Florida Department of Environmental Protection

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December 10, 2010

Gary Frost
Vice President Manufacturing
Georgia-Pacific
Palatka Pulp and Paper Operations
P.O. Box 919
Palatka, Florida 32178-0919

RE: Administrative Order No. 039-NE
Second Request for Additional Information

Dear Mr. Frost:

We appreciate Georgia Pacific's timely and thorough response to our Request for Additional Information (RAI) dated October 4, 2010. We have determined that some of the responses require further clarification and that there is a need to conduct further biological sampling of Rice Creek and associated reference sites. For ease of review, our comments and the questions have maintained the same numbering as the original RAI.

Cover Letter

1. Response is adequate.

2. Response is adequate. However, is there an anticipated date for completion and evaluation of the trials for reducing aluminum?

3. Response is adequate.

4. Response is adequate. It is noted that the "Wet Weather Storage in Sedimentation Zone of Pond 1" described in section 5.11 of the Technical Memorandum No. 3 does include a potential solution for isolating the legacy solids as identified in the "Legacy Solids Report" submitted to the Department

on September 1, 2009, and we would like to continue our discussions over the potential viability of this option. However, no further response to this comment is being requested.

Technical Memorandum No. 3

The following questions are listed in page order of the Technical Memorandum and therefore, may have some duplication as they relate to similar topics.

1. The response is adequate; however, there appears to be a typographical error in Table 1 for the final effluent result for hardness. The hardness is reported as 1.7 mg/L. Can you please clarify the appropriate hardness number? Also, are alkalinity and hardness values expressed as mg/L of CaCO3?

2. Response is adequate.

3. Response is adequate.

4. The attachment "Focused Toxicity Identification Evaluation" includes a table of comparative chemistry and chronic toxicity test results from four GP mills. The table refers to Palatka Pond 1 rather than the final effluent. Is the chemistry in pond 1 representative of the effluent for all constituents in the table? Also, the levels in the table for Palatka Pond 1 appear to be different from current levels at the facility. Ionic imbalance was cited in the July 2010 Technical Memorandum prepared by Brown and Caldwell as one of the possible factors contributing to the chronic toxicity failures of *Ceriodaphnia dubia*. Based on results in Table 1 of your response to question TM1, the alkalinity/hardness ratio now averages less than 2.0 mg/L of CaCO3. Is ionic imbalance still considered a factor contributing to the chronic test failures? The differences in effluent from 2006 to present appear to support the need for a new TIE.

5. Please clarify how lab analytical procedures for color analysis and/or sampling location at the mill differed from samples collected and sent to the outside lab for compliance monitoring.

   In Table 1-1, the average of effluent daily specific conductance values was 1,900 µmhos/cm based on 173 observations. The daily maximum was 2,280 µmhos/cm. In the revised Table 1-1 in Appendix A, the average of effluent daily specific conductance values was 1,822 µmhos/cm based on 8 observations. The daily maximum was 2,078 µmhos/cm. Please explain why there were 173 observations over a nine-month period in Table 1-1, and only 8 in the revised Table 1-1 for an eight-month period.

On page 13, in the last paragraph, you state "When elevated conductivity merely delays, rather than precludes, reproduction it is evidence of test interference rather than effluent toxicity." There were eight chronic definitive tests submitted in 2010. Of those, five had distinct third broods by the end of the test, whether on day 6 or 7. We believe these reports do show more than test interference. You also go on to say "Instantaneously moving test organisms from one matrix to another creates an artificial stress in the test." While this may be true, EPA guidance says that the dilution water can be adjusted to match the receiving water. However, if the dilution water is similar to the receiving water in conductivity, then the "rapid changes in conductivity" would be a factor in the effluent's high conductivity. Please verify the receiving water conductivity and if that might justify a modification to the dilution water.

Also, on page 14, you state "If the test were extended for one additional day … there would no longer be a statistically significant difference …." In all 8 data sets for 2010, the dilutions which struggled to produce 2 or 3 broods by the end on day 6 or 7 were only achieving 1 to 4 neonates which would not have significantly improved the overall test results. For instance, even if you doubled or quadrupled the total neonates in 100% effluent for the test results performed on February 9, 2010, then the number of neonates might have been 6 to 12, which is still significantly less than the average of 31 from the controls. Therefore, even with an additional day, we believe the tests would still show a statistically significant difference.

Also on page 14, in the second paragraph, you mention several states using alternative test species such as the *Hyallela azteca*. While this species does appear on the EPA supplemental list of acute toxicity test species and chronic sediment sampling, it is not approved for chronic testing of effluent samples.

6. through 11. Responses are adequate.

12. It is unclear from the response whether ionic imbalances are still considered a significant factor in chronic toxicity failures. As noted earlier (in question 4 above), since 2006 there appears to be a significant reduction in the alkalinity/hardness ratio of the effluent.

13. through 16. Responses are adequate.

17. Do the aluminum concentrations in Table 8 represent total aluminum or soluble aluminum? Is soluble aluminum a better indicator of possible toxicity than total aluminum? If so, why?

18. through 27. Response is adequate.

Rice Creek Water Quality Report:

1. Response is adequate.

2. The response, subsequently submitted field sheets, and conference calls held between GP and the Department draw concerns over the validity of the SCI data submitted; therefore, the SCI portion of the Rice Creek Water Quality Study needs to be supplemented and conducted again. DEP scientists are willing to assist GP in developing an appropriate monitoring plan, to conduct site evaluations to determine appropriate control sites and the proper applicability of the Stream Condition Index. While not required, GP may want to consider conducting additional Hester-Dendy sampling in conjunction with the additional SCIs. Please let me know if you would like to arrange a meeting to discuss the development of the plan and monitoring sites or, if you prefer, submit a modified monitoring plan to the Department for review.

3. through 5. Response is adequate; however, please refer to item 2 above.

If helpful, the Department will arrange a meeting to discuss these comments in more detail. If you have any questions concerning this matter, please contact my office at (904) 256-1601, or by electronic mail at Melissa.M.Long@dep.state.fl.us.

Sincerely,

Melissa M. Long

Melissa M. Long, P.E.
Water Facilities Administrator

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