CC: T. A. Dougherty
J. F. Reis
H. B. Rhodes
J. Welch

BC: G. R. Adams
R. M. Scholz
G. F. Rouse
J. J. Sibley
A. G. Voress



UNION CARBIDE CORPORATION · METALS DIVISION · P. O. BOX 579 · NIAGARA FALLS, N.Y. 14302 · TEL: 716-278-3376

PLAINTIFF'S EXHIBIT
UC-2386

May 30, 1980

Mr. B. J. Pigg
Asbestos Information Association/NA
1745 Jefferson Davis Hwy.
Crystal Square 4, Suite 509
Arlington, VA 22202

Dear Bob:

Enclosed are: (A) the notice describing the agenda for the recent hearing in California, (B) the proposed changes in the asbestos standard, and (C) my oral presentation in response to the new section on training.

Several people spoke in response to the medical examination changes. Dr. Greenberg opened the discussion by describing the Ad Hoc Advisory Committee's work and their decision to remove, at least for now, the requirement for sputum cytology. A "representative" of San Pedro Shipyard workers proposed that the requirement for medical exams be based on any exposure rather than 0.1 f/cc. Spokesmen from PG & E, CMA, and the California Chamber of Commerce proposed, in general terms, that medical examinations should be limited in scope to Fed-OSHA requirements. A San Jose physician representing PG & E questioned the guaiac test for occult blood, discussed the potential harm from the oblique X-rays, and suggested that the rectal examination be performed only by a physician. It was noted that the rectal examination and additional X-rays may cause an increase in the percentage of employees who refuse the medical examination.

It is my opinion that the Board will adopt the Committee's proposed changes with the possible exception of the specified test for occult blood. Dr. Greenberg seemed inclined to re-examine this with the Advisory Committee.

Dr. Greenberg indicated that the Ad Hoc Advisory Committee would continue to examine the asbestos standard and, as appropriate, make other proposed changes. It was not on the agenda and there was no mention of the Committee's proposed changes in the Housekeeping Section. I discussed this with Dr. Vanneman of Mr. Rinaldi's office and he was not aware of any proposals from the Advisory Committee in this regard. He suggested that I not bring it up at the Hearing, which I didn't.

Please let me know if you have any questions.

Very truly yours,

John L. Myers

John L. Myers
Marketing Manager

/dal

UCC 015331

(A)

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS

EDMUND G. BROWN JR., Governor

OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
1006 FOURTH STREET
SACRAMENTO, CA 95814
(916) 322-3640

NOTICE OF PUBLIC MEETING AND HEARING OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD AND NOTICE OF PROPOSED CHANGES TO TITLE 8 and TITLE 24, CALIFORNIA ADMINISTRATIVE CODE

Notice is hereby given pursuant to the provisions of Section 142.1 of the Labor Code, that the Occupational Safety and Health Standards Board of the State of California has set the time and place hereinafter set forth for a Public Hearing, Public Meeting, and Business Meeting:

PUBLIC MEETING: On May 29, 1980 at 10:00 a.m. in the Auditorium, Room 1036 of the California State Building, 2550 Mariposa Street, Fresno, California

At the Public Meeting, the Board will make time available to receive comments or proposals from interested persons on any item concerning occupational safety and health.

PUBLIC HEARING: On May 29, 1980, following the Public Meeting, in the Auditorium, Room 1036 of the California State Building, 2550 Mariposa Street, Fresno, California

At the Public Hearing, the Board will consider the proposed changes noticed below to occupational safety and health regulations in Title 8 and Title 24 of the California Administrative Code.

BUSINESS MEETING: On May 29, 1980, following the Public Hearing, in the Auditorium of the California State Building, 2550 Mariposa Street, Fresno, California.

At the Business Meeting, the Board will conduct its monthly business.

In the event it becomes necessary to continue the Public Meeting, Public Hearing, or Business Meeting, the meetings or hearing will be continued on the following day, Friday, May 30, 1980 at 10:00 a.m., in Room 1036 of the California State Building, 2550 Mariposa Street, Fresno, California. Should it be further necessary to continue the meetings or hearing, after May 30, 1980, the Board will continue the meetings or hearing on June 5, 1980 at 10:00 a.m., in Room 1036 of the California State Building in Fresno, California.

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(B)

STANDARDS PRESENTATION

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

TITLE 8: GENERAL INDUSTRY SAFETY ORDERS
(Asbestos)

SECTION	SUBJECT
5208(j)(1)(A) and (j)(1)(B)	Medical Examinations. Revises the subsections concerning the content of initial and periodic medical examinations and amends the frequency at which periodic examinations shall be performed depending upon the employee's age or past exposure to asbestos.
5208(n)	Employee Information and Training. (New) Adds new Subsection (n) concerning provisions for "Training Program" and "Access to Training Materials".

There are no building standards contained in this order.

Pursuant to Section 106, Chapter 1284, Statutes of 1974, the above orders do not create any obligation for reimbursement by the State to any local agency under Section 2231 of the Revenue and Taxation Code for costs that may be incurred by it in complying with these orders because these orders merely implement Federal law and regulations.

UCC 015333

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CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

Repeal Subsections (j)(1)(A) and (B) in Section 5208 and adopt new Subsections (j)(1)(A) and (B) into Section 5208 to read as follows:

(j) Medical Surveillance.

(1) Medical Examinations. The employer shall provide or make available at no cost to the employee a comprehensive medical examination by a licensed physician in accordance with this subsection for each employee engaged in an occupation where exposure to airborne asbestos, without regard to the use of respiratory protective equipment, has been determined to exceed, or may be reasonably expected to exceed, an 8-hour time-weighted average concentration of 0.1 fiber, longer than 5 micrometers, per cubic centimeter.

~~(A) The examination shall be conducted within 30 calendar days of an employee's~~ initial assignment, at least annually thereafter, and within 30 calendar days of termination of employment if an examination has not been performed within the year preceding termination.

(B) The examination shall include, as a minimum, a history to elicit symptomatology of respiratory disease or an update of such history, 14-inch by 17-inch posterior-anterior and lateral chest X-rays, and pulmonary function tests including forced vital capacity (FVC) and forced expiratory volume at one second (FEV_1).

(A) The examination shall be conducted within 30 calendar days of the employee's initial assignment, thereafter as required by Section 5208(j)(1)(B)1 or (j)(1)(B)2, and within 30 calendar days of termination of employment if an examination has not been performed within the year preceding termination.

(B) The examination shall include, as a minimum, a history to elicit symptomatology of upper and lower respiratory and gastrointestinal diseases, a physical examination of the respiratory and gastrointestinal systems including rectal examination, a stool guaiac test for occult blood, a 14-inch by 17-inch posterior-anterior chest X-ray, right and left anterior oblique chest X-rays, pulmonary function tests including forced vital capacity (FVC) and forced expiratory volume at one second (FEV_1), ~~and a sputum cytology examination.~~

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1. For employees less than 40 years of age with less than 10 years since initial occupational exposure to asbestos, the medical examination shall be provided every three years after the initial examination and shall include as a minimum a 14-inch by 17-inch posterior-anterior chest X-ray and pulmonary function tests including forced vital capacity (FVC) and forced expiratory volume at one second (FEV_1).

