FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

NORTHEAST DISTRICT
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Georgia-Pacific Consumer Operations LLC
P. O. Box 919
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Authorized Representative:
Mr. Gary L. Frost, Vice President of Palatka Operations

Air Permit No. 1070005-079-AC
Permit Expires: June 30, 2014
Georgia-Pacific Palatka Mill
ARMS ID No. 1070005
No. 4 Recovery Boiler
Revisions for SO_2 and Oil Firing

PROJECT AND LOCATION

This permit (1070005-079-AC) makes minor changes to air construction permit No. 1070005-050-AC which authorized revisions to the SO_2 limits and oil firing restrictions for the No. 4 Recovery Boiler (EU-018), located at the existing Palatka pulp and paper mill (SIC Nos. 2611 and 2621) in Putnam County, North of County Road 216 and West of U.S. Highway 17 in Palatka, Florida. The map coordinates are UTM Zone 17, 434.0 km East and 3283.4 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

Page 1 Continued:

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, 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

DRAFT

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Khalid AlNahdy, P.E., MBA
Program Administrator
Waste & Air Resource Management

FACILITY AND PROJECT DESCRIPTION

Georgia-Pacific operates an existing paper and pulp mill in Palatka, Florida using the Kraft sulfate process. In the Kraft process, the digesting liquor (white liquor) is a solution of sodium hydroxide and sodium sulfide that is mixed with wood chips and cooked under pressure. The spent liquor, known as weak black liquor, is concentrated and sodium sulfate is added to make up for chemical losses. The black liquor solids (BLS) are burned in the recovery furnace to produce a smelt of sodium carbonate and sodium sulfide. The smelt is dissolved in water to form green liquor to which quicklime (calcium oxide) is added to convert the sodium carbonate back to sodium hydroxide, which reconstitutes the cooking liquor. The spent lime cake (calcium carbonate) is recalcined in a rotary lime kiln to produce quicklime, which is used to convert the green liquor to cooking liquor. Other steam and energy needs are met by the power boilers, which burn a variety of fuels including fuel oil and natural gas.

REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility operates no 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 62-213, F.A.C.
- The facility is a major stationary source subject to the Prevention of Significant Deterioration (PSD) of Air Quality in accordance with Rule 62-212.400, F.A.C.

PROJECT DESCRIPTION

~~This permit project corrects the fuel oil burner sizes (and capacities) which were installed after issuance of permit No. 1070005-050-AC. Each startup burner installed has a maximum capacity of 375 gallons per hour (56.25 MMBtu per hour) and each load burner installed has a maximum capacity of 925 gallons per hour (138.75 MMBtu per hour). Even though these burners are significantly larger than proposed in the permit project (1070005-050-AC) no additional restrictions are required since the use of fuel oil was capped on a 24 hour basis by permit No. 1070005-050-AC to 67,680 gallons per 24 hour rolling period. This cap is significantly below the previously indicated maximum burner capacity and the actual capacity of the burners on a 24 hour rolling total basis.~~ This permit project corrects the fuel oil burner maximum design ~~sizes (and~~ capacities~~)~~ which ~~were installed after~~ first appeared in the permit after the issuance of permit No. 1070005-050-AC. Each startup burner installed has a maximum capacity of 375 gallons per hour (56.25 MMBtu per hour) and each load burner installed has a maximum capacity of 925 gallons per hour (138.75 MMBtu per hour). Even though these burners capacities are significantly larger than those identified ~~proposed~~ in the permit project (1070005-050-AC), the design maximum burner capacities are strictly informational and no additional restrictions are required since the use of fuel oil was capped on a 24 hour basis by permit No. 1070005-050-AC to 67,680 gallons per 24 hour rolling period. This cap is 42% below the previously indicated maximum burner capacity and 68% below the revised maximum ~~actual~~ burner-capacity ~~of the burners~~ on a 24 hour rolling total basis.

Additionally, the maximum steam production rate listed in the emission unit description is being removed since it is not an emission limiting standard and was not intended as a restriction. This description modification in no way provides for an increase in emissions or a relaxation of standards for this emission unit.

