

# Department of Environmental Protection

Jeb Bush Governor Twin Towers Office Building 2600 Blair Stone Road Tallahassee, Florida 32399-2400

Colleen M. Castille Secretary

April 30, 2006

Mr. Theodore D. Kennedy Vice President Georgia-Pacific P.O. Box 919 Palatka, Florida 32178-0919

Re: GP Air Construction Permit Project No.: 1070005-35-AC/PSD-FL-367

**Recovery Boiler Modification** 

Dear Mr. Kennedy:

I am in receipt of your correspondence dated April 20, 2006, regarding the above referenced project. Several aspects of your correspondence warrant clarification. I am hopeful that this clarification will allow a productive teleconference with you and your staff tomorrow, Monday May 1, 2006, at 9:30.

First and foremost, the Department has acted in good faith and as expeditiously as possible to reach resolution on this project. Since the receipt of the Recovery Boiler application in November, Georgia-Pacific ("GP") has changed its project priorities on several occasions and redirected the Department's efforts on its various pending projects. For example, on February 14, 2006, the Department received an email from you indicating that the #4 lime kiln project needed to be prioritized due to a crack that developed. Then on March 2, 2006, GP requested a short-term SO<sub>2</sub> emission limit as part of the Recovery Boiler project which required additional modeling. For approximately 3 weeks, the Department worked with GP's modelers trying to resolve this SO2 issue. During this delay, the Department continued its efforts on the technical evaluation and draft permit language. Suddenly, on March 20, 2006, GP rescinded its request for a short-term SO2 limit and also requested the Department stop working on the #4 lime kiln shell project. The Department's staff worked on the Recovery Boiler project during its family vacation time in order to issue a draft PSD permit to GP a mere 10 days later (March 30, 2006).

Based upon a teleconference on April 13, 2006, the Department understands that GP did not obtain the funding for the Recovery Boiler project for this year. The Department remains hopeful, however, that the fruits of

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everyone's efforts on this project will result in a final PSD permit. To that end, your letter raised questions regarding the Department's authority for several permit conditions contained in the draft PSD permit. The following information explains the basis for the Department's authority. I would be happy to discuss this with you in more detail on the teleconference tomorrow morning or at your convenience.

As you are aware, the primary purpose of this project is to completely refurbish the recovery boiler (as evidenced by the \$34 million projected costs) and to increase the solids content of the primary fuel of black liquor solids (BLS). As described in the application, increasing the solids content is predicted to result in high flue gas volumes and increased mass emission rates, particularly NOx emissions. Based on GP's PSD netting analysis, the project could result in the following significant net emissions increases:

Pollutant	Net Emissions Increase	PSD Significant Emission Rates
РМ	333	25 .
PM <sub>10</sub>	274	15
NO <sub>x</sub>	744	40
СО	1,623	100
SAM	26	7
VOC	389	40

These are the potential emissions increases predicted after taking credit for any contemporaneous emissions reductions. Due to the significant potential emissions increase, the project is subject to prevention of significant deterioration ("PSD") preconstruction review for each of these pollutants. As part of the PSD program, the Department is required to perform a case-by-case best available control technology ("BACT") determination. As described in the Technical Evaluation and Preliminary Determination, Rule 62-210.200(38), F.A.C. defines BACT as follows:

- (a) An emission limitation, including a visible emissions standard, based on the maximum degree of reduction of each pollutant emitted, which the Department, on a case by case basis, taking into account:
  - 1. Energy, environmental and economic impacts, and other costs;
  - 2. All scientific, engineering, and technical material and other information available to the Department; and
  - 3. The emission limiting standards or BACT determinations of Florida and any other state;

determines is achievable through application of production processes and available methods, systems and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of each such pollutant.

- (b) If the Department determines that technological or economic limitations on the application of measurement methodology to a particular part of an emissions unit or facility would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice or operation.
- (c) Each BACT determination shall include applicable test methods or shall provide for determining compliance with the standard(s) by means which achieve equivalent results.
- (d) In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60, 61, and 63. (emphasis added)

In addition, Rule 62-4.070, F.A.C. requires that the Department have reasonable assurances that a proposed project will comply with all applicable Department rules. This rule allows the Department to establish permit conditions that afford it reasonable assurances of compliance. These rules are the core of the Department's authority for the PSD emission limitations and continuous emission monitoring requirements established in the PSD permit.

I hope this information is helpful and look forward to discussing this project with you tomorrow or at your earliest convenience.