2. For employees 40 years of age or older or with 10 years or more since initial occupational exposure to asbestos, the medical examination, as described in Section 5208(j)(1)(B), shall be performed annually except that the oblique X-rays need only be performed every three years. ~~and the sputum cytology examination shall be performed approximately six months after each periodic medical examination rather than at the same time.~~

NOTE: The 14-inch by 17-inch posterior-anterior chest X-ray should be rated using the International Labour Office UICC/Cincinnati (ILU U/C) criteria.

(C) The employer shall obtain from the examining physician all the information required by this subsection and any other medical information or diagnosis relevant to occupational exposure to asbestos including the physician's opinion as to whether the employee has any detected medical condition which would place the employee at increased risk of material impairment of the employee's health from exposure to asbestos.

(2) Recordkeeping.

(A) Complete and accurate records of medical examinations required by this section shall be maintained for each employee.

(B) Medical examination records shall be maintained for at least 30 years.

(C) The contents of the medical examination records required by this section shall be made available, for inspection and copying, to authorized representatives of the Chief of the Division of Occupational Safety and Health or the Director of the National Institute for Occupational Safety and Health.

(D) Upon written request of an employee or former employee, the employer shall provide a copy of the medical examination records for the affected employee or former employee to a physician designated by the employee or former employee.

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Adopt new Subsection (n) into Section 5208 to read as follows:

(n) Employee Information and Training.

(1) Training Program.

(A) Within 60 days of the effective date of this subsection, the employer shall institute a training program for, and assure the participation of, all employees exposed to asbestos such that medical examinations are required pursuant to Section 5208(j)(1).

Exception: Employees who are certificated as having been trained in an apprenticeship asbestos training program meeting all the criteria in Section 5208(n)(1)(B).

(B) Training shall be provided at the time of initial assignment and at least annually thereafter, and the employer shall assure that each employee is informed of the following information in language that he can understand:

1. The nature of all health hazards directly attributable to asbestos exposure including carcinogenic hazards.

2. The increased risk of lung cancer associated with smoking cigarettes and asbestos exposure.

3. The specific nature of the operations and specific information to aid the employee in recognizing when and where asbestos exposure may result.

4. The purpose for and a description of the monitoring program.

5. The purpose for and a description of the medical surveillance program.

6. The necessary protective steps to prevent exposure, including engineering controls and safe work practices.

7. Where the employee is required to wear a respirator, the purpose for, proper use and limitations of the respiratory devices.

8. Where protective clothing is required, the purpose for, proper use and limitations of protective devices or clothing.

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9. The purpose for and application of housekeeping and personal hygiene practices and procedures to prevent asbestos exposure to others.

10. The purpose for, significance of and familiarization with emergency procedures as described in Section 5208(l)(3).

11. A review of the provisions of this standard.

(2) Access to Training Materials.

(A) The employer shall make a copy of this standard readily available to all affected employees and their representatives.

(B) All materials relating to the employee information and training program shall be provided, upon request, to authorized representatives of the Chief of the Division of Occupational Safety and Health.

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(c)

ORAL PRESENTATION BEFORE THE

CALIFORNIA STATE OCCUPATIONAL SAFETY

AND HEALTH STANDARDS BOARD

MAY 29, 1980

TITLE 8: GENERAL INDUSTRY SAFETY ORDERS
(Asbestos)

Held in Fresno, California

on

May 29, 1980

By: John L. Myers - Representing:

Asbestos Information Association/North America
1745 Jefferson Davis Highway
Crystal Square 4, Suite 509
Arlington, VA 22202

UCC 015338

RESPONSE TO MR. O'HARA'S REQUEST FOR COMMENTS ON TITLE 8: GENERAL INDUSTRY SAFETY ORDERS (ASBESTOS), page 3 of 5: "Adopt new subsection (n) into Section 5208"

My name is John L. Myers of Union Carbide Corporation. I am speaking on behalf of the Asbestos Information Association of North America (AIA/NA). The AIA/NA is an association of over 50 companies engaged in the mining and processing of asbestos and asbestos-containing products.

We have always endorsed an employee information and training program and Union Carbide conducts such a program at its asbestos mine and mill near King City.

We feel that the wording in (n)(1)(A), which describes the employees to be trained, should be slightly modified. As it reads, the training program could apply to office personnel, casual or infrequent visitors, and other employees who would not be exposed to 0.1 f/cc on a continuing basis - perhaps very infrequently.

We, therefore, suggest that paragraph (A) be revised as follows:

(A) Within 60 days of the effective date of this subsection, the employer shall institute a training program for, and assure the participation of, all employees ~~exposed to asbestos~~ assigned to work with asbestos or asbestos-containing materials and employees assigned to work in areas where such materials are being used, provided that such materials are being used in a manner in which exposures to asbestos may reasonably be expected to exceed the level such that medical examinations are required pursuant to Section 5208(j)(1). (Underlined words are our proposed addition.)

Dr. Greenberg responded to the above by stating that the Ad Hoc Advisory Committee had considered the problem of infrequently exposed persons. They decided that their wording, crossed out above, would "encourage" companies to prohibit or minimize the admission of "non-asbestos workers" to areas where they may be exposed to greater than 0.1 f/cc. I obviously made no rebuttal to his comments.

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ASBESTOS

This material, used extensively for protection against fire and heat hazards, ironically is a recognized hazard to health when asbestos dust is inhaled excessively, causing asbestosis, bronchogenic (lung) cancer, and mesothelioma. The industry's many problems and its far-reaching response to OSHAct regulations are presented.

ASBESTOS, used since antiquity, has widespread and important applications in our modern technological society. Approximately 3,000 different kinds of products containing asbestos are in daily use throughout the world. Its increasing use has lent urgency to the need to cope with occupational health problems related to the excessive inhalation of asbestos dust.

Asbestos is actually a general term used to describe several fibrous mineral silicates that occur as white, grayish, or greenish masses, either compact or as long, silky fibers. The most important types are:

- *Chrysotile*—a simple magnesium silicate;
- *Amosite*—a complex magnesium iron silicate;
- *Crocidolite*—a complex sodium iron silicate.

Some 97 per cent of the world asbestos production comes from chrysotile.

Basically, the known facts about asbestos-related disease can be summed up as follows:

1) Asbestos-related health risks today are almost exclusively confined to the occupational setting;

2) The effects of excessive inhalation of asbestos are both time- and dose-related—this means that asbestos-related diseases may develop, generally, only after the inhalation of substantial amounts of asbestos dust over a substantial period of time;

3) There is presently no evidence of risk to the general public from exposure to the minute amounts of asbestos that have been found in community air;

4) Because of the long latent period of asbestos-related disease, the disease being found today, among some long-term industry employees is not necessarily an indication of present-day conditions. It may, instead, be a result of conditions existing decades ago, at a time when neither the industry, government, nor the medical profession knew much about the health effects of asbestos, or proper means for their control.



