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Golder Associates

June 17, 1999

9737574

Mr. Al Linero
Bureau of Air Quality Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: AIR MODELING ANALYSIS FOR GEORGIA-PACIFIC PALATKA MILL

Dear Mr. Linero:

Please find enclosed three copies of the air modeling analysis report performed for the Georgia-Pacific Palatka Mill. As understood from previous meetings and discussions with the Department, the air modeling analysis is to demonstrate compliance with ambient air quality standards (AAQS) and allowable Prevention of Significant Deterioration (PSD) Class I and Class II increments.

Based on preliminary air modeling analyses, it was found that the existing Palatka Mill configuration resulted in the occurrence of an area of SO_2 AAQS exceedance in the vicinity of the Mill's southeastern property line. Subsequent analyses of the source contributions to this area have indicated that is was mostly due to a down-washing effect on Power Boiler No. 4. Currently, Power Boiler No. 4 has a stack height of 122 feet (ft), which is in the area of influence of the 193.7-ft Recovery Boiler No. 4 building.

With the current 122-ft stack for Power Boiler No. 4, the ISCST3 model predicted a high, second-high 24-hour SO_2 concentration with 5 years of meteorological data of 381 $\mu g/m^3$. This concentration does not include a non-modeled ambient background concentration. Power Boiler No. 4 contributed 208 $\mu g/m^3$ of this concentration.

For the Palatka Mill to demonstrate compliance with the AAQS, it was determined that Power Boiler No. 4 would need a stack height increase to 200 ft. A 200-ft stack height is below the height that would be considered as Good Engineering Practice (GEP) for Power Boiler No. 4. Modeling output files from the Building Profile Input Program (BPIP) building preprocessor program indicate that the GEP stack height for Power Boiler No. 4 is 399.5 ft. Subsequent air modeling analyses with a 200-ft stack for Power Boiler No. 4, resulted in a predicted high, second-high 24-hour SO_2 concentration of 231 $\mu g/m^3$ with Power Boiler No. 4 contributing 27 ug/m^3 to this concentration. This concentration would demonstrate compliance with the 24-hour SO_2 AAQS of 260 $\mu g/m^3$.

Attached with the air modeling report is a diskette containing all air modeling ISCST3 and BPIP files used for the compliance demonstration. The analysis includes Power Boiler No. 4 stack at 200 ft. Additionally, modeling files are also included for Power Boiler No. 4's current stack height.

Disk output and summary files are compressed using the utility PKZIP. A readme.txt file is included on the disk describing the contents of each ZIP file. Should you have any questions about the modeling analysis, please call Steve Marks or me at (352) 336-5600. Thank you.

Sincerely,

Golder Associates Inc.

Steven R Marks for David Buff

David A. Buff, P.E.,
Principle Engineer

DB/SRM/arz

cc: Syed Arif, FDEP
Myra J. Carpenter, G-P
Joe Taylor, G-P
Steve Marks, Golder

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