Sincerely,

Trina L. Vielhauer

Chief,

Bureau of Air Regulation

Pand Vulhaur

cc: Myra Carpenter, Ed Jamro, GP Jeff Koerner, Bruce Mitchell, BAR Pat Comer, DEP-OGC



Palatka Pulp and Paper Operations Consumer Products Division

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

April 17, 2006

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APR 21 2006

BUREAU OF AIR REGULATION

Ms. Trina L. Vielhauer, Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
Division of Air Resource Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re:

CC:

Georgia-Pacific (GP) Palatka Mill – Recovery Boiler Routine Maintenance Repair and Replacement (RMRR) May 2006 Annual Outage

Dear Ms. Vielhauer:

This letter confirms our telephone conversation on Thursday April 13, 2006. Jeff Koerner and Bruce Mitchell from your office and Scott Matchett and Ed Jamro from GP were involved in the call as well. The topic was RMRR and GP's response to your request for additional information.

Based on our April 12 responses to your April 10 request for more information, the Florida DEP agrees that the #4 Recovery Boiler tube replacement work for the May 7 annual outage, as described in our April 5<sup>th</sup> and 12<sup>th</sup> letters, is routine maintenance, repair and replacement, and that permitting is not required. As we discussed, the May 2006 outage work will be consistent with work performed in the last 5 years.

We also discussed the status of the pending PSD Permit and GP's concerns with some of the provisions. While GP has requested an extension of time for filing a request for a hearing, it is GP's intent to work with Department staff to resolve the differences as soon as possible. At this time, we are just protecting our administrative right to request a hearing if any permit provisions cannot be agreed upon.

Thanks for the quick review and response from you and your staff on this matter.

If you have any questions please call me at (386) 329-0918.

Sincerely,

**Environmental Superintendent** 



Palatka Pulp and Paper Operations Consumer Products Division P.O. Box 919 Palatka, FL 32178-0919 (386) 325-2001

April 12, 2006

Jeffrey F. Koerner, P.E. Permitting North Administrator Bureau of Air Regulation Florida Department of Environmental Protection 2600 Blair Stone Road Tallahassee, Florida 32399-2400 RECEIVED

APR 19 2006

BUREAU OF AIR REGULATION

RE: Routine Maintenance Repair and Replacement – Boiler Tube Sections No. 4 Recovery Boiler – GP - Palatka
Response to Request for Additional Information

Dear Mr. Koerner:

On April 10, 2006, Georgia-Pacific received the Department's Request for Additional Information in response to my letter to Ms. Vielhauer regarding our April 5 notice of intent to perform routine maintenance on a small number of boiler tubes. This letter is in response to that request. For ease of following our responses, the questions have been repeated prior to the answers.

As background, in November 2005, GP submitted a PSD permit application that stated our intent to conduct more extensive tube replacements and air system upgrades for the No. 4 Recovery Boiler, along with added projects in the evaporator area. The tube replacement work, proposed to take place over a 3 to 4 year period, involved a significant percentage of the tubes in the unit's superheater, economizer, and generating bank. The total number of tubes to be replaced was estimated at approximately 7,400 in the application. We submitted the application for this work out of an abundance of caution, in light of the relatively extensive nature of this work and the uncertainty surrounding interpretation of the PSD routine maintenance, repair and replacement (RMRR) exclusion. When we received the Department's draft permit for this project, it became obvious that several issues in the draft permit would take time to sort out with the Department. GP must now separately complete the bare minimum of routine maintenance work during the May 2006 outage, far short of the scope of work described in the application. This bare minimum work is that which our insurers require us to complete during the May outage. That routine maintenance work was the subject of our April 5 letter and subsequent correspondence with FDEP.

## Q-1. What is the expected cause of the tube failures? Are materials being upgraded?

**Answer:** The potential tube failures are the result of normal corrosion and some erosion, which is typical for tubes in a recovery boiler. The 60 tube sections in the superheater will be replaced with the same material of construction. The 65 wall tube sections will be replaced with a 304SS composite that has been used in previous repairs. The 304SS composite material was installed in 1991 when the bottom of the furnace was replaced under PSD-FL-171. This composite material is considered preferable because it will match with adjacent lower tube sections and will lessen the risks of water leaks into the Boiler.

Q-2. Does the recovery boiler undergo an outage each year for insurance purposes? Describe the general terms in the insurance contract requiring inspection and repair. When was the boiler last inspected to determine the maintenance that needs to be performed during the scheduled outage?

