



Palatka Pulp and Paper Operations
Consumer Products Division

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

December 14, 2012

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**DIVISION OF AIR
RESOURCE MANAGEMENT**

Mr. Syed Arif, Administrator
Office of Air Permitting Division of Air Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

**Re: Georgia-Pacific Consumer Operations LLC
Palatka Mill, Facility ID No. 1070005
No. 4 Combination Boiler Electrostatic Precipitator Replacement**

Dear Mr. Arif:

Georgia-Pacific Consumer Operations LLC (GP) owns and operates a Kraft pulp and paper mill in Palatka, Putnam County, Florida (Palatka Mill). The Palatka Mill operates under Title V Air Operating Permit No. 1070005-068-AV, which was renewed by the Florida Department of Environmental Protection (FDEP) on July 9, 2012. The Palatka Mill is proposing to replace the fire-damaged No. 4 Combination Boiler (CB) electrostatic precipitator (ESP) with the virtually identical and currently idle ESP that was removed from service when the No. 5 Power Boiler (PB) converted to natural gas ((No. 1070005-038-AC). We anticipate completing this work during the annual maintenance outage of the boiler which is planned for February of 2013.

Background

The No. 4 Combination Boiler (CB), originally constructed in 1965, is rated at 512.7 million British thermal units per hour (MM Btu/hr) heat input, and is currently permitted to burn bark/wood and natural gas. The boiler generates steam used in process operations as well as in turbine generators that produce electrical power for use on-site. The CB is also the backup control device for dilute non-condensable gases (DNCGs), non-condensable gases (NCGs), and stripper off-gases (SOGs). A mechanical multi-cyclone dust collector and an electrostatic precipitator (ESP) are used to control particulate matter (PM) emissions from the boiler.

On April 7, 2011, the Florida Department of Environmental Protection (FDEP) issued an air construction permit (Air Permit No. 1070005-066-AC) authorizing replacement of the CB fuel oil burners with natural gas burners, an upgrade of the existing mechanical dust collection system, replacement of the existing ID fan with a new electric motor and fan, and partial replacement of tubes in the boiler's superheater section. This permit was revised under permit No. 1070005-070-AC to also authorize the replacement of approximately 1400 tubes in the air-

to-air preheater section of the CB. This revision also extended the expiration of the Permit No. 1070005-066-AC from March 1, 2013 to January 1, 2014. These modifications were completed during the January 2012 annual outage of the CB, with the exception of the superheater tube replacement which was deferred based on inspection.

The CB ESP was damaged by fire in early November, with most of the damage in Field 2 and lesser damage in Field 3. Upon restart, we operated the boiler on gas-only until stack testing could be conducted on November 16th and 17th to determine the level of bark burning that could be achieved while assuring compliance with the damaged ESP. The testing resulted in a bark firing limit of 20.6 ton per hour, which was less than half of the average bark firing rate during the previous compliance test completed July 14, 2012 (45 tons per hour). The cost of additional natural gas required to offset the lost bark heat input is approximately \$6500 per day.

Project Description

The Palatka Mill is proposing to modify the ESP ductwork as necessary to redirect the flue gases from the inlet duct of the CB ESP to the inlet duct of the ESP that was previously used as particulate control for the No. 5 Power Boiler (PB). This is a faster and more cost-effective solution than rebuilding the fire-damaged CB ESP. The PB ESP was taken out of service in 2008 when the PB was converted from fuel oil to natural gas. The unit has been inspected and the necessary repairs will be completed to restore the unit to full operation. The PB ESP unit is virtually identical in size, design, and configuration to the CB ESP (pre-fire), and should provide equivalent particulate control efficiency. Attachment 1 is a section of the original Research Cottrell manual with details about both units. The primary difference between the two precipitators originally was that the PB inlet field was empty. An inlet field was added to the PB ESP unit in 2007 under permit 1070005-036-AC issued October 11, 2006. Attachment 2 is a copy of an email of 12/12/2012 to you and Al Linero also detailing the similarities of the two precipitator units.

