Georgia-Pacific

Palatka Pulp and Paper Operations
Consumer Products Division

P.O. Box 919
Palatka, FL 32178-0919
(386) 325-2001

April 10, 2008

Mr. Jeffery F. Koerner, Air Permitting North Section
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: #4 Recovery Boiler "Consumed Air" Process Control System Project
Project No. ~~1070005-038-AC~~ PSD-FL-380
1070005-053-AC

Dear Mr. Koerner:

Enclosed for your review is a construction permit application (four copies) for the referenced project that was discussed in a recent conference call between you, Bruce Mitchell of DEP, Mike Curtis, Wayne Galler, and Ron Reynolds of G-P. The "Consumed Air" control system should improve the steam generation efficiency of the boiler by optimizing the air-to-fuel ratio. G-P is not requesting any increase in black liquor solids (BLS) firing rate or permitted emissions rates as a result of this project. G-P is requesting that DEP incorporate this project into the PSD-380 permit issued May 29, 2007.

If there are any questions regarding this response, please do not hesitate to contact Mike Curtis at 386-329-0918.

Sincerely,

Keith Wahoske

Keith W. Wahoske, Vice-President
Palatka Operations

Enclosure

Cc: W. Galler, T. Champion, T. Wyles, S. Matchett, M. Curtis - GP

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

RECEIVED
APR 14 2008
BUREAU OF AIR REGULATION

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: **Georgia-Pacific Consumer Operations LLC**
2. Site Name: **Palatka Mill**
3. Facility Identification Number: **1070005**
4. Facility Location...:
   Street Address or Other Locator: **215 County Road # 216**
   City: **Palatka** County: **Putnam** Zip Code: **32177**
5. Relocatable Facility? ☐ Yes ☒ No
6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **Michael W. Curtis, Superintendent of Environmental Services**
2. Application Contact Mailing Address...
   Organization/Firm: **Georgia-Pacific Consumer Operations LLC**
   Street Address: **P.O. BOX 919**
   City: **Palatka** State: **FL** Zip Code: **32178-0919**
3. Application Contact Telephone Numbers...
   Telephone: **(386) 325-2001** ext. Fax: **(386) 328-0014**
4. Application Contact Email Address: **michael.curtis@gapac.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 4/14/08
2. Project Number(s): 1070005-053-AC
3. PSD Number (if applicable):
4. Siting Number (if applicable):

Purpose of Application: Installation of Consumed Air Control System for No. 4 Recovery Boiler

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

☒ 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

Installation of Consumed Air Control System for No. 4 Recovery Boiler: The Mill is proposing to install a "Consumed Air" process control system for the No. 4 Recovery Boiler. The process control system will be supplied by DES Global, LLC of Greenville, South Carolina. The purpose for installing the control system is to make the boiler more efficient by generating more steam from each pound of black liquor solids burned in the boiler. Currently, black liquor flow is controlled as a constant volumetric feed rate to the boiler. Combustion air is fixed at a desired set point at each of the four levels in the boiler. Variations in black liquor solids content, black liquor temperature, black liquor heating value and excess air are not taken into account with the present control system. This causes variations in the combustion process. The combustion variability shows up in the amount of steam produced per pound of black liquor solids fired in the boiler.

The proposed new control package will reduce variation in the combustion process and increase steam generation per pound of black liquor solids. The consumed air control strategy consists of increasing or decreasing the amount of black liquor fuel supplied to the boiler to maintain a consistent boiler exit oxygen level, thus establishing a constant air-to-fuel ratio. The oxygen consumed in the combustion process is an indirect measurement of heat input to the boiler and is utilized in controlling fuel feed to the boiler. The project is expected to increase steam generation by approximately 6,000 pounds per hour for the same black liquor firing rate.

The consumed air control system works as discussed in the extract below that was taken from a paper presented at a TAPPI Conference in 1997 by Dynamic Energy Systems. The paper was written about experiences with a boiler at an industrial manufacturing complex other than the Palatka Mill:

