FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

NORTHEAST DISTRICT
8800 BAYMEADOWS WAY WEST, SUITE 100
JACKSONVILLE, FLORIDA 32256

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

PERMITTEE

Rayonier Performance Fibers, LLC
PO Box 2002
Fernandina Beach, FL 32035

Authorized Representative:
Mr. C. A. McDonald, General Manager

Air Permit No. 0890004-040-AC
Issuance Date: August 8, 2013
Expiration Date: February 8, 2015

Fernandina Beach Sulfite Pulp Mill
No. 6 Power Boiler Heat Input Increase

PROJECT AND LOCATION

The construction permit increases the hourly heat input rate of the No. 6 Power Boiler as averaged on a 24-hour and annual basis. The proposed activity will be conducted at the Fernandina Beach Sulfite Pulp Mill (Standard Industrial Classification No. 2611). The existing facility is located in Nassau County at the foot of Gum Street in Fernandina Beach, Florida. The UTM coordinates are Zone 14: 454.7 km East; 3392.2 km North.

This final permit is organized by the following sections.

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.); and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, 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 Jacksonville, Florida

Richard S. Rachal III, P.G. August 8, 2013
Program Administrator
Waste and Air Resource Management Program

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on **August 8, 2013**, to the persons listed below.

Mr. David A. Buff, P.E. (dbuff@golder.com)
Mr. David Rogers, Rayonier Performance Fibers, LLC (david.rogers@rayonier.com)
Mr. C.A. McDonald, Rayonier Performance Fibers, LLC (ca.mcdonald@rayonier.com)
Ms. Debra Lane, Rayonier Performance Fibers, LLC (debra.lane@rayonier.com)

Clerk Stamp
FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), F.S., with the designated agency clerk, receipt of which is hereby acknowledged.

(Clerk) August 8, 2013

FACILITY AND PROJECT DESCRIPTION

Existing Facility

The mill uses a sulfite (ammonia-base) process to produce various grades of chemical cellulose from pine wood-chips. There are only two other pulp mills located in the United States that produce products similar to the Fernandina Mill and neither of these mills use the same type of manufacturing process. This plant produces approximately 10 different grades of cellulose each with different specifications and customers. The amount of each grade of product that is produced is based on market demand. The cellulose produced at this mill goes into such products as plastics, photographic film, LCD screens, paints, cigarette filters, pharmaceuticals, food products, cosmetics and textiles. Customers of these products have stringent quality requirements.

The existing facility consists of the following emissions units.

E.U. ID No.	Brief Description
-005	Vent Gas Scrubber and Direct Contact Condenser
-006	Sulfite Recovery Boiler firing RLS, No. 6 fuel oil, and No. 2 fuel oil
-007	Molten sulfur handling area.
-010	Biological Effluent Treatment System
-011	Dissolving-Grade Bleaching System
-021	Evaporator Vents Methanol Condenser
-022	Bubbling Fluidized Bed No. 6 Power Boiler

Proposed Project

Rayonier proposes to increase the No. 6 Power Boiler's hourly heat input rate from 525 to 660 MMBtu/hr (averaged over a 24-hour period) and from 450 to 525 MMBtu/hr (averaged over an annual period). This increase in heat input capacity will allow the steam production rate to increase to 400,000 lb/hr and 330,000 lb/hr averaged on a 24-hour and annual basis, respectively. It will allow for the increase in steam production at the mill from carbonaceous fuels above facility pulp productions needs to allow the facility to produce additional electricity for sale to the public utility. Rayonier is also proposing to remove Spent Sulfite Liquor (SSL) as an authorized fuel in the boiler.

The proposed project will affect the following emissions units.

EU ID No.	Brief Description
-022	Bubbling Fluidized Bed No. 6 Power Boiler

Pursuant to Rule 62-212.400, F.A.C., Rayonier Performance Fibers, LLC provided information to show that the project will not exceed the significant emissions rates that require preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality.

The project increases the design capacity of the No. 6 Power Boiler. In accordance with Rule 62-212.300, F.A.C., the permit requires Rayonier Performance Fibers, LLC to provide reports summarizing the actual emissions for each year during the 10-year period following resumption of regular operation of the No. 6 Power

Boiler upon completion of the project. This is to ensure that the project remains minor with respect to PSD preconstruction review.

