AP42 Section:	10.5
Reference:	11
Title:	Written communication from John Pinkerton, National Council of the Paper Industry for Air and Stream Improvement, Inc., to Dallas Safriet, U. S. Environmental Protection Agency, Research Triangle Park, NC, June 8, 1993. 2002 supplement

NATIONAL COUNCIL OF THE PAPER INDUSTRY FOR AIR AND STREAM IMPROVEMENT, INC.
260 MADISON AVE. NEW YORK, N.Y. 10016 (212) 532-9000 FAX: (212) 779-2849

Dr. John E. Pinkerton
Program Director
Air Quality
(212) 532-9047

June 8, 1993

Mr. Dallas Safriet (MD-13)
Emission Inventory Branch
Emission Standards and Engineering Division
Office of Air Quality Planning and Standards
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

Dear Dallas:

Re: May, 1993 Draft Revision of AP-42 Section 10.5, "Plywood Manufacturing"

Thank you for providing a revised draft of the subject AP-42 section for review. We were gratified to see that most of our April 13, 1993 comments and suggestions had been incorporated into this latest draft. We would like to reiterate a few of our previous comments which were not addressed in this latest draft of the documentation report, as well as provide a few suggestions on the revised AP-42 section. Our comments are provided below by page number.

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10.5-14. With respect to Method 18 formaldehyde measurements, it should be made clear that the Method 301 validation has not been performed on veneer dryers and press vents (or similar sources), Such a method validation is a requirement for Method 18 results to be acceptable to EPA.

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10.5-25, 26. The CO sampling results for mill 4K should not be shown as a range since only one sampling run with duplicate simultaneous samples was conducted.

10.5-29. All data from Table 11 of NCASI Technical Bulletin No. 405 (TB 405) have been deleted from this table. Most of the ODEQ-7 test results cited in Table 11 for gas-fired veneer dryers were provided by BWR Associates as cited in Reference 20. It would seem that EPA could obtain the information provided to Research Triangle Institute (an EPA contractor) by BWR Associates in 1980 to determine if the data on gas-fired veneer dryer emissions would be usable for AP-42.

10.5-29. The VOC value of 0.75 lb/MSF taken from Reference 8 should be checked to ensure the calculation errors have been properly corrected.

Draft AP-42 Section

General. We continue to firmly believe it would be of great value to include ranges, number of sources tested, and number of sampling runs for all emission factors presented in the tables. A single average number with a subjective quality rating simply does not provide sufficient information about the emission factor.

10.5-3. We believe the issues of measurement methods and filter temperatures are important enough to merit at least a one

paragraph discussion about their effects on measured VOC and condensible particulate emissions in Section 10.5.3. Also, the effect of recirculation of a portion of the dryer exhausts to a blend box on direct wood-fired dryer VOC and condensible emissions should be mentioned in this section.

10.5-4, 5. CO emissions from a wood-fired veneer dryer would be expected to be a function of fuel cell combustion efficiency, amount of heat required for veneer drying, and air leakage into the dryer. By showing different CO emission factors for different wood species and after a wet scrubber, it is implied that CO emissions are only affected by these variables. We suggest revising Tables 10.5-1 and 10.5-2 to show a single CO emission factor for wood-fired dryers of 9 to 57 lb/MSF and to delete references to wood species and control devices. A footnote citing the significance of fuel cell combustion efficiency, heat required for drying, and amount of inleakage to CO emissions should be added to the tables.

10.5-6,7. Since the uncontrolled lodgepole pine filterable and condensible emissions were measured on the same dryer, the emission factors could be added to show an uncontrolled PM emission factor of 0.8 lb/MSF.

10.5-8,9. A footnote should be added to this table indicating that the VOC emission factors for many of the sources with wet control devices were obtained from Method 25 data with a filter held at stack temperature (e.g. 154°F for Mill A data). This could result in total VOC emission factors lower than those which might be developed from measurement data with the higher filter temperatures now called for in Method 25. A second footnote should be added for the "redry, with wet scrubber" VOC entry stating this factor may have been affected by stripping of compounds present in the scrubber water. It might also be worthwhile to note the value of 0.03 lb/MSF for redry is from a single sampling run and may be an anomalously low value.