This permit revises the sulfur dioxide (SO_2) emissions limits and oil firing specifications for the No. 4 recovery boiler at the Palatka Mill. In Project No. 1070005-038-AC (PSD-FL-380), Georgia-Pacific requested clarification of the SO_2 emissions standards and oil firing restrictions for the No. 4 Recovery Boiler (EU-018), which fires No. 6 fuel oil with a maximum sulfur content of 2.35% by weight. Prior to issuance of Permit No. PSD-FL-380, the request was split off along with the project to modify the No. 4 combination boiler as Project No. 1070005-045-AC (PSD-FL-393). For clarity, this project is now being issued as a separate minor source air

construction permit (Project No. 1070005-050-AC) to address only the oil firing and SO_2 conditions for the No. 4 Recovery Boiler.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

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 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256. 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 Air Resource Section of the Department's Northeast District Office. The mailing address is 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256. The phone number is 904/256-1700.

3. Appendices: The following Appendices are attached as part of this permit: Appendix A (Citation Formats and Glossary of Common Terms), Appendix B (General Conditions), Appendix C (Common Conditions) and Appendix D (CEMS 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 permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No emissions unit or facility subject to this permit shall be constructed or 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.]

6. Source Obligation: 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. Also, 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.]

7. Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply (fulfilled by concurrent processing of permit No. 107-0005-076-AV) for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. 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 Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

This section of the permit addresses the following emissions unit.

EU No.	Description
018	**No. 4 Recovery Boiler.** As part of the recovery process at the mill, this unit fires black liquor solids (BLS) to recover the cooking liquor. The permitted capacity is 210,000 lb/hour of BLS based on a 24-hour average (equivalent to 1345 MMBtu/hour based on the permitted capacity and an average heating value of 6410 Btu/lb of BLS). Residual fuel oil is fired as a startup, shutdown and supplemental fuel. ~~The maximum steam production rate is 789,000 lb/hour (24-hour average) for steam conditions of 850° F to 900° F at 1250 psi.~~ Particulate matter emissions are controlled by an electrostatic precipitator (ESP) with automatic voltage control, 2-chambers, and 6 electric fields per chamber. Total reduced sulfur (TRS) emissions are controlled by the low-odor boiler design. Emissions of nitrogen oxides (NO_X) are controlled by a four-level overfire air system. Emissions of carbon monoxide (CO) and volatile organic compounds (VOC) are controlled by the combustion design and good operating practices. The following pollutants are monitored with continuous emissions monitoring systems (CEMS): CO, NO_X, SO_2, TRS and opacity. At permitted BLS capacity, the exhaust gas flow rate is 294,000 dscfm at 8% oxygen with an exit temperature of 400° F. Exhaust gases exit a stack that is 12 feet in diameter and 230 feet tall.

The following conditions related to SO_2 emissions and oil firing requirements replace all other similar conditions in previously issued air construction permits.

OIL FIRING CAPACITIES

1. ~~Permitted~~ Oil Firing Capacity. The following table specifies the capabilities of the oil firing system designed by Combustion Engineering:

Burner Type	Quantity	Oil Pressure	Maximum Design Capacities			
			Oil Firing Rate (gph)		Heat Input Rates (MMBtu/hour)*	
			Each Burner	Total	Each Burner	Total
Startup Burners	4	88 psig	~~250~~375	~~1000~~1500	~~37.5~~56.25	~~150~~225
Load Burners	8	80 psig	~~480~~925	~~3840~~7400	~~72~~138.75	~~576~~1110

* For No. 6 fuel oil, assumes a heating value of 150,000 Btu/gallon and a density of 8.2 lb/gallon.

Any changes to the design or operation of the oil firing system shall require a modification of this permit and a corresponding PSD applicability determination. [Design and Rule 62-210.200(PTE), F.A.C.; ~~and~~ Construction Permit No. 1070005-050-AC, and Applicant's Request in Application No. 1070005-076-AV/079-AC]

PERFORMANCE RESTRICTIONS

2. Oil Firing Restrictions.

   a. The No. 4 Recovery Boiler is authorized to fire No. 6 fuel oil with a maximum sulfur content of 2.35% by weight as determined by the method specified in this permit.

   b. The No. 4 Recovery Boiler shall not fire more than 67,680 gallons of fuel oil during any consecutive rolling 24 hours. *{Permitting Note: This is equivalent to a 24-hour average of 47 gpm, which was the basis of the air quality analysis for ensuring compliance with the Ambient Air Quality Standards.}*

   c. The heat input rate to the No. 4 Recovery Boiler from firing oil shall be less than 1,178,220 MMBtu during any consecutive 12 months. *{Permitting Note: This represents an annual capacity factor of less than 10% of the maximum annual heat input rate of the unit.}*

   [Rules 62-4.070(3) and 62-212.300, F.A.C.]