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Florida Department of Environmental Protection (Department), Northeast District Office, Waste and Air Resource Management. The Northeast District Office's mailing address is 8800 Baymeadows Way, Suite 100, Jacksonville, Florida 32256-7590. All documents related to applications for permits to operate an emissions unit shall be submitted to the Northeast District.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Northeast District Office. The mailing address and phone number of the District Office is: 8800 Baymeadows Way, Suite 100, Jacksonville, Florida 32256. The Compliance Authority's telephone number is 904/256-1700.

3. Appendices: The following Appendices are attached as part of this permit:

   a. Appendix A. Citation Formats and Glossary of Common Terms;

   b. Appendix B. General Conditions;

   c. Appendix C. Common Conditions

   d. Appendix D. Common Testing Requirements

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the owner or operator from compliance with any applicable federal, state, or local permitting or regulations.

   [Rule 62-210.300, F.A.C.]

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time.

   [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification.

   [Rules 62-210.300(1) and 62-212.300(1) (a), F.A.C.]

7. Existing Permits and Regulations: The conditions of this permit supplements all other previously issued air construction permits for this facility. These conditions are in addition to all other applicable permit conditions and regulatory requirements. The owner or operator shall continue to comply with the conditions of those permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, recordkeeping, reporting, operation of air pollution control devices, and the like. The owner or operator shall also comply with the applicable Rules of 62-4, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.

   [Rule 62-4.070, F.A.C.]

8. Source Obligation:

   a. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   b. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12), F.A.C.]

9. Actual Emissions Reporting: This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C. for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., the permittee is subject to the following monitoring, reporting and recordkeeping provisions.

   a. The permittee shall monitor the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 10 years following resumption of regular operations after the change. Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C., which are provided in Appendix C of this permit.

   b. The permittee shall report to the Department within 60 days after the end of each calendar year during the 10-year period setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:

      (1) The name, address and telephone number of the owner or operator of the major stationary source;

      (2) The annual emissions as calculated pursuant to the provisions of 62-210.370, F.A.C., which are provided in Appendix C of this permit;

      (3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and

      (4) Any other information that the owner or operator wishes to include in the report.

   c. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1 and 2, F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.

   d. The following Table A provides the PSD analysis for this project:

Table A. Annual Emissions Summary and PSD Applicability

Pollutant	No. 6 Power Boiler Annual Emissions Summary, Tons/Year				
	Baseline Actual Emissions	Projected Actual Emissions	Projected Increases	PSD Significant Emissions Rate	Subject to PSD?
SO_2	31.06	70.0	38.9	40	**No**
NO_X	304.2	340.0	35.9	40	No
CO	234.2	320.0	85.8	100	No
PM	30.1	35.8	5.7	25	No
PM_{10}	51.1	60.5	9.4	15	No
$PM_{2.5}$	48.3	57.2	8.8	10	No
VOC	1.35	1.60	0.24	40	No
SAM	1.37	3.12	1.75	7	No
Pb	2.5E-02	2.9E-02	4.3E-03	0.6	No
Hg	1.47E-03	1.74E-03	2.66E-04	0.1	No
Fluorides	0.010	0.013	0.003	3	No
GHG[a]	20,709	28,059	7,350	0	-
CO_2e	27,896	36,374	8,479[b]	75000	No

[a] GHG = sum of emission rates of CO_2, CH_4, and N_2O on a mass basis. CO_2e = sum of emission rates of CO_2, CH_4, and N_2O using global warming potentials. PSD applicability analysis excludes biogenic CO_2 emissions per EPA PSD Tailoring Rule.

[b] GHG emission increase must be greater than or equal to zero TPY **and** CO_2e emissions increase must be greater than or equal to 75,000 TPY.

e. The permittee shall compute and report annual emissions in accordance with Rule 62-210.370(2), F.A.C. as provided by Appendix C of this permit. For this project, the permittee shall use the following methods in reporting the actual annual emissions for the following **pollutants** emitted from the No. 6 Power Boiler (identified as Emission Unit No. 022):

(1) The permittee shall use the data collected from the required stack tests to determine and report the actual annual emissions of **PM**, **PM_{10}, $PM_{2.5}$,** and **VOC.** The methodology for calculating PM_{10}, and $PM_{2.5}$ baseline emissions shall be used to calculate the actual annual emissions. The permittee shall follow the stack test methods, test procedures and test frequencies specified in the current Title V air operation permit.