We appreciate the opportunity to provide EPA with these review comments and hope that they will be carefully considered in preparing the final section on plywood manufacturing for inclusion in Appendix F of AP-42. Please contact either me or Dr. David Word at our Southern Regional Center (telephone 904-377-4708, ext. 241) if you need to clarify any of the above comments or suggestions. We look forward to receiving the final version of this material as soon as it is ready.

Very truly yours,

John E. Pinkerton

John E. Pinkerton

cc: V. Dallons
D. Mumper
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G. Andrew
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D. Word

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Documentation Report

10.5-2. It would be desirable to cite more recent industry statistics on production, number of plants, product value, etc. The 1987 figures will be about seven years old by the time the report is finalized. NONE AVAILABLE.

10.5-8. We are not aware of any plywood press vent emission data which would support the claim that type of resin used affects organic emissions. Unless a reference can be cited, this claim should be removed from both the documentation report and AP-42 section. "TYPE OF RESIN" CHANGED TO "RESIN COMPONENTS"

10.5-14. With respect to Method 18 formaldehyde measurements, it should be made clear that the Method 301 validation has not been performed on veneer dryers and press vents (or similar sources), Such a method validation is a requirement for Method 18 results to be acceptable to EPA.

ADD THESE COMMENTS AS A REFERENCE

(NCASI)

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10.5-25. To minimize potential confusion, we would again suggest that English units be given preference over metric units in Table 4-3 and all subsequent tables since metric units are seldom used in the U.S. plywood industry. NO ACTION - EPA DECISION

10.5-25, 26. The CO sampling results for mill 4K should not be shown as a range since only one sampling run with duplicate simultaneous samples was conducted. NOTED AS ONE RUN

10.5-29. All data from Table 11 of NCASI Technical Bulletin No. 405 (TB 405) have been deleted from this table. Most of the ODEQ-7 test results cited in Table 11 for gas-fired veneer dryers were provided by BWR Associates as cited in Reference 20. It would seem that EPA could obtain the information provided to Research Triangle Institute (an EPA contractor) by BWR Associates in 1980 to determine if the data on gas-fired veneer dryer emissions would be usable for AP-42. CALLED DR. WORD, NCASI 7/14 re. RTI CONTACT

10.5-29. The VOC value of 0.75 lb/MSF taken from Reference 8 should be checked to ensure the calculation errors have been properly corrected. CORRECTED

Draft AP-42 Section

General. We continue to firmly believe it would be of great value to include ranges, number of sources tested, and number of sampling runs for all emission factors presented in the tables. A single average number with a subjective quality rating simply does not provide sufficient information about the emission factor. NO ACTION - EPA GUIDANCE

10.5-3. We believe the issues of measurement methods and filter temperatures are important enough to merit at least a one

paragraph discussion about their effects on measured VOC and condensible particulate emissions in Section 10.5.3. Also, the effect of recirculation of a portion of the dryer exhausts to a blend box on direct wood-fired dryer VOC and condensible emissions should be mentioned in this section.

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10.5-6,7. Since the uncontrolled lodgepole pine filterable and condensible emissions were measured on the same dryer, the emission factors could be added to show an uncontrolled PM emission factor of 0.8 lb/MSF. ~~DONE AS REQUESTED~~ NO; LAST COLUMN ODEQ-7 ONLY

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CALL FOR CONTACT @ BWR OR RTI

Very truly yours,

John E. Pinkerton

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June 28, 1993

Mr. Dallas W. Safriet (MD-14)
Emission Factor and Methodologies Section
Emission Inventory Branch
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

Dear Dallas:

RE: Wood Products Industry Emission Testing Priorities

As you requested during the meeting with industry representatives on May 27, the National Council staff has reviewed the April 1, 1993 MRI draft memorandum outlining emission testing priorities for wood products industry sources for the purposes of improving AP-42 Chapter 10 emission factors.

Although many comments and suggestions could be offered on the methodology by which MRI developed the priorities, we think it would be most productive to focus on identification of the most significant emissions information needs facing the forest products industry. Since we are not familiar with the charcoal and wood preserving segments of the industry, our suggestions for testing priorities will focus on pulp and paper mills, panel plants, and lumber mills.

