

ASBESTOS WORKSHOP IN REVIEW

JULY 18-20, 1977

NATIONAL BUREAU OF STANDARDS

The workshop was organized to discuss a definition of asbestos and suitable measurement methods for regulating against asbestos health hazards, prior to the issuance of a standard. Four hundred persons from the mining industry, asbestos manufacturing, U.S. and Canadian health agencies, and medical and research facilities attended the workshop.

The National Bureau of Standards concluded in May from analysis of 80 industrial samples that OSHA's present techniques for analyzing for asbestos in industrial talc is useful only for determining fiber content and not asbestos content. This and other unresolved issues were discussed at the workshop. Divergence of opinion was expressed in two camps: U.S. Government Agencies and Medical representatives v.s. Industry and the U.S. Geological Survey. The Bureau will consider these viewpoints in making its final report to OSHA.

Significant segments of the proceedings include the following:

Mearl Stanton, National Cancer Institute

Cancer-causing danger of fibrous materials is related to fiber dimension. Greatest carcinogenicity came from fibers with dimensions that were equal to or less than .25 μ by more than 8 μ . Smaller fibers were controlled by phagocytes* in the body. Knowledge on why long fibers are carcinogenic is presently inadequate. Continued effort must be done on inhalation studies to allow extrapolation to human experience in understanding the effects of asbestos.

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Paul Kotin, Johns-Manville Corporation, Denver

Exposure to Asbestos under the present standard level does not result inevitably in lung cancer, mesothelioma or asbestosis. There is no such thing as a single threshold for a carcinogen but a series of thresholds can be identified. Nothing rules out a dose-response relationship for asbestos.

William Nicholson, Arthur Langer, Mt. Sinai/Hospital- N.Y.

Thresholds exceed present scientific capability. Excesses of lung cancer and mesothelioma from mortality studies were cited from job related asbestos exposure. In one study spouses, children and other family members of workers in an amosite asbestos factory were studied for asbestos related disease. Out of 626 persons, approximately one-third were found to have abnormal lung x-rays.

* phagocyte - white blood corpuscles that ingest and destroys organisms or particulates that result in disease.