(2) Unless otherwise approved by the Department, the permittee shall use CEMS data for reporting the actual annual emissions of **SO_2, CO, NO_x**.

(3) Unless otherwise approved by the Department, the permittee shall use the same emissions factors for reporting the actual annual emissions of **Pb**, **Hg**, **SAM**, **Fluorides, GHG, and CO_2e** as used in the application to establish baseline emissions.

f. As defined in Rule 62-210.370(2), F.A.C., the permittee shall use a more accurate methodology if it becomes available.

[Application No. 0890004-040-AC; Rules 62-212.300(1)(e), and 62-210.370, F.A.C.]

10. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation of the emissions unit as modified in accordance with the authorizations of this construction permit. To apply for a Title V operation permit revision, the applicant shall submit the appropriate application form, compliance test results (if required), and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting and Compliance Authority.

    [Rules 62-4.030, 62-4.050, and Chapter 62-213, F.A.C.]

No. 6 Power Boiler (EU 022)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
022	No. 6 Power Boiler is a Bubbling Fluidized Bed boiler that produces steam for electrical generation and usage in the manufacturing process. The total maximum operational heat input of this emissions unit is 660 MMBtu/hr (24-hr average). The boiler was originally constructed in 1983 as a traveling grate coal-fired boiler. This unit is authorized to fire biomass (green bark, chips, knots, fines, and landscape waste), tires, No. 2 fuel oil for startup, No. 6 fuel oil with a maximum sulfur content of 2.5% by weight, small quantities of facility-generated on-specification used oil (to be blended with the No. 6 fuel oil); and mill effluent treatment system solids (primary and secondary sludge only). Particulate matter emissions are 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 has a dedicated transformer/rectifier (T/R) set and ash hopper. Ash is removed by a screw conveyor system. NO_x emissions are reduced by staged combustion and flue gas recirculation (FGR). A selective non-catalytic reduction (SNCR) system is installed to control NO_x emissions. This system consists of an ammonia tank, pumps, piping, compressed air delivery, injectors, and a control system. Acid gases are controlled by a wet alkaline scrubber located after the ESP and induced draft fan. The wet scrubber sprays 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 is approximately 2 inches of water column. A continuous opacity monitoring system (COMS); a fuel flow monitor; continuous monitoring of ESP total power (CAM); exhaust flow rate monitor; a continuous emissions monitoring system (CEMS) for SO_2 emissions, a CEMS for NOx emissions, a CEMS for CO emissions, and a CEMS for oxygen. Exhaust gas exits at approximately 150 $^{\circ}$F with a volumetric flow rate of 183,421 acfm through a single wet scrubber stack that is approximately 10 feet in diameter and 190 feet above ground level.

{Permitting note: This emissions unit is regulated under: Rule 62-296.410, F.A.C. –Carbonaceous Fuel Burning Equipment; Rule 62-296.405, F.A.C. – Fossil Fuel Steam Generators with More Than 250 Million Btu Per Hour Heat Input; NSPS - 40 CFR 60, Subpart D, Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971, adopted and incorporated by reference in Rule 62-204.800, F.A.C. Hyperlink to 40 CFR 60 Subpart D, Hyperlink to 40 CFR 60 Subpart A, General Provisions; Rule 62- 212.400(5), F.A.C., Prevention of Significant Deterioration (PSD; Compliance Assurance Monitoring (CAM), adopted and incorporated by reference in Rule 62-204.800, F.A.C., 40 CFR 61 Subpart E, National Emission Standard for Mercury, Hyperlink to 40 CFR 61 Subpart E, and 40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. Pursuant to 40 CFR 63.7499(e), this emissions unit is classified as an existing fluidized bed unit designed to burn biomass/bio-based solids under 40 CFR 63, Subpart DDDDD, Hyperlink to 40 CFR 63 Subpart DDDDD}

APPLICABILITY OF PREVIOUS PERMITS

1. Existing Permits and Regulations: The conditions of this permit supplements all other previously issued air construction and operation permits for these emissions units. These conditions are in addition to all other applicable permit conditions and regulatory requirements. The Permittee shall continue to comply with the conditions of those permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, recordkeeping, reporting, and the like.

