Georgia-Pacific

Palatka Pulp and Paper Operations
Consumer Products
P.O. Box 919
Palatka, FL 32178-0919

June 8, 2011

Robert L. Bull, Jr., P.E.
Florida Department of Environmental Protection
New Source Review Section
Bob Martinez Center
2600 Blairstone Road
Tallahassee, FL 32399-2400

RE: REQUEST FOR ADDITIONAL INFORMATION
DEP FILE NO. 1070005-067-AC
LIME KILN BURNER REPLACEMENT

Dear Mr. Bull:

Georgia-Pacific Consumer Operations LLC (GP) received a request for additional information (RAI) from the Florida Department of Environmental Protection (FDEP), dated April 8, 2011, regarding the proposed replacement of the burner in the No. 4 Lime Kiln at our mill located in Palatka, FL. A response to each of FDEP's comments is provided below, in the same order as they appear in the RAI letter.

Comment 1. Provide revised flow data for the kiln corrected to 10% O_2 and justify assumptions. Provide all calculation revisions based on the corrected flow rates.

Response: In developing the projected actual emissions for NO_x and CO for the initial permit application submitted March 10, 2011, the dry standard stack exhaust gas flow rates measured during past stack tests (see Table 4-2) were used. However, the stack exhaust gas flow rate used for the projected actual emission calculations (Table 4-6) was not corrected to 10-percent oxygen (10% O_2). This resulted in a projected actual exhaust gas flow rate that was lower than it should have been.

The dry standard stack exhaust gas flow rates shown in Table 4-2 of the revised application have all been corrected to 10% O_2. The CO and NO_x baseline emission factors presented in Table 4-6 have been revised and are based on the average of the dry standard stack exhaust flow rates corrected to 10% O_2 as measured during the 2006 through 2010 annual stack tests. The average stack exhaust gas flow rate used to calculate all criteria pollutant emission factors have been increased by 3.9% to account for the estimated increase of exhaust gas due to burning gas in the lime kiln instead of burning No. 6 fuel oil (see detailed response to Comment 3 below). A revised permit application that reflects these changes has been prepared and is included with our response to this RAI.

Comment 2. Provide revised projected actual emissions based upon the revised calculations and justify all assumptions. Provide emission factor consistency for each pollutant when comparing the baseline to projected actual emissions.

Response: As stated above under Comment 1, the projected actual emission rates for all criteria pollutants have been revised based on the correction of the stack gas exhaust flow rates to 10% O_2. GP has selected a different vendor for the replacement burner in the lime kiln who will guarantee a NO_x concentration of 92 parts per million by volume, on a dry basis, corrected to 10-percent oxygen (ppmvd @ 10% O_2), which is significantly lower than the 125 ppmvd @ 10% O_2, NO_x concentration presented in the initial application. The NO_x concentration of 92 ppmvd @ 10% O_2 is the value that the lime kiln will be able to meet on an annual average basis. There are no changes proposed to the CO concentration of 69 ppmvd @10% O_2 presented in the initial application.

GP is also requesting a short-term NO_x concentration of 114 ppmvd, corrected to 10% O_2, for the lime kiln on a 30-day rolling basis, excluding periods of startup and shutdown. The higher, short-term NO_x concentration limit will allow the lime kiln the needed operational flexibility to account for those periods of

time when non-routine process upsets occur and result in higher than normal NO_x emissions. These process upsets occur on an infrequent basis throughout the year and are not expected to change the annual average NO_x emission rate. To demonstrate compliance with both the short-term 30-day rolling average and track annual NO_x emissions, GP proposes to install a continuous emissions monitoring system (CEMs) in the No. 4 Lime Kiln's stack.

GP is also proposing to develop an optional method of measuring the stack exhaust gas flow rate to be used when calculating the NO_x mass emission rate in lieu of using the measurement of the stack exhaust gas flow rate during the annual compliance testing. The optional method we are proposing is to develop an "F-Factor" based calculation for the exhaust gas flow rate that would be confirmed by correlating the results of the F-Factor versus actual exhaust gas flow rate measurements in the lime kiln stack. The use of the optional F-factor method should result in more realistic estimates of the actual exhaust gas flow rate on a day-to-day basis and therefore, more realistic mass emission rates when calculating the annual NO_x mass emission rate. The Mill will present its plan for developing the F-Factor methodology to the FDEP and seek agency approval before implementing the new procedure. If this F-factor methodology cannot be confirmed within a 10% accuracy compared to actual stack flow measurements, then the mill will either revert to using the exhaust gas flow value measured during the annual compliance testing, or the mill may consider a second option of installing an ultrasonic flow meter in the lime kiln exhaust stack.

