

FIHRP (Forest Industry Health Research Program) has published a report titled "***Microorganisms Associated with Wood Chips, Hogfuel and Sludge at Pulp Mills***". The report is available to members on the Pulp and Paper Forum's web-site at www.paperforum.com or contact **Agi Lee** by phone (604) 777-1533, by fax (604) 777-1567, or by e-mail at alee@paperforum.com. Non-members of the Forum may be charged for the report.

The study involved collection of air samples for fungi, bacteria and endotoxin at sites associated with wood chips, hogfuel, and sludge at four pulp and paper mills. In addition, bulk samples of chips, hogfuel and sludge were analyzed for fungi and bacteria. Samples were collected in September and October 2001, and January 2002.

Aspergillus fumigatus was the major fungal species found in air samples but it was not present on wood chips. *Aspergillus fumigatus* was found on hogfuel samples collected in winter but was generally absent on hogfuel collected in summer.

Airborne concentrations of endotoxin measured at some mill sites may be associated with inflammation of airways. A chip dumper pit and a sludge dewatering building exceeded all the suggested exposure guidelines for prevention of airways inflammation.

Results of this study indicate the need to minimize repeated exposure of workers to dusty environments. Elevated levels of airborne fungal spores relative to outdoors were found in chip handling areas. Elevated levels of endotoxin were present in hogfuel, sludge, and some chip handling areas.

Airborne concentrations of *Aspergillus fumigatus* were relatively low and would not represent a risk of lung infection for healthy workers. Individuals with severely compromised immune systems are at risk of lung infection from exposure to low levels of *Aspergillus fumigatus*.

Elevated levels of airborne fungal spores and endotoxin appear to be associated with dust that accumulates in conveyor galleries and other dusty locations. Chip, hogfuel and sludge handling operations should be examined to determine if changes could be made to minimize accumulation of dust.

Workers who may be exposed to excessive amounts of dust from wood chips, hogfuel or sludge should wear an approved fabric dust respirator or a half-facepiece respirator with dust cartridges.

FUNGI & BACTERIA: WOOD CHIPS, HOG- FUEL & SLUDGE

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