   [Rules 62-4.070, 62-212.400, F.A.C.; Construction Permit No. 0890004-018-AC, Construction Permit No. 0890004-021-AC; Construction Permit No. 0890004-031-AC]

PERFORMANCE RESTRICTIONS

Essential Potential to Emit (PTE) Parameters

2. Permitted Capacity. The maximum heat input rate is as follows:

   a. 660 MMBtu per hour based on a 24-hour average, which is approximately 400,000 lb/hour of steam production.[1, 2]

   b. 525 MMBtu per hour based on an annual basis, which is approximately 330,000 lb/hr of steam production.[2]

   [1.] Initial and annual compliance testing shall be conducted within 90% of the permitted heat input rate.
   [2.] Demonstration through recordkeeping on a 12-month rolling average basis.

   [Rules 62-4.070(3), 62-204.800, 62-212.200(PTE), F.A.C., Construction Permit No. 0890004-018-AC; Construction Permit No. 0890004-021-AC; Application No. 0890004-040-AC]

3. 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 prior to firing.

   e. No. 2 fuel oil for startup.

   g. Mill effluent treatment system solids consisting of primary effluent treatment sludge with approximately 30 percent secondary sludge returned from the aeration stabilization basin. The total maximum firing rate shall not exceed 60 tons per day (dry) and a daily average of 45 tons per day (dry). Prior to firing in the No. 6 Power Boiler, both the primary and secondary sludges shall be pressed to approximately 70 percent solids by weight or less. The Permittee is authorized to co-fire mill effluent treatment system solids with Biomass, and/or Tire-Derived Fuel, and/or No. 6 fuel oil.

Condition No. 3. Continued:

h. The Permittee shall load the sludge from the mill's effluent treatment system onto the existing biomass feed conveying system through an existing front-end loader dump hopper. The sludge commingles with the biomass on the conveyor and is then fed into the No. 6 Power Boiler along with the biomass.

[Construction Permit No. 0890004-018-AC; Construction Permit No. 0890004-021-AC; Construction Permit No. 0890004-026-AC; Application No. 0890004-040-AC; Rule 62-710.210, F.A.C.; Rule 62-4.070, F.A.C.; and, 40 CFR Part 279]

4. Control Equipment.

1. To control particulate matter emissions, the permittee shall operate the settling chamber followed by the 4-field electrostatic precipitator designed to achieve at least the PM emissions standards specified in this permit and the current Title V Operation Permit.
2. To control acid gases, the permittee shall operate the wet alkaline scrubber. The scrubber shall be designed to achieve at least the emissions standards specified in this permit and current the Title V Operation permit.
3. To control nitrogen oxides, the permittee shall operate as-needed the selective non-catalytic reduction system (SNCR) with ammonia injection in addition to the staged combustion and flue gas recirculation to achieve the NO_x emissions standards specified in this permit and the current Title V Operation permit.

[Rule 62-4.070, F.A.C., Construction Permit No. 0890004-018-AC; Construction Permit No. 0890004-021-AC, Application No. 0890004-040-AC]

5. SNCR NH_3 Injection Rate: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain a flow meter to measure and record the NH_3 injection rate for the SNCR system for the No. 6 Boiler. NH_3 injection records shall be maintained on site and made available upon request.

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

EMISSION LIMITING STANDARDS (ADDITION TO TITLE V AIR OPERATION PERMIT)

Emission Limitations and Standards

{Permitting Note: Unless otherwise specified, the averaging times for these Conditions 6. and/thru 12. are based on the specified averaging time of the applicable test method.}

6. Particulate Matter (PM) Emissions (As determined by EPA Method Compliance Testing):

   a. PM emissions shall not exceed 0.0557 lb/MMBtu heat input; nor 36.75 lbs/hr and 128.0 TPY. PM emissions shall be determined by the average of three runs in accordance with Environmental Protection Agency (EPA) Reference Method (RM) 5. Each run shall be a minimum of 60 minutes in duration.