**Answer:** The Recovery Boiler undergoes an annual outage for insurance purposes. Insurance on this Recovery Boiler is handled through a consortium of insurance companies and coverage is given in 12-month blocks. Near the end of each 12-month period, GP must reapply for insurance. To satisfy the insurers, GP hires an independent contractor to inspect the Recovery Boiler – inside and out. The insurance consortium relies on the contractor's report in order to ascertain the condition of the Boiler and GP's commitment to making routine repairs and replacements to enhance safe operation.

The contractor inspects tubes and conducts destructive and non-destructive testing of tubes. The contractor considers tube sections that were identified in the previous year's inspection as being "prime candidates" for replacement during the next outage. If inspection and testing during the current outage indicates that "candidate replacement tube sections" can be safely operated until the next outage, those tube sections are not disturbed. The Recovery Boiler was last inspected during the annual outage in May 2005 and the tube sections that are addressed in this request were found to be "candidate replacement tube sections".

Q-3. For comparison purposes, please provide a summary of such outages conducted over the last five years including the nature, extent, frequency, purpose, and costs for each year.

**Answer:** The Information requested is summarized in Attachment 1 and Table 1.

The Mill has taken routine annual maintenance outages on the Recovery Boiler every year, driven largely by insurance requirements and the Mill's recognition of its obligation under Florida regulations (see below) to maintain the Boiler in good, safe operating condition. During the past five years, for example, the maintenance budget for the Recovery Boiler outages has ranged from \$1.4M to \$3.5M, averaging \$2.6M. The work included routine replacement or repair of similar numbers of tube sections, constituting similarly small fractions of total tube surface area, and done at similar cost to the intended 2006 work. All work was performed during normal annual Mill outage periods and was intended solely to maintain the Boiler in its current function and capacity and in a safe operating condition.

Please note that timely repair of damaged tube sections in the Recovery Boiler is a condition of continued insurance coverage of the Boiler, without which it is not prudent for GP to operate the unit. Moreover, in our view, this type and extent of work is not only "routine" as a factual matter, in light of the routine tube repair and replacement practices by recovery boiler operators throughout the industry, but is routine as a matter of law under the Florida air regulations. We are confident that the Department would agree with us that we have an obligation under Rule 62-210.700(4) to properly maintain and operate facility equipment so as to minimize shutdowns and excess emissions. In fact, if excess emissions occur during malfunction events that are later found to have been caused entirely or in part by poor maintenance practices or preventable equipment failures, we risk losing any SSM defense for

such emissions, and the Department could initiate enforcement. Hence, the Florida rules require us to perform adequate routine maintenance, repair and replacement work of the very type discussed in this letter.

As you know, the Mill intends and needs to do this work in an outage scheduled to begin on May 7. Therefore, if the Department continues to have any questions whatsoever about whether this work qualifies as RMRR under the Florida regulations, we would like to discuss those with you as soon as possible. We will contact you shortly to follow up on this letter. In the meantime, if you have any questions regarding this matter, please contact Ms. Myra Carpenter at (386)-329-0918.

Thanks in advance for your help and cooperation.

Sincerely,

Mr. Theodore D. Kennedy

Robert R. Komika FOR TOK

Vice President – Palatka Operations

ce: Mark Aguilar, P.E., S. Matchett, Myra Carpenter - GP

T. Cole - OHFC

# ATTACHMENT NO. 1 RECOVERY BOILER (RB) ANNUAL OUTAGES – 2001 TO PRESENT

#### **NATURE OF OUTAGES: 2001 to 2006**

The work has involved routine maintenance to repair and/or replace corroded and/or eroded boiler tube sections in the wall and superheater of the Recovery Boiler. The replacement of tubes in May 2006 represents about 0.4% of the total tubes surface area in the Boiler. It is very common in the industry for recovery boilers to require tube replacements in order to minimize leaks and boiler shutdowns. Tube replacements do not extend the life of a boiler. A recovery boiler's life span is dependent on all of the major equipment associated with the boiler (i.e. steam drum, feed system, combustion controls, etc.) in addition to all of its generating, superheater, and economizer tubes. It is possible that tube sections could be replaced several times over the life of a recovery boiler.

#### **FREQUENCY OF OUTAGES: 2001 TO 2006**

Throughout the life of the Recovery Boiler, boiler tube sections have been replaced as needed based on an assessment of the condition of the tubes as related to safe operation. Periodic replacement of tube sections is an accepted, routine maintenance obligation for recovery boilers.

Routine maintenance outages have occurred over the past 5 years as follows:

March 2001, April 2002, May 2003, April/May 2004, May 2005 and scheduled for May 2006.