SO_2 EMISSIONS STANDARDS

3. SO_2 Emissions Standards. As determined by CEMS, SO_2 emissions from the No. 4 Recovery Boiler shall not exceed 100 ppmvd at 8% O_2 based on a 24-hour rolling average. This emissions standard includes all valid SO_2 CEMS data collected except during periods of boiler startup and shutdown. *{Permitting Note: The limit of 100 ppmvd corrected to 8% oxygen is equivalent to 292.8 lb/hour. This limit is based on the PSD modeling analysis for PSD-FL-380 and PSD-FL-393.}* [Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400(12), F.A.C.]

4. SO_2 Emissions Cap. As determined by all valid CEMS data, SO_2 emissions from the No. 4 Recovery Boiler shall not exceed 153.9 tons during any consecutive 12 months. This emissions cap includes valid SO_2 CEMS data collected including all periods of startup, shutdown, malfunction and oil firing. *{Permitting Note: The purpose of this emissions cap is to avoid PSD preconstruction review for PSD-FL-380 and PSD-FL-393.}* [Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400(12), F.A.C.]

MONITORING REQUIREMENTS

5. SO_2 CEMS. The permittee shall properly install, calibrate, operate and maintain a CEMS to measure and record SO_2 emissions to demonstrate compliance with the standards specified in this permit. The CEMS shall include the measurement of oxygen (or carbon monoxide) for correction of SO_2 emission concentrations to 8% oxygen. The CEMS shall comply with the applicable requirements of Performance Specification 2 in Appendix B of 40 CFR Part 60 and the quality assurance procedures in Appendix F of 40 CFR Part 60. The permittee shall comply with the conditions of Appendix D (CEMS Requirements) of this permit. [Rule 62-4.070(3), F.A.C.]

6. SO_2 CEMS Data Substitution. The following procedures shall be used for missing data.

   a. SO_2 24-hour Rolling Average. No data shall be substituted for the missing data to determine compliance with the standard based on 24-hour rolling average. The next valid 1-hour emissions average shall be used to complete the 24-hour rolling average.

   b. SO_2 Emissions Cap. All valid CEMS data shall be used to determine compliance with the SO_2 emissions cap. This includes periods of startup, shutdown, malfunction, oil firing and operation while firing BLS. For periods of missing data, the permittee shall calculate the maximum 24-hour rolling average for each method of operation (e.g., startup, shutdown, malfunction, oil firing and operation while firing BLS). For the 12-month period, this average shall be substituted for each missing 1-hour emissions average under the given method of operation.

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

7. CEMS Required for Reporting Annual Emissions. The permittee shall use SO_2 data from the CEMS when calculating annual emissions for purposes of computing actual emissions, baseline actual emissions and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for purposes of computing emissions pursuant to the reporting requirements of Rules 62-210.370(3) and 62-212.300(1)(e), F.A.C. The permittee shall follow the procedures in Appendix D (CEMS Requirements) of this permit for calculating annual emissions. [Rule 62-4.070(3), F.A.C.]

RECORDS AND REPORTS

8. Fuel Oil Sulfur Records. The permittee shall maintain the following records of the sulfur content of fuel oil fired in the No. 4 Recovery Boiler.

   a. For each delivery of fuel oil, the permittee shall maintain a permanent file of the certified fuel analysis from the vendor identifying the fuel sulfur content and heating value.

b. The permittee shall demonstrate compliance with the maximum permitted fuel sulfur specification based on a 3-barge rolling average. The permittee shall maintain records of the fuel analysis for each fuel oil shipment received. The permittee shall calculate and maintain a log of the fuel sulfur content based on a 3-barge rolling average (i.e., the average of three consecutive barge deliveries based on the certified fuel oil analysis receipt). Fuel oil analysis shall be conducted using ASTM Methods D-129, D-1552, D-2622, D-4294 or equivalent methods approved by the Department. If the calculated 3-barge rolling average exceeds the permitted maximum fuel sulfur content, the permittee shall notify the Compliance Authority within one working day.

c. Before April 1st of each year, the permittee shall submit an annual report summarizing the fuel oil deliveries and the 3-barge rolling averages of the fuel sulfur content for operations during the previous calendar year.

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

9. Fuel Oil Firing Records. The permittee shall operate and maintain an oil flow monitoring system to determine compliance with the oil firing limitations for the No. 4 Recovery Boiler (gallons per consecutive rolling 24-hour period and MMBtu per consecutive rolling 12-month period). [Rules 62-4.160(15) and 62-4.070(3), F.A.C.]