

CURRENT APPROACH TO THE REGULATION OF ASBESTOS IN CANADA

Introduction

Asbestos is a useful industrial material having many important and essential applications. Asbestos is the collective term for naturally occurring mineral silicate fibres of the serpentine and amphibole groups. For practical purposes the types of fibre which are most important are chrysotile of the serpentine group, and crocidolite and amosite of the amphibole group. Chrysotile, the variety commercially produced in Canada, accounts for over 90 per cent of all asbestos mined.

Exposure to airborne asbestos dust is recognized as a hazard to health: pulmonary fibrosis (asbestosis), malignancies of the lung and possibly of the gastrointestinal tract, and mesothelioma are effects which can result from asbestos dust inhalation. The risk of developing asbestos related diseases is dependent upon the concentration of fibre in the inhaled air, the duration of exposure and the type of fibre. Crocidolite, amosite, or chrysotile dust exposure can cause lung cancer and the risk is greatly increased by cigarette smoking. Crocidolite and amosite are more frequently associated with mesothelioma than is chrysotile and indeed human exposure to chrysotile alone has rarely been shown to induce mesothelioma.

As knowledge has increased about the health hazard posed by asbestos dust, concern has risen in business and government to protect workers and the public. Manufacturing equipment and techniques have been developed that can radically decrease the degree of contamination of the atmosphere in mine, mill and factory. More precise sampling and measuring procedures are being developed for routinely monitoring the concentration of asbestos in the atmosphere. Some existing production facilities make full use of these advances in knowledge, equipment and technique; others do not.

Occupational Health

Existing Canadian regulations concerned with occupational exposure to asbestos dust require that atmospheric contamination within the work place be limited to a time-weighted average of 2 fibres per cubic centimetre (f/cc)* of air. Some provinces have, or are planning, more stringent controls on amphiboles than for chrysotile and indeed the use of crocidolite has been banned by labour authorities in the province of Saskatchewan. When appropriate, regulations are revised in the light of new knowledge.

* Fibres counted are only those greater than 5 micrometres in length with an aspect ratio of at least three to one.