#### **EXTENT OF OUTAGES: 2001 TO 2006**

Only tube sections in the wall and superheater will be replaced during the May 2006 outage. These sections represent about 0.4% of the total tube surface area in the Boiler.

During the outages over the past five years, no new major parts were added to the Recovery Boiler. Outages typically lasted from 10 to 25 days depending upon the accessibility to the areas where the work was to be performed.

The March 2001 outage lasted 11 days, the April 2002 outage lasted 12 days, the May 2003 outage lasted 16 days, the April/May 2004 outage lasted 23 days, the May 2005 outage lasted 16 days and the May 2006 outage is scheduled to last about 10 days.

### **PURPOSE OF OUTAGES: 2001 TO 2006**

The small number of tubes in the wall and superheater tube sections are replaced to assure safe and reliable function of the Recovery Boiler at its current capacity. Past work and the scheduled 2006 work were/are not intended to increase the useful life of the Recovery Boiler. In order to satisfy requirements for continued insurance on the Recovery Boiler, it is anticipated that tube section replacements will continue in the future.

#### COST OF OUTAGES: 2001 TO 2006

The average cost of repairs on the Recovery Boiler during annual outages from 2001 to 2005 was \$2.6M. The cost estimated for the May 2006 annual outage is \$1.8M. See details in Table No. 1.

Also for comparison purposes, the total average yearly maintenance cost for the Recovery Boiler from 2001 to 2005 was \$6.7M. This covered day to day maintenance activities for the entire year. The total budgeted yearly maintenance cost for 2006 is \$6.5M. See details in Table No. 1.

# TABLE NO. 1 - RECOVERY BOILER ANNUAL OUTAGES - 2001 TO 2006

WD A D	DVDDCCD I D	COST in Recovery Boiler
YEAR	PURPOSE in Recovery Boiler	Outage / tubes
2006 (Plan)	General Routine Maintenance on mechanical and electrical systems, tank repairs, ESP repairs, and replacement of 65 water wall tube and 60 superheater tube sections. The tube section replacements represent about 0.4% of the total tube surface area.	The total cost of the annual outage in the Recovery Boiler is estimated to be \$1.8M. The cost to repair the tubes is estimated to be \$0.35M to \$0.4M. The total yearly maintenance costs in the RB are budgeted at \$6.5M.
2005	General Routine Maintenance on mechanical and electrical systems, tank repairs, breaker cleaning, ESP repairs, and replacement of 262 water wall tube sections and 50 superheater tube sections The tube section replacements represent about 1.3% of the total tube surface area.	The total cost of the 2005 annual outage in the Recovery Boiler was \$3.5M. The cost to repair the tubes was approximately \$2.1M. The total yearly maintenance cost for the RB in 2005 was \$6.3M.
2004	General Routine Maintenance – Replaced 131 roof tubes, 26 wall tube sections, and 22 superheater tube sections. The tube section replacements represent about 1.1% of the total tube surface area.	The total cost of the 2004 annual outage in the Recovery Boiler was \$4.0M. The cost to repair/replace the tubes was approximately \$1.0M The total yearly maintenance cost for the RB in 2004 was \$8.7M.
2003	General Routine Maintenance – Replaced 21 superheater tube sections. The work included "metallizing the boiler tubes". The tube section replacements represent about 0.1% of the total tube surface area.	The total cost of the 2003 annual outage in the Recovery Boiler was \$2.0M. The cost to repair/replace tubes was less than \$0.1M (including work to metallize boiler tubes). The total yearly maintenance cost for the RB in 2003 was \$6.5M.
2002	General Routine Maintenance – Replaced 37 wall tube sections, 14 superheater tube sections, and 1 screen tube. The tube section replacements represent about 0.2% of the total tube surface area	The total cost of the 2002 annual outage in the Recovery Boiler was \$2.1M. The cost to repair/replace tubes was less than \$0.1M The total yearly maintenance cost for the RB in 2002 was \$6.9M.
2001	General Routine Maintenance – Replaced 15 superheater tube sections and 4 wall tube sections. The tube section replacements represent about 0.2% of the total tube surface area	The total cost of the 2001 annual outage in the Recovery Boiler was \$1.4M. The costs to repair/replace tubes was approximately \$0.17M  The total yearly maintenance cost for the RB in 2001 was \$5.3M.

**Tube Section means** – a panel of tubes that makes up an entire tube length. For example – a 100 foot long tube might be made up of 5 - 20ft. tube sections.