Comment 3. Define all other revisions or assumptions made to the revised calculations and emissions.

Response: In early 2005, the Mill replaced the burner in the Lime Kiln with the fuel oil-fired burner that is currently in use. As a result, the emissions data before 2005 may not be representative of the current kiln operation. Therefore, a more appropriate period of time for selecting the baseline actual period is the period of calendar year 2005 through calendar year 2010. Based on using this updated time period, we have selected 2005 through 2006 as the 24-consecutive month baseline period for all criteria pollutant baseline actual emission calculations.

Additionally, based on further engineering analyses, we have determined that the stack exhaust gas flow rate will only increase by 3.9% when burning natural gas, and not 10% as was originally predicted. The highest stack exhaust gas flow rate measured during any stack test within the baseline period was 52,162 dscfm @ 10% O_2. Increasing the highest measured stack exhaust gas flow rate by 3.9 percent results in a value of 54,196 dscfm. Because this value is essentially the same as the maximum design flow rate for the lime kiln of 54,200 dscfm, the design flow rate value is now being used as the projected actual flow rate. Each of the criteria pollutant emission factors used to calculate the baseline actual emissions have been increased by 3.9 percent to conservatively reflect the burning of natural gas in the lime kiln. GHG emissions are directly dependent on fuel usage and not lime production in the lime kiln; therefore, these baseline emission factors have not been modified.

Comment 4. The application indicates there will be no greenhouse gas emissions increases with this project. Please provide a more detailed explanation to justify the emissions calculations found in the application tables.

Response: The original application indicated that no increases in GHG emissions would occur using the baseline actual to projected actual emissions comparison and excluding those emissions that the lime kiln "could have accommodated" during the baseline period. This calculation method was in no way different from the methodology used to calculate emission increases for all other criteria pollutants.

However, by changing the baseline period for GHGs from 2004 – 2005 to 2005 – 2006 (as explained under Comment 3 above), the baseline actual GHG emissions decreased slightly. In addition, the amount of emissions the lime kiln "could have accommodated" during the baseline period also decreased slightly resulting in a slight increase in GHG emissions when performing the emissions calculation described above. The increase in GHG emissions is less than 5% of the PSD significant emission rate for GHGs. The specific GHG emissions calculation was completed using the following methodology:

1. Annual emissions for the baseline period of 2005 and 2006 were determined (Table 4-3).
2. The average annual emissions for this two-year period were calculated (Table 4-4).

3. The projected actual emissions were determined including the combustion of both natural gas and No. 6 fuel oil in the lime kiln (Table 4-7).

4. The highest annual emission rates that could have been accommodated during the baseline period when firing No. 6 fuel oil were then determined by projecting the observed maximum monthly production rate and fuel oil firing rate for a typical operating year. These excluded emissions represent emissions that could have been realized if product demand dictated operating the lime kiln more during the baseline period (Table 4-9).

5. The difference between the "could have accommodated" emissions and the baseline emissions are considered demand growth emissions and are excluded from the projected actual emissions (Table 4-10).

6. The GHG emission increase due to the project is the result of the projected actual emissions minus the demand growth emissions minus the baseline actual emissions (Table 4-10).

The result of this methodology shows that there will be no PSD significant increase in GHG emissions due to the replacement of the burner in the No. 4 Lime Kiln.

Comment 5. Provide revised tables and narratives as necessary.

Response: A revised permit application has been included with the Mill's response to the RAI.

Thank you for your consideration of this information. If you have any questions, please do not hesitate to call Ron Reynolds at 386-329-0967.

Sincerely,

Gary Frost

on behalf of Gary Frost

Vice-President

cc: Mike Curtis, GP
Melissa Antoine, GP
Wayne Galler, GP
David Buff, Golder
Phil Cobb, Golder
Ken Prest, GP
Ron Reynolds, GP

Enclosures