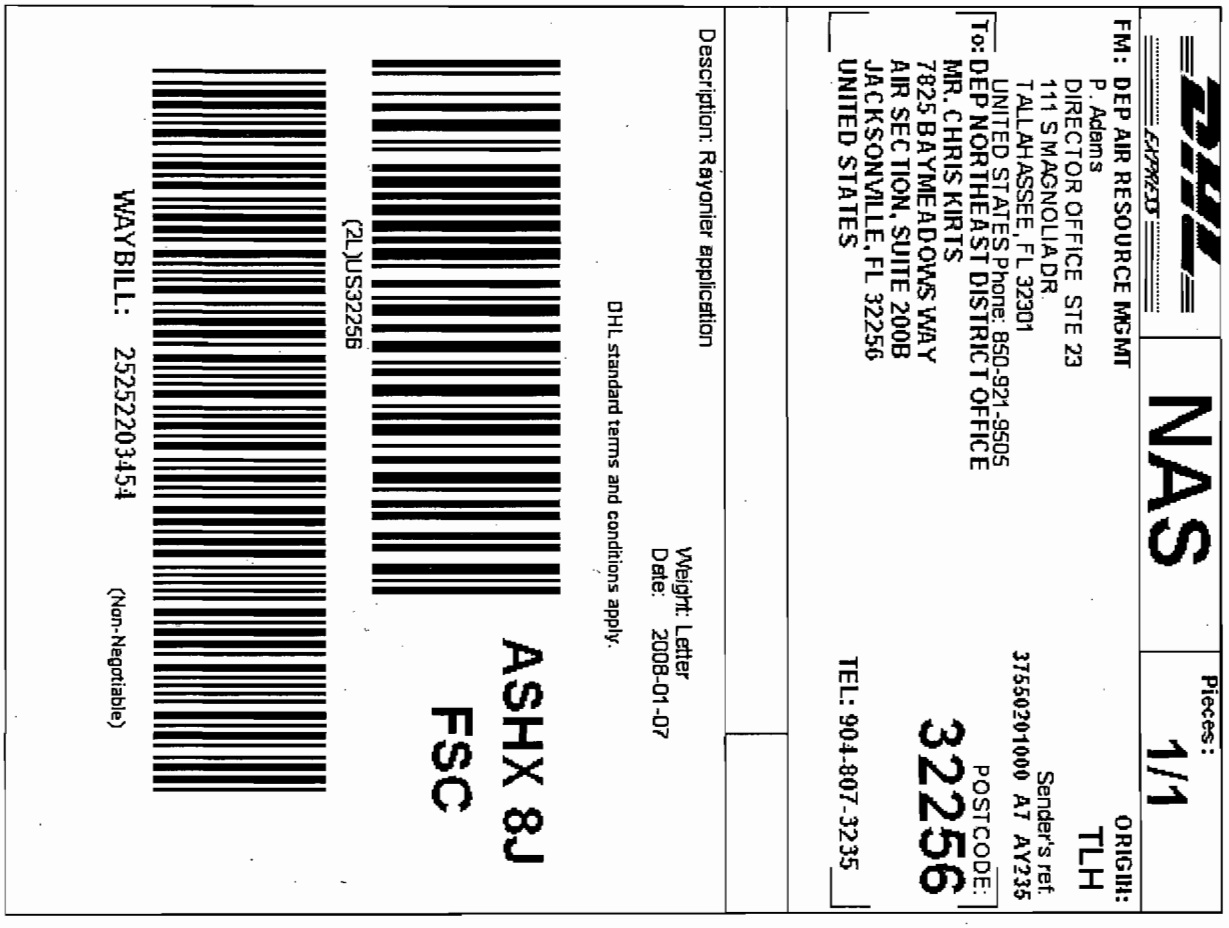
Sludge addition rate [lb as is / hr]
Sludge dryness [%OD]
Bark addition rate
Knots addition rate
Oil addition rate [plan for zero].
Spent Sulfite Liquor [SSL] addition rate [plan for zero].
Tire derived fuel [plan for monthly average].
Ash production rate [lb/hr].

**Notifications**

The FDEP will be notified greater than 30 days before the planned date of the stack testing and confirmed two weeks before the trial. Any unforeseen postponement will be provided to the Department immediately upon recognizing the need for the postponement.

**Reporting**

The final report of the trial will be provided within 30 days from mill receipt of the stack test and all analytical results. In no case will the report be provided more than 60 days after the trial.