Chrysotile is mined in open pit mines, such as this one in Canada. (Photo: courtesy Asbestos Information Association/North America).

What Is the Hazard?

More than 200,000 employees face risks from asbestos. The principal danger is caused by inhaling asbestos fibers. Recent studies also have shown the presence of asbestos fibers in the lungs of persons having no industrial exposure — probably due to their presence in the atmosphere near construction sites, where an asbestos mixture formerly was commonly sprayed onto steel beams as a method of making the structure fire resistant. This practice has since been banned by *Occupational Safety and Health Act* regulations.

Prolonged inhalation of asbestos fibers between 5 and 50 microns long (one millionth of a meter) can produce a lung disease known as asbestosis. The lungs cannot eliminate asbestos fibers, so the fibers coat the tissues. If this process continues over a period of 10 to 20 years with significant quantities of asbestos present, the tissue reaction progresses until a generalized diffuse fibrosis occurs, causing severe respiratory disability. There have been reports of increased incidence of lung cancer in persons with asbestosis.

There are three primary diseases known to be caused or exacerbated by prolonged and heavy inhalation of asbestos fibers. They are *asbestosis*, *bronchogenic* (lung) cancer, and *mesothelioma*.

Reprinted from National Safety News

UCC 015340

What Asbestos Is and Where It Is Used

The term *asbestos* is derived from an ancient Greek word meaning *inextinguishable*. In reality, mineral asbestos is non-flammable even at extremely high temperatures, it inhibits certain types of chemical reactions, and is extremely flexible and durable. All these qualities combine to make it especially suitable for a wide variety of demanding uses, particularly those that protect human life and property. Asbestos may be unique in that its primary function is to save lives.

Asbestos is the generic name given to a group of hydrated silicate minerals that can be separated into relatively soft, silky fibers that have great tensile strength. Certain grades can be carded, spun, and woven; others can be pressed or layered to form paper. *Chrysotile, crocidolite* (or blue fiber), and *amosite* are the three varieties of asbestos that are commercially significant today. Each differs from the others, both physically and chemically.

Chrysotile is a flexible white magnesium silicate that can be attacked by acids. It differs from other asbestos minerals in that it has a positive rather than a negative electrical charge in water. It now accounts for 97 per cent of all asbestos used annually in the United States. This high percentage of use is due in part to industry awareness of medical studies that show *amosite* and *crocidolite* to be more potentially hazardous to health than *chrysolite* asbestos. Canada and the Soviet Union are the leading producers of chrysolite fiber, but small deposits are also found in the United States, Italy, South Africa, Rhodesia, and China.

Amosite, which is mined commercially only in the Transvaal district of South Africa, is a brown ferrous magnesium silicate that occurs in the same type of iron-rich sedimentary rock as does *crocidolite*. It is brittle and not as acid-resistant as *crocidolite*. *Amosite* is used principally in the manufacture of heat insulating materials.

Crocidolite, characterized by a deep blue color, is a ferrous sodium silicate that is acid-resistant but less flexible than *chrysotile*. The bulk of the world's supply comes from South Africa. *Crocidolite* was a strategic material during World War II, when it was used as the filtering element in gas mask canisters. It can be spun or woven into materials and fabrics used in acid-resistant packings and flame-resistant clothing.

Properties and Advantages

As many as 3,000 different products are in daily use throughout the world containing some asbestos. The heat-resistant properties and fibrous structure of asbestos make it extremely desirable as a fire-proofing and insulating material. Typically, asbestos is used wherever fire and excessive heat are a threat to safety.

Companies now are looking at fibrous glass, plastics, ceramics, and various synthetic materials as possible replacements for asbestos in certain applications. However, there generally is no one adequate substitute material available, because increased costs, poor performance, and weight often make the substituted material unattractive.

How Asbestos Is Used

Asbestos fibers can be classified into two types: *spinning* and *non-spinning*. Spinning fibers comprise the longer grades of chrysotile and crocidolite; non-spinning fibers include the shorter grades of chrysotile and crocidolite, plus the long and short grades of amosite. Use of a specific grade of fiber depends greatly upon application, and to a lesser extent on price and availability.

Longer-grade chrysotile fibers can be carded, spun, and woven to make textile products such as yarn, rovings, tape, and cloth. Asbestos textiles are used to make fire-proof clothing, packings, friction materials, gaskets, lagging cloth, and laps that provide electrical and thermal insulation.

Spinning grade asbestos fibers also are used in such non-spinning applications as compressed sheet packings and gaskets. They also are an ingredient of strong asbestos paper used in tape form to wrap electrical wires and cable.

The shorter-grade (non-spinning) chrysotile fibers make up the great majority of chrysotile used in the U.S. These fibers go into numerous asbestos-cement products, including pipe, roofing shingles, flat and corrugated siding, millboard, cements and fillers, and insulated paper. Short chrysotile fibers are used extensively in brake linings and automatic transmission friction materials.

More than 90 per cent of the asbestos fiber used annually in the U.S. is incorporated into finished products where the fiber is entrapped, or locked in, and not free to serve as a possible contaminant in the atmosphere. Asbestos can be locked into a product with a binder, saturant, coating, or binding agent so that normal handling, application, and use will not generate significant quantities of abestos dust. Asbestos-cement products are examples of "locked-in" materials, whereas many insulating materials and spray-on fire-proofing compounds are so-called "non-locked-in" materials.

Fire-prevention and retardation is a feature of such asbestos-containing products as: protective clothing; thermal, electrical, and acoustical-insulating materials, roof shingles, siding, and flooring; space vehicle heat shields, theatre curtains, boiler jackets, welding screens and blankets, gaskets for spark plugs, motor casings, and insulating tapes for wire and cable.

Fire-proofing plus protection against abrasive wear and tear (including the caustic action of acids) are qualities of asbestos that combine to make it useful in vinyl and asphalt floor tile, asbestos-cement pipe, asphalt paving, friction materials, packings and gaskets, asbestos-cement building materials, paper, felts and many textile products.

The adhesive and binding properties of asbestos fibers make asbestos a useful ingredient in reinforced plastics, paints, varnishes, roofing cements, wicks, rope, twine, protetcive coatings, and felts used in paper manufacturing.

The spinning and weaving capability of asbestos fibers is basic to the asbestos textile industry. Asbestos fibers also are used in filters that collect dust and other air pollutants, and in filteration systems used in the processing of beverages, liquids, and drugs.

