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# Department of Environmental Protection

Jeb Bush  
Governor

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

David B. Struhs  
Secretary

June 30, 2003

CERTIFIED MAIL – Return Receipt Requested

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

RE: Request for Additional Information Corrections  
Request to Modify the No. 4 Recovery Boiler and No. 4 Lime Kiln and to Obtain a Bubble Plan Pursuant to 40 CFR 63.862(a)(1)(ii)  
Project No.: 1070005-021-AC

Dear Mr. Kennedy:

On June 27, 2003, the Department sent you a request for additional information regarding a May 30, 2003 request to modify the No. 4 Recovery Boiler (RB) and No. 4 Lime Kiln (LK) and to obtain a Bubble Plan pursuant to 40 CFR 63.862(a)(1)(ii). A correction is being made to a parenthetical expression contained in issues Nos. 1.d. and 2.d., which is to change "(industrial design)" to "(induced draft)".

If you have any questions regarding this matter, please call Bruce Mitchell at (850)413-9198.

Sincerely,  
*Trina L. Vielhauer*  
Trina L. Vielhauer  
Chief  
Bureau of Air Regulation

TLV/bm

cc: Joel Huey, U.S. EPA, Region 4  
Chris Kirts, NED  
Myra J. Carpenter, GP  
David A. Buff, P.E., GAI  
Bruce  
Trina } 6-30-03  
Paty }  
Rita Felton-Smith (NED)

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

2. Article Number  
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*John Alexander*  
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*John Alexander* 7/2/03

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 Mr. Theodore D. Kennedy

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# Department of Environmental Protection

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June 27, 2003

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Mr. Theodore D. Kennedy  
Vice President – Palatka Operations  
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Palatka Mill  
P.O. Box 919  
Palatka, Florida 32178-0919

RE: Request to Modify the No. 4 Recovery Boiler and No. 4 Lime Kiln and to Obtain a Bubble Plan Pursuant to 40 CFR 63.862(a)(1)(ii)  
Project No.: 1070005-021-AC

Dear Mr. Kennedy:

On May 30, 2003, the Department received a request to modify the No. 4 Recovery Boiler (RB) and No. 4 Lime Kiln (LK) and to obtain a Bubble Plan pursuant to 40 CFR 63.862(a)(1)(ii). Based on our review of the proposed project, we have determined that the following additional information is needed in order to continue processing this application package. Please provide all assumptions, calculations, and reference material(s), that are used or reflected in any of your responses to the following issues:

1. In your applications for air construction (AC) permits, No. AC54-1925551/PSD-FL-171, received February 13, 1991, and No. AC54-266676/PSD-FL-226, received March 7, 1995, for the No. 4 RB, the maximum flow rate was indicated as 210,000 dscfm, uncorrected, and under the Professional Engineering seal of Mr. David Buff. In Table 2, the flow rates in the years 1998 and 1999 seem to reflect this flow rate; however, the subsequent years of operation show that the flow rates are greater than these flow rates, with a couple of years, specifically 2000 and 2003, at flow rates greater than 15% of this value. Because of this noticeable difference and the increase in the flow rate from a previous maximum, please address the following issues:

- a. Please explain how you have been able to increase the flow rate that was considered the “maximum flow rate” when it was originally permitted for construction.
- b. Have you ever modified or replaced any component of the No. 4 RB since it was installed? If so, please explain in detail and identify the specific changes made and include the affected dates.
- c. Have you ever modified or replaced any component of the No. 4 RB’s control system since it was installed? If so, please explain in detail and identify the specific changes made and include the affected dates.
- d. Has the ID (industrial design) fan associated with the No. 4 RB’s operation ever been modified or replaced? If so, please explain in detail and identify the specific changes made and include the affected dates.
- e. If a physical modification did occur to the No. 4 RB and/or its control system, please explain in detail and provide the AC permit(s) that authorized the modification.

