

AIR EMISSIONS FROM PEROXIDE BLEACHING OF CTMP

FOREST INDUSTRY HEALTH RESEARCH PROGRAM

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The *Forest Industry Health Research Program (FIHRP)* has published a report on airborne compounds found at sites in mills producing chemi-thermomechanical pulp (CTMP). The report, which is now available to members, is titled "*Air Emissions from Peroxide Bleaching of CTMP*". To request a copy, contact **Agi Lee** at the Pulp and Paper Forum, by phone (604) 777-1533, fax (604) 777-1567, or e-mail alee@paperforum.com. Non-members of the Forum may be charged for the report.

The objective was to characterize air contaminants released into working areas during peroxide bleaching of CTMP. In addition, some samples were collected in refiner areas. Air samples were collected at two coastal mills in B.C. during November 2000.

- Major air contaminants found at the sampling sites were acetaldehyde, ethanol, acetone, and terpenes (alpha-pinene, beta-pinene, delta-carene, and limonene).
- Airborne concentrations for all compounds were much lower than the WCB exposure limits, with the exception of total terpenes at the impressafiner site, Mill A.
- Concentrations of compounds were generally higher from sites at the first stages of the CTMP process, where chips enter the mill, such as the impressafiner and chip washer overflow.
- Air contaminants were present at lower concentrations or not present at sites associated with peroxide bleaching.
- *Acetaldehyde* was present in all the samples. The highest concentration was 0.55 ppm at the impressafiner, Mill A.
- *Formaldehyde* was not detected in any samples.
- Total terpenes measured at the impressafiner, Mill A, was 5 ppm, sufficient to produce a strong odour, and possibly eye and lung irritation. *Alpha-pinene* (3.4 ppm) was the major terpene.
- *Delta-carene*, an ALARA substance, was present in all five air samples at Mill B. The concentration measured at the chip washer site (0.6 ppm) may warrant further investigation, if workers are present at the site for extended periods.