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Asbestosis

An occupational disease characterized by lung scarring, asbestosis is one of the lung diseases called pneumoconioses. It is the most common of the three asbestos-related illnesses and is found only among those who have worked regularly and continuously with asbestos under inadequately controlled conditions. The average time span from first exposure to the first clinical signs of asbestosis is 17 years, although some cases have been reported in as few as 10 years.

Asbestosis is believed to be neither malignant nor necessarily fatal. Many asbestos workers with minor cases can and do continue to work and lead normal lives without difficulties.

The asbestos industry has long recognized the risk of this disease and has implemented safe-guards to protect workers' health. As far as can be determined, asbestosis never has been found in the general public, even among people living in close proximity to asbestos mines and processing plants, according to the Asbestos Information Association/North America.

Bronchogenic (lung) cancer

A number of medical studies have linked heavy asbestos exposure with an increased risk of lung cancer. While lung cancer occurs far less frequently among asbestos industry workers than asbestosis does, under some circumstances it occurs more frequently than in the general population. As with asbestosis, the amount of fiber to which an employee is exposed is an important factor in lung cancer development. In addition, it is the considered opinion of many scientists that lung cancer will not develop in an employee if he did not first have asbestosis.

Factors other than heavy asbestos exposure are believed important in the causation of lung cancer among asbestos industry workmen. The most documented example is ciga-

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Some of the most asked questions pertaining to asbestos and health are answered here by the Asbestos Information Association/North America.

Q.—Is the atmosphere being polluted by asbestos sprays used to fireproof the superstructure of buildings under construction?

A.—The use of asbestos-containing, spray-on fireproofing compounds in high-rise building construction has been banned in the United States by the Federal Environmental Protection Agency (FEPA) because the methods developed for the control of emissions of fiber from these sources proved to be ineffective.*

Q.—Will there be an "epidemic" of asbestos-related mesothelioma in the future among people who worked in United States shipyards during World War II?

A.—It appears highly unlikely that such an "epidemic" will occur. Predictions of this nature have been based primarily on the experience of workers in British — not U.S. — shipyards, where a relatively small number of mesothelioma cases have been reported among yard employees not known to have worked directly with loose-bound asbestos products in their jobs. There are several important factors, however, which do not make the British experience comparable with that in American shipyards. These include:

- *The prime method of applying asbestos-containing insulations aboard British warships was by spraying, a notoriously dusty method of application. Dust counts during spraying in British shipyards have been recorded as high as 1,500 fibers per cubic centimeter of air (300 times higher than the current U.S. standard for asbestos exposure). Counts taken during the sweeping and bagging of asbestos debris have reached the astronomical figure of 3,815 fibers per cc (more than 750 times the U.S. standard). This resulted in very high dust levels throughout the shipyard area.*

- *Spray application methods were never used in the U.S. shipyards during W.W. II. The alternative method used in this country, while creating dusty conditions for the men doing the actual work, did not result in hazardous conditions throughout the yard, as was the case in Great Britain.*

- *The type of asbestos fiber most used in British shipyards for insulation purposes was crocidolite, the variety of fiber most medical experts agree is the most likely to cause mesothelioma. Crocidolite was not used in the U.S. shipyard work.*

Q.—Do asbestos-containing filter materials release asbestos fibers in potentially hazardous quantities into liquors, beers, wines, soft drinks, and other liquids offered for sale to the public?

A.—Asbestos-cellulose filter pads have been used in the filtration of liquids since the beginning of this century. The mass production of many of our most important injectable drugs would be virtually impossible without the use of asbestos-containing filter media. While it is possible that very tiny amounts of electron microscope sized asbestos fibrils are released into some beverages from the use of asbestos-containing filter pads, there is no evidence whatever that the size and quantity of the fibrils released constitute any hazard to human health. This same question was raised in Great Britain a few years ago with regard to fibrils of asbestos found in beer. The furor died when it was shown that the total amount of asbestos fiber found in British beer added up to only two one-thousandths of an ounce in the total United Kingdom beer production of over a thousand million gallons a year.

*Editor's Note: One of the earliest cities to ban the practice of spraying of asbestos mineral fiber insulation in high-rise construction was New York. The New York City Council took such action effective February 25, 1972, under Local Law 49, 1971, Air Pollution Control Code, Section 1403.2-9.11(B), enacted Aug. 25, 1971.

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Asbestos is automatically packaged at the mill and shipped in impermeable bags to prevent dust exposure. (Photos: courtesy Asbestos Information Association/North America.)



In the manufacturing plant, bags of asbestos are opened and fiber handled in ways preventing exposure.

rette smoking. Studies conducted of as many as 17,500 asbestos insulation workers show that those who smoke have a much greater risk of contracting lung cancer than nonsmokers in the general public — but that those asbestos industry workmen who do not now smoke cigarettes and who have never smoked regularly, have no greater risk of lung cancer than the average man in the street who does not smoke.

Mesothelioma

This disease is an extremely rare cancer of the lining of the chest (*pleural*) or the abdominal cavity (*peritoneum*). It is found more frequently among those with occupational asbestos exposure than among the general population. It also has been found among people who, in the past, lived in close proximity to uncontrolled crocidolite asbestos plants or mines, and even, on rare occasions, in the households of employees who worked in crocidolite asbestos factories or mines and who presumably brought substantial quantities of this particular type of asbestos fiber into their homes on their work clothes. This has not been found to be the case with individuals exposed only to chrysotile asbestos, which accounts for 97 per cent of the asbestos fiber used in the United States today.

Because the latent period for mesothelioma ranges from 30 to 45 years, it is impossible at this late date to determine precisely the exposure levels experienced by these "neighborhood" and "household" cases. However, they were probably quite high by today's standards. In any case, as technology was developed for the control of asbestos dust levels, both in the plant and out, these potentially hazardous conditions have been greaty reduced, if not eliminated.

A relatively small number of cases have also been reported among employees in shipyards and on construction projects who, while not working directly with asbestos, were exposed to heavy concentrations of air-borne fiber by working in close proximity to those who did. Exposures of this type have been reduced by strictly enforced industrial safety devices and procedures.

Asbestos and the General Public

The Asbestos Information Association/North America states:

> *There is no evidence — either from experience or from scientific research — that anyone in the general public has ever contracted any asbestos-related disease from exposure to minute amounts of asbestos dust being found in community air, which are many times lower than those levels that have been demonstrated to result in no excess of disease in occupationally exposed populations.*

That conclusion is supported by both the Asbestos Panel of the National Academy of Sciences' Committee on Biologic Effects of Atmospheric Pollutants, and the 33-member Advisory Committee on Asbestos Cancers of the International Agency for Research on Cancer, a division of the World Health Organization.

In its 1971 booklet, *Asbestos, the Need for and Feasibility of Air Pollution Controls*, the NAS Asbestos Panel, which consisted of seven of the nation's experts on asbestos and health, stated:

> *There is no evidence that persons in the general population — without occupational, household, or neighborhood exposures — have any increased risk of neoplasm, even though there may be ferruginous bodies or fibers in their lungs.*

According to the Asbestos Information Association, the report of the IARC Advisory Committee represents the consensus of present world medical opinion on all aspects of the asbestos-health problem.