2. In your application for an air construction (AC) permit, No. AC54-1925551/PSD-FL-171, received February 13, 1991, for the No. 4 LK, the maximum flow rate was indicated as 24,200 dscfm, uncorrected, and under the Professional Engineering seal of Mr. David Buff. In Table 2, the flow rates for all of the years shown are considerably greater than this flow rate. Because of this noticeable difference and the increase in the flow rate from a previous maximum, please address the following issues:

- a. Please explain how you have been able to increase the flow rate that was considered the “maximum flow rate” when it was originally permitted for construction.
- b. Have you ever modified or replaced any component of the No. 4 LK since it was installed? If so, please explain in detail and identify the specific changes made and include the affected dates.

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Project No.: 1070005-021-AC  
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- c. Have you ever modified or replaced any component of the No. 4 LK's control system since it was installed? If so, please explain in detail and identify the specific changes made and include the affected dates.
  - d. Has the ID (industrial design) fan associated with the No. 4 LK's operation ever been modified or replaced? If so, please explain in detail and identify the specific changes made and include the affected dates.
  - e. If a physical modification did occur to the No. 4 LK and/or its control system, please explain in detail and provide the AC permit(s) that authorized the modification.
3. For the No. 4 RB, the value for the universal gas constant used in the calculations is inconsistent. In the calculations for TRS (total reduced sulfur) and SAM (sulfuric acid mist), the value used was 1545.3 ft-lbf/lb-mole-°R; and, for the rest of the calculations, the value used was 1545 ft-lbf/lb-mole-°R. Please use one value for consistency purposes for all of the calculations and recalculate the potential pollutant emissions and resubmit the appropriate application page that includes the emissions calculation.
4. Even though the particulate matter (PM) Best Available Control Technology (BACT) emissions limits for the Nos. 4 RB and LK were set on the basis of "gr/dscf", AC permit, No. AC54-266676/PSD-FL-226, established federally enforceable limits in gr/dscf (corrected to 8% O<sub>2</sub>), lbs/hr and TPY for the No. 4 RB and AC permit, No. AC54-192551/PSD-FL-171, established federally enforceable limits in gr/dscf (corrected to 10% O<sub>2</sub>), lbs/hr and TPY. The Bubble Plan requested by the application would relax the federally enforceable limits previously established. Since the relaxation of federally enforceable limits is being requested, which is a "modification" by definition, you are required to submit the appropriate emissions evaluation for all affected pollutants for PSD purposes pursuant to Rule 62-210.200, F.A.C., Definitions - Actual Emissions, and Chapter 62-212, F.A.C., Stationary Sources - Preconstruction Review. The average actual emissions value, in TPY, of each pollutant is to be compared to the future potential/allowable emissions, in TPY; and, if the net value is greater than the value(s) contained in Table 212.400-2, then please submit the appropriate application information to address the PSD New Source Review requirements of Rule 62-212.400(5), F.A.C.
5. In the application section for the No. 4 RB, on page 16, the maximum dry standard flow rate is indicated as 325,677 dscfm. Yet, on page 19, the calculation for SAM used the actual volumetric flow rate of 447,000 acfm, when the standard is 0.81 ppmvd. In addition, the calculation for the emissions did not show the correction for moisture. Why did you use 860 °R instead of 528 °R for correcting the limit to standard conditions, specifically 68 °F? Please explain why the calculation methodology is different and, if appropriate, correct the calculation and resubmit the appropriate application page that includes the emissions calculation.
6. In the application section for the No. 4 RB, on page 19, the calculation for SO<sub>2</sub> (sulfur dioxide) emissions would have to be based on 37.5 ppmvd in order to get the answer that you present. Please explain how you arrived at the answer that was submitted. Please correct and resubmit the appropriate application page that includes the emissions calculation.
7. For the proposed 40 CFR 63, Subpart MM MACT II Bubble Plan for the No. 4 RB and the No. 4 LK, you did not follow the requirements of 40 CFR 63.865(a), which requires that you use the average volumetric gas flow rates measured during the performance test to calculate the individual and overall PM limit. In Table 3, the application used a projected volumetric gas flow rate for each of these emissions units, which is unacceptable for the plan. If you still want to pursue a Bubble Plan, then please resubmit the proposed plan using the correct parameters; and, provide the calculations for all parts of the proposed plan.
8. For the proposed 40 CFR 63, Subpart MM MACT II Bubble Plan for the No. 4 Smelt Dissolving Tanks (SDTs), you did not follow the requirements of 40 CFR 63.865(a), which requires that you use the average Black Liquor Solids (BLS) firing rate measured during the performance test to calculate the individual and overall PM limit. In Table 3 and for the No. 4 SDTs, the application states that the BLS used in the calculations were based on the permit limit of 105 tons/hr of BLS, which is unacceptable for the plan. If you still want to pursue a Bubble Plan, then please resubmit the proposed plan using the correct parameters; and, provide the calculations for all parts of the proposed plan.