In our view, the most critical data gap facing the industry is for fugitive VOC emissions from wood material storage piles. Pulp mills, panel plants, sawmills and chipping facilities would benefit from having estimates for VOC emissions. Currently there are no factors for emissions from chip, sawdust or bark piles. Particulate and PM_{10} emissions from the storage piles and transfer activities should also be of high priority. MRI has only suggested that a wind tunnel investigation be conducted; we feel FTIR technology merits consideration for full-scale speciated VOC measurements on actual piles. Quantification of terpenes and isoprenes is of critical importance.

For pulp and paper mills, we agree that high priority should be assigned to obtaining speciated VOC emissions information for mechanical pulping processes (mistakenly identified as chemical pulping processes in the MRI memorandum) such as stone groundwood, thermo-mechanical, and chemi-thermomechanical. The

Roy

Attached are copies of comment received from HCASI on plywood section and testing provisions

— Dennis

Rich M
David B.

effects of wood species and steam recovery practices will be important variables to consider in design of a sampling effort for these types of pulp mills.

Obtaining speciated VOC information for paper machines and pulp dryers should also receive high priority. A wide array of furnishes (unbleached kraft, bleached kraft, sulfite, groundwood, recovered fiber, etc.), products (linerboard, fine papers, newsprint, tissue, specialty papers, etc.) and machine additives (dyes, defoamers, biocides, fillers, etc.) will undoubtedly need to be investigated. Very little usable information exists on emissions from paper machines at the present time. We do not think paper coating activities should be viewed as high priority since estimating techniques based on the properties of the coating materials appear to provide satisfactory emission estimates.

One additional area of pulp and paper manufacture which should receive high priority is that of repulping, bleaching and brightening of recovered fibers. With the exception of chloroform generated in recovered fiber bleaching with sodium hypochlorite, knowledge about VOC emissions from these sources is essentially non-existent. Considering the growth in recycled paper production, and questions being raised in air quality permitting proceedings for these facilities, obtaining emissions information merits high priority.

Regarding solid wood products manufacture, evaluating VOC emissions from lumber drying kilns (both direct wood-fired and steam heated) is very important, especially with respect to determining total annual VOC emission rates. Speciation of the VOCs, the majority of which are anticipated to be terpenes, for different softwood species such as southern yellow pine, Douglas fir and Ponderosa pine is highly desirable.

Of only slightly lesser importance is the gathering of additional VOC emissions data for softwood plywood veneer dryers which are drying veneer to higher moisture levels than in the past. As you know, almost all available veneer dryer emissions data are from the late 1970s to early 1980s period, when drying was carried out to lower final moisture levels. The differences in final moisture content may have implications for VOC emissions. In addition, measurements should be made with a consistent Method 25A procedure, since Method 25A is now being recommended by EPA for VOC measurements. Much of the earlier data were collected with Method 25 using varying filter temperatures.

Concerning AP-42 information needs, a thorough analysis of formaldehyde measurements made with various testing methods should be conducted prior to publication of any formaldehyde

emission factors. As previously discussed with you and other EPA personnel, the industry has major concerns about the use of draft Method 0011 (DNPH) for panel plant sources. We would like to see additional simultaneous source testing done with the DNPH, chromatropic acid and acetylacetone methods. Although there is a great deal of formaldehyde test data available, resolving questions about the comparability of results obtained with different sampling methods is critical to determining if additional testing will be needed to develop reliable formaldehyde emission factors for reconstituted panel plant dryers and press vents.

Another important information gap exists for VOC and particulate emissions from wet and dry process hardboard mills. Refiner vents, tube dryers, press vents and curing ovens should be considered for future emission testing.

We are hopeful our perspectives on the emissions data needs for pulp and paper mills, panel plants and sawmills will assist the Agency in setting priorities for future testing programs in the wood products industry. Please feel free to call if you would like further elaboration on this subject.

Very truly yours,

John E. Pinkerton

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cc: J. Southerland
D. Mumper
K. Bentley
R. Kaufmann
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