The proposed ductwork modifications are shown in the drawing shown in attachment 3. The modifications will include the installation of ducting needed to connect the two precipitator inlet ducts, and installation of the necessary blanks and turning vanes to transfer the CB flue gases to the PB ESP. The modifications will be completed during a boiler outage planned for February, but could be earlier pending permit issuance. Any repairs required to return the PB ESP to full service will also be completed at that time.

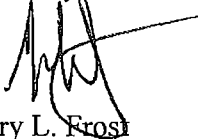
Permit Request

As part of the permit application for the No. 4 Combination Boiler that resulted in the April 7, 2011 construction permit, the Mill submitted a PSD applicability analysis using the "baseline actual-to-projected actual" emission comparison allowed under Rule 62-212.400(2)(a)1 of the Florida Administrative Code (F.A.C.). Based on this comparison, all projected emission increases due to the proposed project were less than the PSD significant emission rates, as was shown in Table 4-10 of the January 2011 permit application. The proposed project will not change the results of that PSD applicability analysis.

As directed by Al Linero of FDEP, we are submitting Part I of the long form application along with the supporting attachments as application for this construction permit revision.

Should you have any questions concerning this submittal, please contact Ron Reynolds at (386) 329-0967.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary L. Frost". The signature is stylized and somewhat cursive, with a long horizontal line extending to the right from the end of the name.

Gary L. Frost
Vice President

Attachments

cc: Jim Eckenrode, Georgia-Pacific Consumer Operations LLC (Palatka, Florida)
Ron Reynolds, Georgia-Pacific Consumer Operations LLC (Palatka, Florida)
Melissa Antoine, Georgia-Pacific LLC (Atlanta, Georgia)
Mark Ruppel, Georgia-Pacific Consumer Products LP (Atlanta, Georgia)
Al Linero, FDEP, Tallahassee
Stuart Bartlett, FDEP, Jacksonville

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DIVISION OF AIR RESOURCE MANAGEMENT



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 any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit - Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
An initial, revised, or renewal Title V air operation permit.

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 [X] No
6. Existing Title V Permitted Facility? [X] Yes [] No

Application Contact

1. Application Contact Name: Ronald E. Reynolds
2. Application Contact Mailing Address... Organization/Firm: Georgia-Pacific Consumer Operations LLC
Street Address: 215 County Road 216
City: Palatka State: FL Zip Code: 32178-0919
3. Application Contact Telephone Numbers... Telephone: (386) 329-0967 ext. Fax: (386) 328 - 0014
4. Application Contact E-mail Address: ron.reynolds@gapac.com

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 12-14-12
2. Project Number(s): 1070005-078-AC
3. PSD Number (if applicable):
4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

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

Air Construction Permit

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

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 being submitted to replace the fire-damaged electrostatic precipitator (ESP) on the No. 4 Combination Boiler (EU ID 016) with the idle No. 5 Power Boiler ESP. The units are side by side and the ductwork will be modified to redirect the flue gases from the No. 4 CB ESP inlet duct to the No. 5 Power Boiler ESP inlet duct. The No. 5 Power Boiler ESP and stack are virtually identical to the No. 4 Combination Boiler ESP and stack in design and configuration.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
016	No. 4 Combination Boiler	N/A	N/A

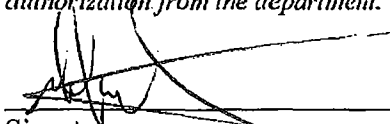
Application Processing Fee

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 : Gary Frost, Vice-President Operations
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Georgia-Pacific Consumer Operations LLC Street Address: PO Box 919 City: Palatka State: FL Zip Code: 32178
3. Owner/Authorized Representative Telephone Numbers... Telephone: (386) 329 - 0063 ext. Fax: (386) 312 - 1135
4. Owner/Authorized Representative E-mail Address:
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i>  Signature 14 Dec 2012 Date

APPLICATION INFORMATION

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, N.E. City: Atlanta State: Georgia Zip Code: 30303
3. Professional Engineer Telephone Numbers... Telephone: (404) 652-4293 ext. Fax: (404) 654-4706
4. Professional Engineer E-mail Address: mjaguila@gapac.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(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</i> <i>(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.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, 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.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, 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 <input type="checkbox"/>, 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.</i> <i>(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 <input type="checkbox"/>, 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.</i>
Signature: <u><i>Mark J. Aguilar</i></u> (seal) Date: <u>12-17-2012</u>

Attachment 1

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SECTION I: INTRODUCTION

IA PURPOSE AND CONTENTS OF THIS MANUAL

This manual contains both general and specific information for the safe operation and maintenance of the precipitation equipment installed at Georgia Pacific Company, Palatka, Florida.

