Florida Department of Environmental Protection

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

Rick Scott
Governor

Jennifer Carroll
Lt. 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. 0890004-034-AC
Permit Expires: April 30, 2013
Issue Date: October 31, 2011
Fernandina Beach Sulfite Pulp Mill
ARMS ID No. 0890004
New Chlorine Dioxide Generator
Plant No. 2

PROJECT AND LOCATION

The permittee is authorized to relocate and reassemble an existing ClO_2 Plant at the Fernandina Beach mill. In conjunction with this plant a new ClO_2 storage tank will be constructed. Estimated capacity of this new tank is 80,000 gallons. The proposed work will be conducted at the Fernandina Beach Pulp Mill, which is a 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.

STATEMENT OF BASIS

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 and as described in the application, approved drawings, plans, and other documents on file with the Department. 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.

CONTENTS

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Executed in Jacksonville, Florida

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

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) 10/31/2011 (Date)

SUBSECTION A. FACILITY DESCRIPTION

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. This mill produces approximately 150,000 tons of performance fibers annually.

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

Unregulated Emissions Units and/or Activities: *Refer to Appendix U-1, List of Unregulated Emissions Units and/or Activities*

The proposed project will affect the following emissions unit.

E.U. ID No.	Brief Description
023	Chlorine Dioxide Generator Plant No. 2 (New)
013	Chlorine Dioxide Plant (Existing)

PROJECT DESCRIPTION

Rayonier Performance Fibers, LLC proposes to construct a new additional chlorine dioxide (ClO_2) generator plant (Plant No. 2) with a proposed capacity of approximately 24 tons per day (TPD) of ClO_2 generation. The existing plant will remain in production with an approximate capacity of 2.5 TPD of ClO_2 generation. The new ClO_2 generator plant is not intended or expected to result in an increase in production capacity. The existing plant is listed as an unregulated emission unit in the Title V Air Operating Permit. Plant No. 2 will also be designated as an unregulated emission unit.

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility operates 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.

1. Permitting Authority: The permitting authority for this project is the Florida Department of Environmental Protection (Department), Northeast District Office, Air Resources Section. The Northeast District Office's mailing address is 7825 Baymeadows Way, Suite B200, 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: 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256. The Permitting 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

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 permittee from compliance with any applicable federal, state, or local permitting or regulations.

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. 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.]

8. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. 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 new equipment. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, 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, 62-4.220 and Chapter 62-213, F.A.C.]

CHLORINE DIOXIDE GENERATOR PLANT No. 2 (EU 023)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
023	Chlorine Dioxide Generator Plant No. 2

Emission Unit 023 identifies the Chlorine Dioxide Generator Plant No. 2. The permittee is authorized to relocate and reassemble an existing ClO_2 Plant at the Fernandina Beach mill. In conjunction with this plant a new ClO_2 storage tank will be constructed. Estimated capacity of this new tank is 80,000 gallons.

The ClO_2 production process for the new plant will be an "R8" process, which is based on the reduction of sodium chlorate by methanol in a strong sulfuric acid solution. Sodium chlorate, methanol, and sulfuric acid will be received and stored adjacent to the ClO_2 plant. Methanol will be stored in the mill storage tank already in place for the existing ClO_2 plant. ClO_2 produced by the proposed plant will be stored in the existing No. 2 ClO_2 storage tank (167,000 gallon capacity) and in a new No. 3 ClO_2 storage tank of approximately 80,000 gallon capacity. The existing No. 1 ClO_2 storage tank (20,000 gallon capacity) will be removed from service.

A sodium chlorate solution will be produced from dissolved chlorate crystals. The sodium chlorate solution, methanol, and sulfuric acid will be introduced into the generator system in the proper quantities to efficiently produce ClO_2 generator liquor. The generator liquor will be circulated through the ClO_2 generator (reactor) and will pass through a liquor heat exchanger (reboiler) where low pressure steam will increase the temperature of the slurry so that water will be evaporated upon exit from the reactor. The ClO_2 will flash off in the generator reaction. The relatively pure ClO_2 gas, which contains some air and water vapor, will then be passed into a ClO_2 absorption tower.

Chilled water will be introduced at the top of the tower and ClO_2 will be absorbed at a solution strength of less than 10 grams per liter. This solution is collected and piped to the ClO_2 storage tanks. The remaining gas leaving the ClO_2 absorption tower will go to a ClO_2 recovery system/vent scrubber where the remaining traces of ClO_2 and chlorine will absorbed. Gases from the ClO_2 storage tanks and other process vessels will also be vented to this scrubber, which uses a sodium bisulfite scrubbing media. A dedicated cooling tower will also be constructed for water conservation purposes.

The additional ClO_2 will supplement the use of elemental chlorine (Cl_2) in the bleach plant and may ultimately allow Rayonier Performance Fibers LLC to convert its bleaching operation to an elemental chlorine free (ECF) process. The reduction of use of chlorine (Cl_2) will result in the reduction of the emissions of Hazardous Air Pollutants from the bleaching plant. The new ClO_2 generator is also part of the Best Available Technology (BAT) determination included in the Florida Department of Environmental Protection (FDEP) National Pollutant Discharge Elimination System (NPDES) permit (pending).

{Permitting note(s): This emissions unit is not subject to a specific emission limiting regulation. Based upon information submitted by the applicant the project is not subject to Prevention of Significant Deterioration review.

PERFORMANCE RESTRICTIONS

1. Capacities and Fuels: The proposed work shall not result in any increase in the mill pulp production rate.

   [Rule 62-4.070(3), F.A.C. and Application No. 0890004-34-AC]

2. The permittee shall operate the "tail gas scrubber" in accordance with the manufacturer's instructions to provide reasonable assurance that Cl_2 emissions are minimized as described in the permit application.

   [Rule 62-4.070(3), F.A.C. and Application No. 0890004-34-AC]

RECORDKEEPING REQUIREMENTS

3. The permittee shall maintain records of the quantity of chlorine dioxide produced in tons on an annual calendar year basis as follows:

   Plant No. 2

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

REPORTING REQUIREMENTS

4. The permittee shall report the record of the quantity of chlorine dioxide produced in tons on an annual calendar year basis in the Annual Operating Report.

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

5. The permittee shall submit to the Permitting Authority the specifications for the "tail gas scrubber" on or before start-up of the Chlorine Dioxide Generating Plant No. 2.

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

ID No.	Emission Unit Description
013	Chlorine Dioxide Generator Plant No. 1

RECORDKEEPING REQUIREMENTS

1. The permittee shall maintain records of the quantity of chlorine dioxide produced in tons on an annual calendar year basis as follows:

   Plant No. 1

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

REPORTING REQUIREMENTS

2. The permittee shall report the record of the quantity of chlorine dioxide produced in tons on an annual calendar year basis in the Annual Operating Report.

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