

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Environmental Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
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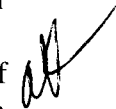


APRIL 18, 1996

Memorandum

To: Regional Air Quality Supervisors
Regional Permit Coordinators
Assistant Chiefs
Permit Engineers
Russell Hageman
Mike Aldridge
Sammy Amerson
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From: Laura Butler, Assistant Chief 
Air Permits Branch 

Through: Alan Klimek, Chief 
Air Quality Section

Re: PM₁₀ Emissions from Planing and other Woodworking Operations

The woodworking industry generally uses various processes including, but not limited to, sawing, planing, and sanding of dry wood. For this industry, TSP emissions were previously identified as the regulated pollutant of concern for Title V classification. Pursuant to the October 16, 1995 EPA Guidance memorandum from Ms. Lydia Wegman, PM₁₀ replaced TSP as the regulated pollutant for Title V applicability purposes. My April 26, 1995 memorandum addressed particle size distribution for TSP (PM₁₀₀) from woodworking operations. This memorandum serves to provide more refined particle size distribution information below the previously targeted TSP size of 100 microns. The information provided in this memorandum originated from previous TSP studies including a 1976 NCDEM Study at Singer Furniture Company and White Furniture Company. This information is not meant to supercede site specific PM₁₀ information, and should be used only in the absence of site specific PM₁₀ information for applicable sources. At this time, the PM₁₀ factors should be used only for Title V applicability review and billing purposes.¹ These factors are provided in Table 1. Data sources are provided in Table 2.

¹ TSP (PM-100) should still be considered when determining applicability for permitting under 2Q .0102 and for compliance with any 2D emission standard.

In an effort to provide PM₁₀ factors for the woodworking industry, previous studies were reviewed. The lowest available screening data was either 37 or 44 microns. Because PM₁₀ percentages will be a subset of the PM₄₄ or PM₃₇ percentages, the factors listed in Table 1 represent the "worst case" scenario. The average values of the the available PM₃₇ and PM₄₄ data are presented in Table 1. Because we are working with worst case factors, the average value can be used to determine PM₁₀ emissions from the stated woodworking processes. This approach differs from the previous recommended TSP factors, where the maximum value was presented.

Table 1.

Woodworking Process	Percentage of Wood Dust Regulated as PM ₄₄
Sanding	23.8
Fine Sawing (band sawing, etc.)	0.37
Rough Sawing (saw milling, etc.)	1.89
Molding	0
Planing	0

Table 2.

Data Source	Run 1	Run 2	Run 3	Average - Percent Passing Through Screen Size
Finish Planer and Molder (Singer)	0.00000	0.0000	0.0000	0.0000 < 37 microns
Planers (White)	-----	-----	-----	0.0000 < 37 microns
Rough End (Bernhardt)	3.75	1.13	0.78	1.89 < 44 microns
Machine Room (Bernhardt)	0	1.12	0	0.37 < 44 microns
Sanding	15.1	30.38	26.05	23.8 < 44 microns

c: J. Evans
P. Lloyd
Local Programs