> "The recovery boiler liquor firing strategy provides stable heat input. A consumed air model combines total air and flue gas oxygen measurements to compute the amount of air used, or consumed, in black liquor combustion. The model compensates for air used by auxiliary fuel and for infiltration air. From the data, the heat input is inferred and used to set liquor flow. Air being consumed is continuously calculated and used to adjust liquor flow to the furnace in order to maintain a heat release that corresponds to the air consumed and excess air. Once heat input stability is achieved, there is a significant reduction in the standard deviation of all process variables.
>
> The control system maintains a constant air flow to the furnace that is a function of boiler load while constantly adjusting liquor flow. The control strategy further provides automatic adjustment of the total air flow and air splits to the primary, secondary, and tertiary levels when the firing rate is changed. As load is reduced, the control set point for oxygen is automatically adjusted upward so that an ideal amount of air is available for combustion at all times. The recovery boiler was equipped with two oxygen meters, one on each side of the economizer outlet. Control is governed by the lowest of these recorded values. Mill rationale for selecting the lowest reading recognizes that a failed analyzer could send the recorded oxygen to the high level of the meter range which would be recognized by the control system as an indication of too much air being used. With the lowest value, there is a reduced probability of having insufficient air for combustion when an oxygen analyzer problem occurs.
>
> Automatic control of the boiler is operator friendly. The "Single knob control" functionality provides operators with a single input interface for changing the recovery boiler load. All other adjustments are automatic based on the load selected. To change load, the operator types an input of the desired new load. With this one input, the computer control system smoothly and precisely ramps liquor flow and air supply to the new load conditions without operator intervention. The throughput change is ramped at a fixed programmed rate determined during start-up. The smooth, ramped load change minimizes drum level, steam header, and furnace pressure upsets. The gradual change further provides furnace stability as load is adjusted to minimize turbulence and carryover that can frequently occur where liquor load is changed and air controls are not."

The Mill is not implementing this project to increase black liquor solid flow through the boiler. Currently, the unit routinely operates at 98% of the 24-hour average permitted capacity. Experience with the control system has resulted in increased black liquor throughput in some instances at other pulp and paper mills. However, we do not believe this will be the case in Palatka. The Mill will not be changing the maximum black liquor solids firing rate or the potential-to-emit emission rates for the No. 4 Recovery Boiler as a result of implementing this project. For this reason, the Mill is requesting the Florida Department of Environmental Protection to incorporate this project into the recently issued PSD permit for the No. 4 Recovery Boiler that was issued on May 29, 2007.

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
018	No. 4 Recovery Boiler	AC1A	*

Application Processing Fee

*Previously paid to state

Check one: ☐ Attached - Amount: ☒ Not Applicable

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
   Keith W. Wahoske, Vice President Manufacturing
2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **Georgia-Pacific Consumer Products LLC**
   Street Address: **P.O. BOX 919**
   City: **Palatka** State: **FL** Zip Code: **32178**
3. Owner/Authorized Representative Telephone Numbers...
   Telephone: **(386) 329-0063** ext. Fax: **(386) 328-0014**
4. Owner/Authorized Representative Email Address: **keith.wahoske@gapac.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.

Keith Wahoske — Signature

4/11/08 — Date

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:

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):

- ☐ 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:
Street Address:
City: State: Zip Code:

4. Application Responsible Official Telephone Numbers...
Telephone: ( ) - ext. Fax: ( ) -

5. Application Responsible Official Email Address:

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.

Keith Wahosh — Signature

4/11/08 — Date

Professional Engineer Certification

1. Professional Engineer Name: **Mark J. Aguilar**
   Registration Number: **52248**
2. Professional Engineer Mailing Address:
   Organization/Firm: **Georgia-Pacific LLC**
   Street Address: **133 Peachtree Street, NE**
   City: **Atlanta** State: **GA** Zip Code: **30303**
3. Professional Engineer Telephone Numbers...
   Telephone: **(404) 652-4293** ext. Fax: **(404) 654-4706**
4. Professional Engineer Email Address: **mjaguila@gapac.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.

Mark J. Aguilar — Signature

4/2/2008 — Date

(seal)

* Attach any exception to certification statement. ** Board of Professional Engineers Certificate of Authorization # 00001670

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **434.0** North (km) **3283.4**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **29/41/0** Longitude (DD/MM/SS) **81/40/45**	
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **26**	6. Facility SIC(s): **2611, 2621**
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: **Michael W. Curtis, Superintendent of Environmental Services**
2. Facility Contact Mailing Address... Organization/Firm: **Georgia-Pacific Consumer Products LLC** Street Address: **P.O. BOX 919** City: **Palatka** State: **FL** Zip Code: **32178-0919**
3. Facility Contact Telephone Numbers: Telephone: **(386) 329-0918** ext. Fax: **(386) 328-0014**
4. Facility Contact Email Address: **michael.curtis@gapac.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:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official Email Address:

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:	