



## Project Summary

# Characterization of Manufacturing Processes and Emissions and Pollution Prevention Options for the Composite Wood Panel Industry

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The report summarizes information gathered on emissions from the composite wood industry (also called the plywood and particleboard industry) and potential pollution prevention options. Information was gathered during a literature search that included trade association publications, journal articles, symposium presentations, and university research.

Little information exists in the literature pertaining to pollution prevention. Most available literature focuses on ways to reduce raw material consumption and improve manufacturing processes. However, in many instances, these reductions and improvements lead to pollution prevention benefits. Some of these potential pollution prevention options presented in the report include: conveyor belt drying, low temperature drying, high moisture bonding adhesives, foam extrusion, and variable glue application rate. Other pollution prevention options presented in the report include alternative fiber sources (e.g., agricultural fiber and recycled wood waste) and naturally derived adhesives. These options are presented as resources that are abundant and renewable. Little emissions data exist in the literature to include with these options.

*This Project Summary was developed by the National Risk Management Research Laboratory's Air Pollution Prevention and Control Division, Research Triangle Park, NC, to announce key findings of the research project that is fully documented in a separate report*

*of the same title (see Project Report ordering information at back).*

### Overview

The composite wood manufacturing industry (initially called the plywood and particleboard industry) was included in EPA's initial list of air toxics source categories under Section 112 of the Clean Air Act Amendments of 1990. The industry was defined by the EPA as "...any facility engaged in the manufacturing of plywood and/or particleboard, including, but not limited to, manufacturing of chip waferboard, strandboard, hardboard/cellulosic fiberboard, oriented strandboard, hardwood plywood, medium density fiberboard, softwood plywood, or any other wood composite product manufactured using binder". EPA's Office of Air Quality Planning and Standards (OAQPS) will be writing maximum achievable control technology (MACT) standards for Hazardous Air Pollutants (HAPs) as they apply to the composite wood panel manufacturing industry; the MACT regulations for this industry are scheduled to be proposed in 1999.

The Pollution Prevention Act of 1990 requires EPA to review regulations of the Agency prior to their proposal to determine the effect of regulations on source reduction. In response to this charge, EPA has established the Source Reduction Review Project (SRRP), the goals of which are to ensure that source reduction measures and multimedia issues are considered during the earliest stages of development of regulations under the Clean Air Act, Clean Water Act, and Resource Con-

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servation and Recovery Act. The SRRP is focused on 17 industrial categories that will be affected by the above regulations; the composite wood panel manufacturing industry was selected as one of the 17 categories.

EPA's National Risk Management Research Laboratory (NRMRL)/Air Pollution Prevention and Control Division (APPCD) worked in conjunction with OAQPS on implementing the SRRP for the composite wood panel manufacturing industry. As part of this effort, Research Triangle Institute was contracted to characterize emissions from manufacturing processes and

to identify potential pollution prevention opportunities for reducing them.

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**Elizabeth M. Howard** is the EPA Project Officer (see below).

*The complete report, entitled "Characterization of Manufacturing Processes and Emissions and Pollution Prevention Options for the Composite Wood Industry," (Order No. PB96-183892; Cost: \$25.00, subject to change) will be available only from:*

*National Technical Information Service  
5285 Port Royal Road  
Springfield, VA 22161  
Telephone: 703-487-4650*

*The EPA Project Officer can be contacted at:*

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