Because the equipment has been custom designed, certain specific adjustments and settings can only be made during operation. Information regarding these adjustments will be supplied during startup by Research-Cottrell field personnel who will also:

1. Perform a quality assurance inspection
2. Startup the equipment on air and gas load
3. Adjust and set electrical equipment.
4. Record data and
5. Train plant personnel in operation and maintenance.

IB DESCRIPTION OF INSTALLATION

IB1 Purpose

The electrostatic precipitation equipment on this installation is designed to remove particulate from the gas stream of a combination bark and oil fired boiler #4, Unit A, and, oil fired boiler #5, Unit B.

IB2 Scope

The equipment furnished by Research-Cottrell under this contract consists of two (2) electrostatic precipitators with G-Opzel type collecting plates, "Duratrod" rigid discharge electrodes, each one chamber, 20 gas passages, support insulator seal air system, top housing, and a screw conveyor ash handling system.

IB3 Specifications

(a) Operating & Performance Data	UNIT A	UNIT B
- Gas Volume (Pitot), ACFM	230,000	230,000
- Gas Temperature, °F	420°F	425°F
- Temperature, Design	550°F	550°F
- Pressure, Design	+3" W.C.	+3" W.C.

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SECTION I:	INTRODUCTION - cont.	UNIT A	UNIT B
	- Outlet Stopper Gr/SDCF	0.047 GRS/ACF	0.017 GRS/ACF
	- Quantity of Chambers/Pptr	1	1
	- Quantity of Fields/Chamber	3	2
(b)	Casing		
	- Material & Thickness	3/16" Mild Steel, ASTM-36	
	- Penthouse Material and Thickness	ASTM-A570 10 Ga. ASTM-A36	
	- Quantity of Perforated Plates/Pptr.	3	
	- Location of Perforated Plates Pptr.	Inlet Nozzle, Inlet Flange and Outlet Flange	
	- Quantity of Perforated Plate Rappers/Pptr.	2	
	- Type of Access Doors	24" Ø Mild Steel	
(c)	Collecting System		
	- Quantity of Gas Passages	20	
	- Spacing of Gas Passages	12"	
	- Collecting Surface Material and Thickness	Opzel 18 Ga. ASTM-A366	

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1B. DESCRIPTION OF INSTALLATION - cont.	UNIT A	UNIT B
1B3 <u>Specifications</u> - Cont.		
- Quantity of Collecting Surfaces	126	84
- Collecting Surface Effective Length	11.2'	11.2'
- Quantity Surface Effective Height	41'	41'
- Quantity Collecting Electrode Rappers	60 (TOTAL BOTH UNITS)	
- Type of Collecting Surfaces	G Opzel	
- Hopper Material	1/4" Mild Steel, ASTM-A36	
(d) High Voltage System:		
(1) Discharge Electrodes (Duratrod):		
- Quantity	600 Units A & B	
- Type	Rigid scalloped vane "Duratrod"	
- Material & Thickness	18 Ga., ASTM-A366	
(2) Discharge Electrode Rappers		
- Quantity	15 Magnetic Impulse Gravity Impact (MIGI) LV-1	
- Type	20 Pound Plunger	
(e) High Voltage Electrical Set - 500 MADC (FW)		
(1) Transformer-Rectifier Controls are housed in the motor control centers. Three (3) in Unit A and two (2) in Unit B.		
- Quantity	5 Units A & B	

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1B DESCRIPTION OF INSTALLATION - cont.

1B3 Specifications - cont.