Mr. Theodore D. Kennedy  
Georgia-Pacific  
Palatka Mill  
Project No.: 1070005-021-AC  
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9. In the application section for the No. 4 LK, on page 16, the maximum dry standard flow rate is indicated as 45,853 dscfm, yet the emission calculations for CO (carbon monoxide), VOC (volatile organic compounds) and TRS, on page 19, use 45,833 dscfm. Please correct, recalculate and resubmit the appropriate application page(s) for each pollutant; and, include the calculations.

10. In the application section for the No. 4 LK, on page 19, the calculation for SO<sub>2</sub> emissions assumes a 50% removal efficiency through the venturi scrubber. What is the basis for the removal efficiency and has this value ever been proven through stack testing? If so, please provide the test results.

11. In the application section for the No. 4 LK, on page 19, the answer for the calculation for TRS emissions is not correct. Please correct and resubmit the appropriate application page that includes the emissions calculation.

12. The use of statistics to establish unproven volumetric gas flow rates for the No. 4 RB and the No. 4 LK is not acceptable for the following reasons:

With regard to the use of a 95% confidence limit in Table 2. Volumetric Air Flow During Compliance Stack Tests, Georgia-Pacific, Palatka, Florida, the statistic used is invalid. The 95% confidence limit is applicable to data that meets the assumptions of a large number of normally distributed, random and independent samples. This sample size is too small for the normal distribution assumption. A sample of at least 30 would be needed. A small size alternative for a normally distributed data set would be to use a Student's t distribution. However, this set is not close enough to normal to do so.

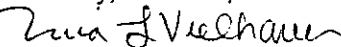
13. For each emissions unit, specifically the No. 4 RB and the No. 4 LK, please justify the use of a flow rate well in excess of any previously demonstrated flow rate, especially in light of the previously submitted applications and performance tests conducted for these emissions units.

14. It appears that the calculations used to correct the dscfm to the 8 or 10% oxygen is incorrect. It looks like the following was used:

corrected dscfm = dscfm x [(21-%O<sub>2</sub> measured)/(21-%O<sub>2</sub> desired)] instead of:  
corrected dscfm = dscfm x [(21-%O<sub>2</sub> desired)/(21-%O<sub>2</sub> measured)]

Please correct, where appropriate, and resubmit the application page(s) for each pollutant; and, include the calculations.

The Department will resume processing this application after receipt of the requested information. If you have any questions regarding this matter, please call Bruce Mitchell at (850)413-9198.

Sincerely,  


Trina L. Vielhauer  
Chief  
Bureau of Air Regulation

TLV/bm

cc: Joel Huey, U.S. EPA, Region 4  
Chris Kirts, NED  
Myra J. Carpenter, GP  
David A. Buff, P.E., GAI

Trina }  
Bruce } 6-27-03 RAN

