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RCSI Air Pollution News Note*

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Air Pollution

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R. C. S. I. Air Pollution News Note
by
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Summary

A proposed law forbidding the spraying of asbestos on construction in New York State was criticized by Dr. George Berg and Dr. Charles McHenry testifying on behalf of the Genesee Region Health Planning Council. In place of this law, the testimony proposed that the State set a limit on air pollution with asbestos from all sources, including wrecking of buildings. Wet asbestos spray was called relatively harmless until it dried and turned into dust. Dry, needle-shaped asbestos dust particles were described as a cause of lung cancer. The testimony was filed on May 24, 1971 in the course of hearings held by the Department of Environmental Conservation, and the abbreviated text is quoted below.

The Proposed Ruling

Section 196.2 Prohibition. No person shall engage in or allow surface coating by the spraying of asbestos or asbestos-containing materials.

Purpose

The purpose of the law is to protect the public and, especially, smokers from the hazards of lung cancer induced by exposures to asbestos dust. We approve of the Environmental Conservation Department's action in attempting to control this grave environmental hazard. We find, however, that the proposed law fails to address itself directly to the purpose and misses some major sources of asbestos hazards.

Technical Comments

The hazard of asbestos dust depends on the shape and size of the dust fibers and, probably, also on the concentration of these fibers in the ambient air. The sources of the most hazardous fibers are:

1. Application of wet asbestos slurry on construction projects in which fine spray is released to the outside and dries into airborne dust.
2. The preparation of asbestos in which containers of flake or dust are opened and mixed without proper provisions for confining the dust, and preparations of asbestos sheets and fabricated parts in which dust is produced by cutting or sawing.

¹ The authors are members of the Regional Environmental Health Planning Committee, Genesee Region Health Planning Council.

3. Demolition, and especially demolition of housing in which clouds of dust are raised without proper wetting of the framework.
4. Secondary pollution by wastes, in which otherwise harmless asbestos wastes are converted to hazardous dust by drying and crumbling. This kind of pollution is especially likely to be produced by residues from spray application on construction projects.

The proposed New York State Regulation addresses itself only to the process of spraying asbestos slurry, the bulk of which is harmless until it becomes a secondary dust; and it fails to take into account other, and probably more important, sources of asbestos contamination.

Existing Occupational Law

A Federal law controlling exposures to ambient dusts as an occupational hazard states, "Exposure of employees to inhalation...of any material or substance at a concentration above those specified in 'Threshold Limit Values'...shall be avoided." For asbestos of all types, this level is Threshold Limit Value 5 fibers per ml., greater than 5 microns in length.

Proposed Regulation

It is general practice to reduce the permissible exposure for the general public to no more than a tenth of the occupational exposure. We, consequently, propose that the substance of your law consist of prohibiting any construction activity which shall expose the public to concentrations of asbestos fibers in excess of 5 fibers per 10 milliliters where the fibers are of 5 microns or more in length. This means, that we ask you to set a performance standard for environmental pollution with asbestos.

We further suggest that any specific prohibitions on technical ways of handling asbestos, be explicitly stated as a means of attaining this performance standard. This will allow engineers and public health workers to devise more effective ways of controlling the hazards of asbestos on the basis of future experience. In summary, we urge a statement that would control all sources of ambient asbestos dust and not just one.

General Comment

Asbestos is a highly useful material which makes great contributions to the safety and comfort of housing and industrial operations, as a fire retarding and noise absorbing substance and as an insulation material of great efficiency per unit weight. The hazards of asbestos are presently well defined and are the subject of intensive study.

It is, consequently, possible and worthwhile to use asbestos safely and beneficially. We favor regulations that will encourage manufacturers to develop and apply completely safe techniques in preference to regulations that will ban this material altogether and force the use of untested substitutes whose benefits are questionable and whose hazards still remain unknown.