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Meeting immediately after the October 1972 Lyon Conference on Biological Effects of Asbestos, the Committee — with representation from 10 different countries — drafted the following opinions on asbestos-related disease and the general public:

- *Asbestosis* — There is at present no evidence of lung damage by asbestos to the general public. The amount of asbestos in the lungs of members of the general public is very small compared to those occupationally exposed.

- *Lung Cancer* — The evidence . . . suggests that an excess lung carcinoma risk is not detectable when the occupational exposure has been low. These low occupational exposures have almost certainly been much greater than that to the public from general air pollution.

- *Mesothelioma* — There is no evidence of risk to the general public at present.

Because of some recent controversy in the United States and Canada on this subject, the question was also examined whether there is any "evidence of an increased risk of cancer resulting from asbestos fibers present in water, beverages, food, or in the fluids used for the administration of drugs." The answer of the commission was: *Such evidence as there is does not indicate any risk.*

Asbestos and Health Research

Extensive medical and technical research into the health effects of asbestos and the proper means for their control is being conducted at laboratories throughout the world. A significant percentage of this research is being sponsored, co-sponsored or otherwise aided by the world asbestos industry. Two of the largest non-governmental sources of funds for asbestos-health research are the Institute of Occupational and Environmental Health (IOEH) in Montreal, sponsored by the Quebec Asbestos Mining Association, and the Asbestos Research Council, sponsored by the British asbestos manufacturing industry. Individual companies acting independently are also conducting research into the problem.

Controlling the Hazard

When asbestos is mined, milled, or processed in manufacturing plants, its minute, dry fibers become air-borne like dust particles. Enclosure and local exhaust ventilation applied to equipment or operations are the principal means of preventing employee exposure to dangerously high concentrations. Dust respirators certified by National Institute of Occupational Safety and Health (NIOSH) are recommended for use by employees in some work operations.

Typical methods implemented to control dust levels include: sophisticated dust collection systems (which combine high-power exhaust fans, duct networks, and high-efficiency filters); special methods of waste disposal; use of protective clothing and portable dust respirators; innovative wetting and dampening methods that minimize dust generated during production.

The asbestos industry has developed a completely automatic fiber bag-opening station that will permit workers to open the bags, remove the fiber, dispose of the bags, and enter the fiber into the manufacturing process without creating dust. In general, greater use of automation is being sought throughout the asbestos industry to reduce dust levels and to minimize exposure of employees to air-borne asbestos fiber.

Basically, the requirements of an effective dust control program are twofold:

1) Design fabrication processes and production equipment so as to minimize dust generation as much as possible;

2) Implement highly organized programs of industrial maintenance (including hygiene surveys) to insure that safe levels are maintained.

Periodic monitoring of dust concentrations should reveal any dust levels that might exceed the threshold limit value (TLV).

It is obvious that good preventive maintenance must go hand in hand with effective dust control measures if the standards recently announced by the Occupational Safety and Health Administration are to be achieved.

Establishing Safe Dust Levels

The first epidemiological study of the effects of asbestos dust on workers was reported in 1930.[1] From that time on, it was generally recognized in industry that asbestosis serious enough to interfere with respiratory or cardiovascular functions could be prevented by reducing dust levels to a specified TLV.

The American Conference of Governmental Industrial Hygienists (ACGIH) set the industry's first standard in 1938 by establishing a TLV of five million particles per cubic foot. Independent research supported by the Johns-Manville Corporation concluded at about the same time that a TLV of one million fibers, 10 microns or longer, per cubic foot would be an adequate level for safe occupational exposure.

In 1961, the ACGIH established a new standard with a TLV of 12 asbestos fibers, five microns or longer, per cubic centimeter, and this was later modified (in 1970) by reducing the time-weighted average to five fibers per cubic centimeter, with a maximum of 10 fibers per cubic centimeter at any one time.

This standard was adopted as a *temporary* measure in 1972 by OSHAdministration, and it is the present accepted level. However, on



Specially-treated, lint-free asbestos textile material with "locked-in" fibers is pulled onto table for marking, cutting of patterns. (Photo: courtesy Raybestos-Manhattan).

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ACL Doc 17371 · Page 14 of 33 asbestosclaims.law/library/17371/14

July 1, 1976, a new standard is scheduled to go into effect that will reduce the TLV to only two asbestos fibers, five microns or longer, per cubic centimeter on a time-weighted average.

Specifically, OSHA's current permissible level is five fibers per milliliter greater than five microns in length for an eight-hour time-weighted average air-borne concentration. This may be increased to 10 such fibers per milliliter for *no more than 15 minutes per hour*, up to five hours per eight-hour day. Such determination shall be by the membrane filter method at 400 to 450 times magnification (4 millimeter objective) phase contrast illumination. Imminent danger situations are generally not applicable. Any exposure greater than permissible levels for unprotected or improperly protected workers is considered a serious violation.[2]

How Is It Measured?

Asbestosis dust will be collected with a personal sampling pump. Fibers will be counted microscopically at 400-450 magnification using phase contrast illumination.

OSHAct Regulations

On July 7, 1972, OSHAdministration issued standards regulating asbestos dust exposures. These occupational standards deal with:

- Permissible concentrations of asbestos fibers;
- Methods of compliance;
- Warning signs and labeling of potentially dangerous products;
- Monitoring of dust levels;
- Medical examinations for employees;
- Recordkeeping by employers.

These standards have one basic purpose — *to protect employees from exposure to potentially hazardous amounts of asbestos dust in their workplace.*

The major obligations placed on employers, and industry in general, by the standards can be summed up as follows:

1) The employer shall maintain a healthy workplace, making sure that no employee is exposed to concentrations of air-borne asbestos fiber in excess of established limits;

2) Where the exposure limits are exceeded, the employee shall be notified in writing of the situation by his employer and shall be informed of corrective measures being undertaken to reduce his exposure to a safe level;

3) Engineering controls and the implementation of safe work practices are the only approved permanent methods of correction;

4) While corrective measures are being instituted, the employee shall be protected by other means, such as the wearing of an approved respirator provided by his employer, or by job rotation;

5) The use of respirators or shift rotation to achieve control is not permitted except during the time required to install engineering controls or implement safe work practices; in situations where such controls or practices are not technically feasible; and in emergencies;

6) No employee shall be assigned to a task requiring the use of a respirator if his most recent yearly medical examination indicates that he would be unable to function properly while wearing one, or if the wearing of a respirator would endanger the employee's health or safety, or that of another workman on the job;

7) Special protective clothing change rooms, and separate clothes lockers shall be provided for employees in certain situations;