      [Construction Permit No. 0890004-018-AC; Construction Permit No.0890004-021-AC; Application No. 0890004-040-AC; Applicant Requested Emission Limit; PSD Review Avoidance; and Rule 62-4.070(3), F.A.C.]

   b. PM emissions shall not exceed 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel or fossil fuel and wood residue; nor 66.0 lbs/hr. PM emissions shall be determined by the average of three runs in accordance with EPA RM 5. Each run shall be a minimum of 60 minutes in duration.

      [40 CFR 60.42(a)(1); Application No. 0890004-040-AC]

   c. 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 132.0 lbs/hr. PM emissions shall be determined by the average of three runs in accordance with EPA RM 5. Each run shall be a minimum of 60 minutes in duration.

   [SIP Rule 62-296.410(2)(b)2., F.A.C.; Application No. 0890004-040-AC]

7. Sulfur Dioxide (SO_2) Emissions (As determined by CEMS data):

   a. SO_2 emissions shall not exceed 340 nanograms per joule heat input; nor 0.80 lbs per million Btu derived from liquid fossil fuel or liquid fossil fuel and wood residue; nor 420.0 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). The 420.0 lbs/hr limitation allows the facility to avoid NSPS Subpart Db applicability.

      [NSPS; 40 CFR 60.43(a)(1); 40 CFR 60.45(g)(2); Construction Permit No. 0890004-018-AC; Construction Permit No. 0890004-021-AC; Application No. 0890004-040-AC; Applicant Requested Emission Limit; NSPS Subpart Db Applicability Avoidance]

   b. SO_2 emissions shall not exceed 210.0 tons per consecutive 12-month rolling total in order to escape PSD NSR requirements. 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.; Construction Permit No. 0890004-018-AC; Construction Permit No. 0890004-021-AC]

8. Nitrogen Oxides (NO_x) Emissions (As determined by CEMS data):

   a. NO_x emissions, expressed as NO_2, shall not exceed 129 nanograms per joule heat input; nor 0.30 lbs per million Btu derived from liquid fossil fuel, liquid fossil fuel and wood residue; nor 101.20 lbs/hr, and measured as any three-hour period (arithmetic average of three contiguous one-hour periods). The 101.20 lbs/hr limitation allows the facility to avoid NSPS Subpart Db applicability.

      [NSPS; 40 CFR 60.44(a)(2); 40 CFR 60.45(g)(3); Construction Permit No. 0890004-018-AC; Construction Permit No. 0890004-021-AC; Application No. 0890004-040-AC; Applicant Requested Emission Limit; NSPS Subpart Db Applicability Avoidance; Rule 62-212.400(2)(g), F.A.C.]

Condition No. 8. Continued:

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:

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

where:

$PSNO_x$ = 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. NO_x emissions shall not exceed 380.0 tons per consecutive 12-month rolling total in order to escape PSD NSR requirements. 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.]

9. Carbon Monoxide (CO) Emissions (As determined by CEMS data). CO emissions shall not exceed 198.0 lbs/hr, 30-day rolling average; nor, 591.3 tons per consecutive 12-month rolling total. The hourly limit is based on 0.3 lbs per million Btu heat input (0.25 lbs/MMBtu vendor guarantee). The annual limit is based on applicant requested emission limitation. 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.; Construction Permit No. 0890004-018-AC; Construction Permit No. 0890004-021-AC, Applicant Request Emission Limitation; Application No. 0890004-040-AC]

10. Volatile Organic Compounds (VOC) Emissions (As determined by EPA Method Compliance Testing). VOC emissions shall not exceed 0.002 lbs per million Btu heat input; nor 1.32 lbs/hr and 4.60 TPY. VOC emissions shall be determined by the average of three runs in accordance with EPA RM 25A. Each run shall be a minimum of 60 minutes in duration.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; Construction Permit No. 0890004-018-AC; Construction Permit No. 0890004-021-AC; Application No. 0890004-040-AC]

11. Mercury Emissions.

a. Mercury emissions, when effluent treatment system solids (sludge) are fired, shall not exceed 3.2 kg (7.1 lb) of mercury per 24-hour period. [40 CFR 61.52(b)]

b. In order to escape PSD NSR, and as determined by test methods of 40 CFR 61 Subpart E, Mercury Emissions shall be less than 0.1 tons per consecutive 12-month rolling total.