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Air Section, Suite 200B
7825 Baymeadows Way

Jacksonville, FL 32256
UNITED STATES

Attention To: Mr. Chris Kirts
Phone#: 904-807-3235

Sent By: P. Adams
Phone#: 850-921-9505

Rate Estimate: 5.15
Protection: Not Required
Description: Rayonier application

Weight (lbs.): Letter
Dimensions: 0 x 0 x 0

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# Rayonier

*Performance Fibers*

*Fernandina Mill*

February 5, 2008



Mr. Jeffery F. Koerner, P.E.
Division of Air Resources Management
Florida Department of Environmental Protection
2600 Blair Stone Road, M.S. 5505
Tallahassee, FL 32399-2400

RE: Rayonier Fernandina Beach Dissolving Sulfite Pulp Mill
No. 6 Power Boiler Modification
Project No. 0890004-021-AC

Dear Mr. Koerner:

I am responding to your January 16, 2008 Request for Further Information in regard to the above referenced permit application. The responses are in the same order as your questions in your January 16, 2008 letter.

1. Based on the meeting with you, Corrie Braum, David Rogers and David Tudor on December 5, 2007 when the issue of concurrent processing was discussed we decided to NOT request concurrent processing. Unfortunately all of the references to concurrent processing in our cover letter of December 14, 2007 were not removed. We are not requesting concurrent processing. For your information Rayonier has submitted an application to the Northeast District to modify the Title V as a separate proceeding and have asked them to schedule their work on that application to follow the construction permit application now in your review.

2. There is no intention to change any of the emission limits in the initial construction permit for No.6 boiler. Attached are corrected pages 27 and 28 of the application reflecting the 210 ton of sulfur dioxide limit in the permit.

3. Methylene chloride is not an issue for the construction permit. Please disregard any reference or request on methylene chloride.

4. There is no intention to change any of the emission limits in the initial construction permit for No.6 boiler. Attached is corrected page 31 of the application reflecting the 591.3 tons per year of carbon monoxide limit in the original construction permit.

5. New application page 34a is attached containing the emission calculations for VOC reflecting the limits in the original construction permit

6. No. 6 power boiler will comply with the NSPS and the air construction permit limits when firing spend sulfite liquor (SSL).

7. 40 CFR Part 61 Subpart E does appear to apply if Rayonier decides to burn sludge in this boiler and requests a permit to do so. This application is only for a trial and during this trial will be testing the knots, bark and sludge for mercury. The sludge is mainly lost wood fiber waste with small amounts of biological material from digesting the dissolved substances cooked out of the wood. One would expect no more mercury emissions than that from burning wood waste because any sludge burned would be replacing either knots or bark, i.e. wood waste. We would not want this boiler to become subject to 40 CFR Part 61, Subpart E because of the trial requested. It is premature to reference in this trial permit. Once the trial burn is completed, Rayonier will make the decision whether to request permanent authorization to burn sludge. Only at that time would the boiler become subject to 40 CFR 61 Subpart E.

   However, we will add to the trial plan to test knots, bark and sludge for mercury. If we find these are the same within the normal variability one expects form such tests then we can conclude there is no increase in mercury emissions, therefore this change is not a modification with an increase in emissions and not subject to a construction permit or PSD review. If there is an increase, burning sludge would be subject to a construction permit and possibly a PSD permit if the increase exceeds the PSD significant emission rate.

   ODT stands for Oven Dried Tons, usually it refers to pulp. The other term common in this industry is ADT or air dried tons of pulp. The relationship between air dried and oven dried depends on the pulp, but usually about 10% is lost going from air dried to oven dried.

8. You are correct that the $SO_2$ emissions and fuel usage must be managed to achieve the SO2 emissions cap. The SSL would have to be co-fired with other fuels, typically bark. There is no past operation for burning SSL in this boiler. We will not exceed 55,188 tons per year.

If you have questions regarding this application please contact either David Rogers, (904)277-1346, e-mail: david.rogers@rayonier.com or Dave Tudor (904)557-8332, e-mail: david.tudor@rayonier.com.