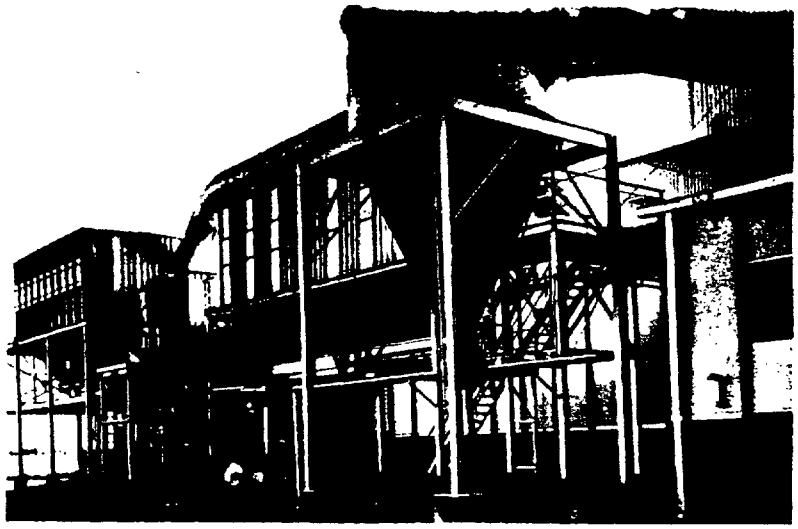
8) The personal and environmental monitoring of a workplace shall be conducted *by the employer* to assure that the standards are being met; employees shall have access to the results of the monitoring of their jobs;

9) Warning signs shall be posted at entrances to areas where dust levels are in excess of the standard;

10) Caution labels shall be placed on any finished asbestos-containing products that are likely to release fiber in excess of the standard during handling, application, or fabrication;*

11) The employer shall provide yearly medical examinations for employees exposed to concentrations of asbestos dust, and pre-employment and termination medical exams also are required;

12) Upon request, an employee's medical record will be made available to his family physician.



Prime method of dust control is the bag house type collector, as shown here outside plant.

*EDITOR'S NOTE: Manufacturers and processors of apparel made of asbestos-based textile fabrics are *not* required to identify such products with caution labels, because such asbestos is "locked" into the fabric through sealants or other sophisticated processes. Several such patented methods of locking-in the asbestos have been developed, thus minimizing or eliminating raveling.

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ACL Doc 17371 · Page 15 of 33 asbestosclaims.law/library/17371/15

Other requirements included in the standard are:

- Where respirators are permitted, they must be selected from among types approved by the U.S. Bureau of Mines or certified by the National Institute for Occupational Safety and Health (NIOSH);
- No asbestos cement, mortar, coating, grout, plaster, or similar material containing asbestos can be removed from shipping bags or their containers without being either wetted, enclosed, or ventilated;
- Insofar as practicable, asbestos must be handled, mixed, applied, removed, cut, scored, or otherwise worked in a wet state to reduce fiber emissions unless this would diminish the usefulness of the product;
- Hand tools that may produce or release asbestos fibers in excess of the limits must be provided with local exhaust ventilation systems;
- External work surfaces must be kept free of excessive accumulations of asbestos fiber;
- Waste must be collected in sealed impermeable bags or other closed, impermeable containers.

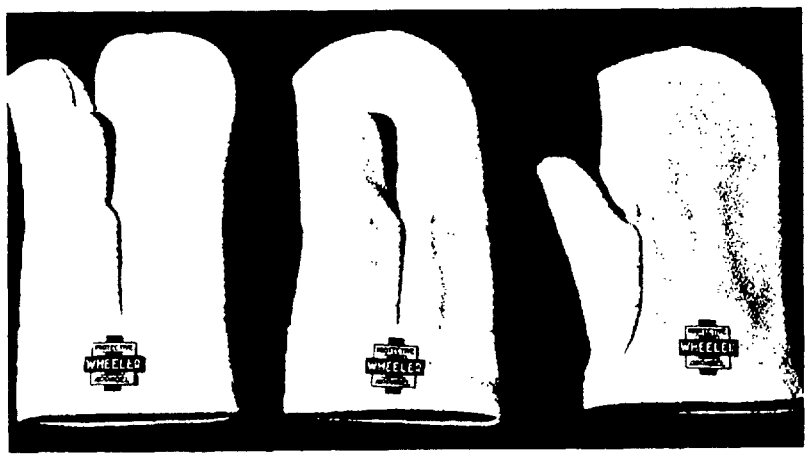
The National Institute for Occupational Safety and Health (NIOSH) recently conducted environmental surveys in some 30 plants manufacturing asbestos cement pipe, friction materials, insulating materials, and textiles. In addition, workers in 12 plants were given medical examinations, including X-rays, and pulmonary function tests to show any indication of lung disease. Information was also recorded on each worker's occupational, smoking, and respiratory disease history.

On March 30, 1973, Environmental Protection Agency Administrator William D. Ruckelshaus set national emission standards for three hazardous air pollutants — asbestos, beryllium, and mercury.[3]

These three pollutants are the first to be designated as hazardous to health under the *Clean Air Act* amendments of 1970. The act defines hazardous air pollutants as those that "may cause, or contribute to, an increase in mortality, or an increase in serious irreversible or incapacitating reversible illness."

The "hazardous to health" designation requires EPA to set national emission standards for the affected air pollutants.

The new asbestos standards prohibit visible emissions from asbestos mills, selected manufacturing operations, and spray-on applications. The use of asbestos tailings for roadway surfacing generally is prohibited. Certain work practices are specified for the demolition of buildings in order to control asbestos emissions. These practices generally prohibit the dropping of asbestos debris from buildings and require the wetting of asbestos materials before removal. The demolition standards apply to all structures except homes and apartment buildings with four units or less. — **End.**



Gloves and mittens are a major item of protective equipment utilizing asbestos. Special treatment of asbestos fabric assures "locking-in" of fibers, preventing fraying and unraveling. Such treatment obviates any need to label the product as a possible health hazard. Asbestos material so treated meets *OSHAct* standards as set forth in the *Federal Register*, Vol. 37, No. 110, dated June 7, 1972. (Photo: courtesy of Wheeler Protective Apparel, Inc.).

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NEWS & NOTES

AIA NORTH AMERICA ASBESTOS INFORMATION ASSOCIATION 1660 L Street, N.W., Washington, D.C. 20036 (202) 223-4885

31 December 1975

Comment Date for OSHA Standard Extended - Following numerous requests to extend period for filing comment on proposed revision to asbestos standard, OSHA announced new date, from Dec. 8, 1975 to Feb. 9, 1976. Comments to be submitted to Docket Officer (H-033), Department of Labor, N-3620, 200 Constitution Ave., N.W., Washington, D.C. 20210. All material received will be available for public inspection.

Task Force Activities - At meeting in Arlington, Va., Dec., 11, AIA/NA Directors unanimously approved industry program to respond to OSHA's proposed revision to asbestos standard. Program was presented by Guy G. Gabrielson, Jr., chairman of board for Nicolet Industries who heads task force response to OSHA.