(2) AC Line Input

- Voltage	430-480
- Current	98.5
- Phase	1
- Frequency	60 Hz.
- KVA at 480V	47.3

(3) Transformer-Rectifier

- Type	Liquid Dielectric HV Oil, Air Cooled
- Quantity	5 Units A & B
- Maximum Ambient Temp.	50

(4) Transformer

- Input Voltage (V)	400 RMS
- Output Voltage (KV)	85 KVP
- kVA	60.7

(5) Rectifier Output (Pure Resistive Load)

- Voltage (KV Avg.)	55
- Current (MA Avg.)	500

(f) Ventilation System

- Primary Fan	Robinson
- R-C Standard Ductwork, Fan Base and Filter Box	2

(1) Thermostat

- Type	Burling
- Quantity	2 - Blast Heaters

Attachment 2

Reynolds, Ron E.

From: Reynolds, Ron E.
Sent: Wednesday, December 12, 2012 2:49 PM
To: 'Lineró, Alvaro'; Arif, Syed (Syed.Arif@dep.state.fl.us); Pell, Leigh
Cc: McQuaig, Mary M.; Ruppel, Mark S.; Eckenrode, Jim P.; Antoine, Melissa K.; Morris, Daniel L.; Francis, Keith T. (PAL)
Subject: RE: Georgia-Pacific Consumer Operations LLC, Palatka Mill, Facility ID 1070005

One minor correction to the information presented 12/7 in the email below is that each precipitator has 45 rappers, not 49. Correction made below.

The application package is near completion. Hope to submit yet this week.

Thanks,

Ron Reynolds
Senior Environmental Engineer – Air
GP, Palatka Operations
Palatka, FL 32178-0919
Office 386-329-0967
Cell 386-916-3133

From: Reynolds, Ron E.
Sent: Friday, December 07, 2012 12:40 PM
To: 'Lineró, Alvaro'; Arif, Syed (Syed.Arif@dep.state.fl.us); Pell, Leigh
Cc: Tingle, Scott D.; Ruppel, Mark S.; Eckenrode, Jim P.; Antoine, Melissa K.; Morris, Daniel L.; Francis, Keith T. (PAL)
Subject: RE: Georgia-Pacific Consumer Operations LLC, Palatka Mill, Facility ID 1070005

Below is information comparing the design of the #4 Combination Boiler precipitator and the #5 Power Boiler precipitator (currently unused) that we are proposing to utilize for the #4 CB:

- 1) The two precipitator chambers are identical (size, structure, etc.)
- 2) The main difference between the two precipitators originally was that the Power Boiler inlet field was empty; an inlet field was added to the PB unit in 2007 under permit 1070005-036-AC issued October 11, 2006 (copy attached).
- 3) Both Precipitators have (3) Fields, all of them have (21) collecting plates, (20) gas passages with 12" spacing
 - a. The collecting plates are 41' high and 11'2" wide.
- 4) Each field has (120) electrodes, (6) in each gas passage.
- 5) Each Precipitator has (45) Rappers
 - a. (12) collecting plate rappers per field
 - b. (3) discharge electrode rappers per field
 - c. (2) inlet and (2) outlet distribution plate rappers
- 6) The fields are individually energized by five (6) transformer/rectifier (T/R) sets (three per Precipitator). Each T/R is connected full wave through a single output bushing. The power supply is 480 volts, 60 Hz, 3 Phase.

a. T/R Set Ratings

Primary Volts AC	Primary Amps AC	Secondary Volts DC	Secondary Amps DC	KVA
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480 V	84 Amps	55 kV	500 mA	38.6 kVA
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- 7) Both utilize BHA SQ300 Controls for the Rappers and T/R Sets.
- 8) There are a few subtle differences that overall should not impact dust removal performance. These differences are in the style of electrodes and plates in various fields. I can get more details on this if needed.

Also attached is a section of the original Research Cottrell manual with details about both precipitator units.

This is not intended to represent the application; just preliminary information as requested. Additional information will be forwarded as available.

Best regards,

Ron Reynolds
Office 386-329-0967
Cell 386-916-3133

Attachment 3