Sincerely,

F. J. Perrett
General Manager

## *F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –*

### POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

| 1. Pollutant Emitted: **SO2** | 2. Total Percent Efficiency of Control: **99** |
|---|---|
| 3.Potential Emissions: **420** lb/hour **210** tons/year | 4. Synthetically Limited? [X] Yes [ ] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **NA** to tons/year | |
| 6. Emission Factor: **0.8 lb/mmBtu** Reference: **40 CFR 60.43(1)** | 7. Emissions Method Code: **0** |
| 8. Calculation of Emissions: **hrly: 525 mmBtu/hr x 0.8 lb/mmBtu = .00 lbs/hr** **ann: 450 mmBtu/hr x 0.106545 lb/mmBtu x 1/2000 tons/lbs x 8760 hr/year = 210 TPY** | |
| 9. Pollutant Potential/Estimated Fugitive Emissions Comment: | |

## F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -

### ALLOWABLE EMISSIONS

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

**Allowable Emissions** Allowable Emissions **1** of **3**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **RULE 40 CFR 60.43** | 2. Future Effective Date of Allowable Emissions: |
| 3. Allowable Emissions and Units: **0.8 lb/mmBtu** | 4. Equivalent Allowable Emissions: **420** lb/hour **1,576.8** tons/year |
| 5. Method of Compliance: **Alkali scrubber** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **0.8 lb/mmBtu x 450 mmBtu/hr x 8760/2000 = 1,576.8 TPY**<br>**0.8 lb/mmBtu x 525 mmBtu/hr = 420 lb/hr** | |

**Allowable Emissions** Allowable Emissions **2** of **3**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** | 2. Future Effective Date of Allowable Emissions: |
| 3. Allowable Emissions and Units: **0.106545 lb/mmBtu** | 4. Equivalent Allowable Emissions: **55.94** lb/hour **210** tons/year |
| 5. Method of Compliance: **Alkali scrubber and CEMS for $SO_2$** | |
| 6. Allowable Emissions Comment (Description of Operating Method): **0.106545 lb/mmBtu x 450 mmBtu/hr x 8760/2000 = 210 TPY**<br>**0.106545 lb mmBtu x 525 mmBtu/hr = 55.94 lb/hr**<br>**Equivalent hourly and annual emissions are based on an annual averaging time.** | |

**Allowable Emissions** Allowable Emissions **3** of **3**

| | |
|---|---|
| 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/ESTIMATED FUGITIVE EMISSIONS

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

| 1. Pollutant Emitted: **CO** | 2. Total Percent Efficiency of Control: **See Comment.** |
|---|---|
| 3.Potential Emissions: **157.5** lb/hour **591.3** tons/year | 4. Synthetically Limited? ☐ Yes [X] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **NA** to tons/year | |
| 6. Emission Factor: **0.3 lb/mmBtu** Reference: | 7. Emissions Method Code: |

8. Calculation of Emissions:

**hrly: 525 mmBtu/hr x 0.3 lb/mmBtu = 157.5 lbs/hr**

**annual: 450 mmBtu/hr x 0.3 lb/mmBtu X 8760/2000 = 591.3 TPY**

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

**CO control is based on methods and designs that prevent the pollutant from forming. Therefore it is not possible to calculate a control efficiency as if there were collection of a pollutant.**

## *F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –*

### POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

| 1. Pollutant Emitted: **VOC** | 2. Total Percent Efficiency of Control: |
|---|---|
| 3.Potential Emissions: **1.05** lb/hour **3.94** tons/year | 4. Synthetically Limited? ☐ Yes [X] No |
| 5. Range of Estimated Fugitive Emissions (as applicable): **NA** to tons/year | |
| 6. Emission Factor: **0.002 lb/mmBtu** Reference: **permit 0890004-18-AC** | 7. Emissions Method Code: |

8. Calculation of Emissions:

**525 mmBtu/hr x 0.002 lb/mmBtu = 1.05 lb/hr**

**450 mmBtu/hr x 0.002 lb/mmBtu x 8760/2000 = 3.94 lb/hr**

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

## 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: **6241 N.W. 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653**
3. Professional Engineer Telephone Numbers...
   Telephone: **(325)336-5600** ext. **545** Fax: **(352)336-6603**
4. Professional Engineer Email Address: **dbuff@golder.com**
5. Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein*, that:*

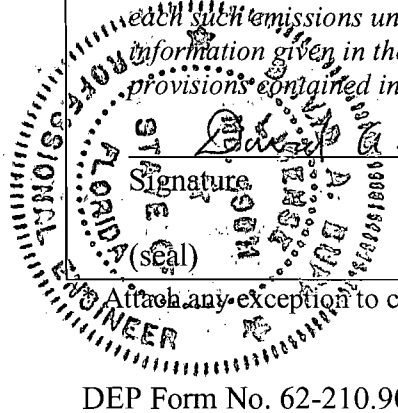
*(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and*

*(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.*

*(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, 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.*

*(4) If the purpose of this application is to obtain an air construction permit (check here ☒, 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 ☐, 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.*

*(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 , 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.*




Signature David A. Buff (seal)

Date 2/5/08

Attach any exception to certification statement.