At same meeting, Dr. Donald Matzzie, project director for CONSAD Research Corp., firm under OSHA contract for study leading to government required inflationary impact statement on proposed standard, outlined procedures for accomplishment. Parameters of OSHA's addressal to asbestos standard were discussed with Ass't. Secretary of Labor (OSHA) Morton Corn and staff members in meeting Nov. 20 attended by AIA/NA president Dougherty, Gabrielson and executive director Mereness.

. More than 500 letters have been sent to manufacturers and processors of asbestos products inviting participation in AIA/NA information gathering program of technological feasibility and economic impact data. Response clearly indicates industry concern and desire for sound scientific and economic data as basis for realistic standard.

. Consulting firm Roy F. Weston, Inc., under contract to AIA/NA for industry profile study, has distributed questionnaire to cross section of industry. Firm is conducting on-site interviews and obtaining input by letter and telephone. Analysis of data will be made at Jan. 21-22 meeting in West Chester, Pa., headquarters of Weston.

. AIA/NA Standards and Technical Committee will meet in Washington's Mayflower Hotel, Jan. 26-27 to work on draft of technological feasibility and economic impact report.

UCC 015348

. Dr. Hans Weill, AIA/NA medical advisor, will head group of scientists for early Jan. conference in U.K., as part of research and data analysis for medical report on OSHA proposal.

Adequacy of extension of comment period to Feb. 9 - not announced until Dec. 17 - is questioned by all concerned. Minimum of 120 days was requested by AIA/NA and others. Nevertheless, AIA/NA expects, as announced, to present medical, technological feasibility and economic impact reports with summary statement and recommendations at meeting in Mayflower Hotel, Washington, Feb. 4 for endorsement by participating companies, unions and associations prior to formal submittal to OSHA by Feb. 9. deadline.

Corn Testifies Before House Subcommittee - On Dec. 8 Morton Corn, Assistant Secretary of Labor (OSHA), told House Education and Labor Subcommittee on Manpower, Compensation and Health and Safety that, while economic and technological factors are essential considerations in standards setting process, principal consideration in preparing a standard is safety and health of workers. Corn said OSHA will put more emphasis on health inspections, consultation and education services for employers and make standards easier to understand. He said he will direct his efforts toward raising professional level of OSHA and will utilize expertise available from sources outside government in occupational safety and health field. Corn stated latter intention is reflected by revitalization of National Advisory Committee on Occupational Safety and Health (NACOSH). (see below)

Five New Members Join NACOSH - Labor Secretary John Dunlop has appointed following to National Advisory Committee on Occupational Safety and Health (NACOSH): Dr. Miles Colwell, vice president, health and environment, Aluminum Company of America; Dr. Paul Kotin, senior vice president, health, safety and enviornment, Johns-Mansville Corp.; Edward N. Deck, manager, corporate safety and security, General Electric Co.; Dr. Mary Amdur, Harvard School of Public Health, and Dr. Harold R. Imbus, medical director, Burlington Industries. Committee met Dec. 11-12 to program close working relationship with OSHA in policy formulation. In addition to Assistant Labor Secretary Morton Corn, speakers at meeting included Dr. John Finklea, NIOSH director and Marshall Miller, Bert Conklin, Barry White and Grover Wrenn of OSHA staff.

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ACL Doc 17371 · Page 19 of 33 asbestosclaims.law/library/17371/19

Controversy Regarding "New Evidence" - NIOSH paper cited as "new evidence" in OSHA's proposed asbestos standard has resulted in controversy within medical/scientific community. Paper entitled "Mortality Patterns among Hard Rock Gold Miners Exposed to an Asbestiform Mineral" by Gillam, Wagoner et al (1975) was presented last March at New York Academy of Sciences Conference on Industrial Carcinogens. Paper challenges adequacy of OSHA 2-fiber standard; present NIOSH asbestos sampling and analytical methods; and, potential adverse health effects among general, nonoccupational populations exposed to industrial waste disposals and industrial process effluents containing trace concentrations of short-fiber, noncommercial asbestos minerals. Dr. Paul Kotin, senior vice president for health, safety and environment, Johns-Manville, Corp. identified certain "inaccuracies and inconsistencies" in data presented and urged changes in paper before publication in order to preserve scientific accuracy. Drs. Kotin and Hans Weill, AIA/NA medical advisor, attended meeting of government and industry representatives at NIOSH Dec. 15 to discuss issue. It is understood Academy will include commentary of Dr. Kotin with publication of paper in forthcoming proceedings of Conference.

EPA Standards for Safe Drinking Water - Interim Primary Drinking Water Regulations applicable to U.S.'s public drinking water supplies (about 240,000 public water systems) were published in Federal Register on Dec. 24. Standards set maximum contaminant levels (MCL's) for bacteria, turbidity, and a number of organic and inorganic chemicals that have been detected in drinking water; they also prescribe minimum monitoring frequencies for water supply systems. Regulations do not list asbestos as a contaminant, however, preamble states EPA is concerned about possible need for asbestos monitoring as a minimum requirement and agency is conducting research and cooperating in research projects to develop criteria for establishing needed limits as quickly as possible.

New AIA/NA Members - Monsey Products Company, Kimberton, Pa., and Rostone Corp., Lafayette, Ind., became members of Association in Dec.

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ACL Doc 17371 · Page 20 of 33 asbestosclaims.law/library/17371/20

New Navy Directive on Asbestos - U.S. Navy's Commander, Naval Sea Systems Command issued directive on Oct. 24 (NAVSEA Instruction 5100.2) establishing policy on elimination of asbestos in ship construction and maintenance and directing certain actions toward reduction of asbestos dust exposure. Specifically, Navy's policy is: "Asbestos and materials containing asbestos shall not be used in the construction, overhaul, repair and maintenance of naval vessels nor shall such materials be used in any facility or operational application where suitable alternate materials have been designated. However, in locations where asbestos materials are properly installed rip out operations shall not be performed for the sole purpose of eliminating asbestos." Instruction applies to all asbestos-containing materials but implementation details are currently available for thermal insulation only. Directive further provides for expansion of implementation areas as substitute materials may be developed.

OSHRC Rules on Medical Examinations - In 2-1 ruling on Nov. 14, Occupational Safety and Health Review Commission (OSHRC) issued decision that an employer whose employees are engaged in occupations which require exposure to concentrations of airborne asbestos are required to provide, or make available at his cost, medical examinations for employees regardless of levels of exposure. Commissioner Robert D. Moran dissented and described ruling as "utopian and clearly unreasonable." He noted asbestos standard as proposed Jan. 12, 1972, required medical examinations for employees exposed to asbestos dust "in excess of the limits specificed ..." Standard as published June 7, 1972, differs substantially in that medical examinations are required when employees are engaged in occupations which expose them "to airborne concentrations of fibers." Further, countless employers who read limitations of proposed rule would have supposed there was no reason to participate in rulemaking process because their operations would have been unaffected. Moran concluded since statute requires Secretary of Labor to publish "proposed" rules in Federal Register, current asbestos standard, published June 7, 1972, was not subjected to public scrutiny and is void because of improper promulgation. Case assigned OSHRC Docket Nos. 3203, 4008 and 7335. Copy of decision available on request.