[Rules 62-4.160(2), 62-210.200(PTE), and 62-212.400(2)(g), F.A.C.]

Condition No. 11. Continued:

{Permitting Note: Mercury emissions testing conducted on September 10 and October 1, 2008 (60 TPD (dry) sludge firing rate with bark), resulted in average emissions below the test method detection limit, i.e.< 0.30 µg/dscm. The facility did not use the additional test procedures specified in the EPA Determination dated December 7, 2007 during these emissions test.}

c. This emissions unit is subject to the applicable requirements of 40 CFR Part 61, Subpart A - General Provisions. [40 CFR 61.01(c); *Hyperlink to 40 CFR 61 Subpart A, General Provisions*]

12. Visible Emissions:

a. As determined by COMS data, visible emissions shall not 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); Construction Permit No. 0890004-018-AC; Construction Permit No. 0890004-021-AC]

b. As determined by COMS data as specified in Condition 26., 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.]

SPECIFIC TESTING REQUIREMENTS

13. Within 120 days of permit issuance, the permittee shall conduct performance testing for particulate matter and VOC using the test methods and procedures stated within the current Title V Air Operation permit. Each test run shall be conducted at a minimum of 90% of the maximum rated heat input to the No. 6 Power Boiler. For each PM and VOC test run, emissions of SO_2, NO_x, CO, and opacity from the CEMS and COMS shall be included in the stack test report.

[Rule 62-4.070(3), F.A.C.; 40 CFR 60.8(a)]

14. Boiler Maximum Heat Input Capacity. Within 120 days of permit issuance, the permittee shall determine the maximum heat input rate of the boiler by conducting a 6-hour full load demonstration measuring peak Btu/hr heat input after achieving steady state conditions. The Permittee shall submit a testing protocol to the Compliance Authority for approval at least 30 days prior to conducting the test. Results of the test shall be submitted to the Compliance Authority within 45 days of test completion.

[Rule 62-4.070, F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

15. Test Reports. The Permittee shall submit test reports to the Compliance Authority as required by Rule 62-296.320(8), F.A.C.

Condition No. 15. Continued:

In addition to the information required in Rule 62-297.310(8), F.A.C., each stack test report shall also include the following information: steam production rate (lb/hour), heat input rate (MMBtu/hour), and calculated authorized fuels firing rate (tons/hour or gallons per hour as appropriate).

[Rule 62-297.310(8), F.A.C.; Rule 62-4.070, F.A.C.]

16. Other Applicable Requirements. In addition to the specific conditions listed above, this emissions unit is also subject to the applicable requirements contained in:

    a. 40 CFR 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. *Hyperlink to 40 CFR 63 Subpart DDDDD- NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*.

    Pursuant to 40 CFR §§63.7499(e) and 63.7500, and Table 2, this emissions unit is classified as an existing fluidized bed unit designed to burn biomass/bio-based solids subject to the following emission standards:

Pollutant	Emission Limit
HCl	0.022 lb/MMBtu
Hg	5.7×10^{-06} lb/MMBtu
CO (for units equipped with a CO CEMS)	310 ppmvd @ 3% O_2 (30-day rolling average)
PM	0.11 lb/MMBtu

    b. The applicable requirements contained in 40 CFR 63, Subpart A General Provision: Table 10 of 40 CFR 63 Subpart DDDDD, which shows the parts of the General Provisions in §§63.1 through 63.15 are applicable. *Hyperlink to 40 CFR 63 Subpart A, General Provisions*.

17. 40 CFR 63, Subpart DDDDD -Compliance Date: The owner or operator shall comply with the applicable emission limitations and operating limitations of 40 CFR 63 Subpart DDDDD no later than the compliance date specified within the Subpart, i.e. January 31, 2016.

    [40 CFR 63.7495(b)]