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Bill Containing OSHA Appropriations Vetoed - Departments of Labor and Health, Education and Welfare appropriations bill for fiscal 1976 containing $116-million for OSHA was vetoed by President Ford on Dec. 19. House will consider veto override Jan. 27. President cited economy reasons for his actions. Bill is of particular importance to OSHA since it provides increase of $14-million over fiscal 1975 budget and expresses congressional intent for improvement of OSHA operations. Conference report directed OSHA conduct retraining of compliance officers, simplification of standards, redirection of inspection priorities to place more emphasis on occupational health and work places with poor health and safety records; and development of an effective on-site consultation program.

House Passes On-Site Consultation Bill - H.R. 8618 authorizing federal on-site consultation for employers upon request was passed by House on Nov. 17 and sent to Senate. Consultation program would be separate from OSHA enforcement activities and give priority in filling requests to small businesses and hazardous industries. Organized labor opposes bill. (N&N Sept. & Dec.)

Employees Not Entitled to Walkaround Time - U.S. Court of Appeals for District of Columbia ruled Nov. 28 that employers are not required by OSH Act to pay employees for time spent in accompanying OSHA inspectors in walkaround inspection of employers' plants. Court found no indication that Congress intended employees' right to participate in an inspection should necessarily result in increased costs to employer.

Standard for Labeling Hazardous Materials - No decision reached by OSHA on proposing standard for labeling of hazardous materials. Recommendations of Advisory Committee this subject have been under review by agency since June. As alternate to issuing separate standard covering hazard warning (labeling, data sheets, employee indoctrination), OSHA may incorporate such requirements in future safety and health standard proposals.

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Government Meetings on Asbestos - Two government sponsored meetings of special interest to asbestos industry are scheduled in January:

Hazardous Materials Advisory Committee of EPA's Science Advisory Board - Meets 9:00 AM, Jan. 8-9, Room 1112, Bldg. 2, Crystal Mall, 1901 Jefferson Davis Hwy., Arlington, Va. 105-page document, "Review of the Environmental Effects of Asbestos," prepared under EPA contract to Oak Ridge National Laboratory for National Environmental Research Center, Cincinnati, will be reviewed. Document in draft form is not a criteria document, rather an historical review prepared prior Nov. 30, 1974. Limited distribution made by AIA/NA Memo. of Dec. 24 - copies available on request. Contact is: Dr. J. Frances Allen, EPA, (703) 557-7720, (Federal Register, Dec. 22, p. 59241). AIA/NA staff member will attend.

OSHA Advisory Committee on Construction Safety and Health - Meets 9:00 AM, Jan. 21-22, Room N-3437, A-D, New Department of Labor Bldg., 200 Constitution Ave., N.W., Washington, D.C. Committee to discuss revisions to "asbestos rules with reference to alternative administrative and engineering controls, medical surveillance and medical and monitoring record procedures, as well as other problems of application and responsibility." Announcement notes exclusion of construction industry in proposed revision to OSHA asbestos standard with intent of developing and proposing separate revision to standard for construction industry. Meeting is considered highly significant in view approaching close of comment period on proposed revision to asbestos standard. Contact is: Jay Arnoldus, OSHA, (202) 523-8024, Federal Register, Dec. 24, p. 59502). (AIA/NA Memo. Dec. 29 refers).

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ACL Doc 17371 · Page 23 of 33 asbestosclaims.law/library/17371/23

rning on Cancer and Environment

STOCKHOLM (UPI) — The three American winners of the 1975 Nobel Prize in medicine today blamed environmental factors for up to 80 percent of human cancer.

About half of the cancer from these factors could be eliminated, but the population appears to ignore expert advice, they said. The three researchers said the most prominent cancer-causing factor was cigarette smoking.

Profs. David Baltimore, Howard M. Temin and Renato Dulbecco won this year's prize for their "discoveries concerning the interaction between tumor viruses and the genetic material of the cell."

Appearing at a news conference prior to the Nobel Prize awarding ceremonies Wednesday, Temin, of the University of Wisconsin, said:

"Well over half or up to 80 percent of cancer in human beings is caused by things in the environment. The first thing is to recognize them and the second is to remove them. If they were removed, about 50 percent of these cancers could be prevented."

Baltimore, from the Massachusetts Institute of Technology, said even if these factors were identified, he doubted the population would heed the advice of the experts.

"People still smoke," he said. "The number of youngsters smoking is appalling."

The Washington Star

Monday, December 8, 1975

Federal Government sets limit on asbestos fibre air pollution

From the Ottawa Bureau of The Globe and Mail

OTTAWA — Acting Environment Minister Romeo LeBlanc announced yesterday a federal limit on the permitted concentration of fibres in the air surrounding asbestos mining, mill and dry rock storage operations.

The limit of two fibres a cubic centimetre is imposed as a regulation under the federal Clean Air Act.

The federal limit is similar to that now in force in Ontario but considerably stricter than the five fibres a cubic centimetre permitted in British Columbia. In Quebec, where safety considerations have been the subject of a protracted dispute between mining companies and the Confederation of National Trade Unions, the companies had been urged by the provincial Government to meet the five-fibre limit by 1978.

Although worker safety falls with in provincial Government jurisdiction the federal Government has authority under the Clean Air Act to regulate the environment and discharges into the environment.

The federal Government has chosen to act under the Clean Air Act although the former environment minister Jeanne Sauve, at one time questioned whether she had the authority to regulate inside-plant conditions.

Asbestos fibres ingested from the air have been shown to cause a rare form of lung cancer and asbestosis, a fatal respiratory disease. The symptoms of the diseases sometimes do not become apparent until 10 to 20 years after exposure.

In making the announcement, Mr. LeBlanc said that pollution-control technology available to the industry has been proved capable of meeting the new regulations.

Regulations are also being developed to control other sources of asbestos-fibre emissions in mines and mills such as drilling operations and the handling and disposal of tailings.

THE GLOBE & MAIL
TORONTO, ONTARIO, CANADA

DEC 1 6 1975

Asbestos fibers possible hazard to everyone?

© Chicago Daily News Service

CHICAGO — Asbestos fibers, previously identified as a hazard to industrial workers, have been shown to produce lung-tissue changes in the general population, medical scientists say.

They reported finding lung changes in 10 men who were being routinely X-rayed. The men, all Navy personnel, had no occupational exposure to asbestos.

Dr. Charles W. Ochs and Dr. John P. Smith, medical officers at the Bethesda Naval Hospital in Maryland, said most males over 50 probably have asbestos fibers in their lungs and 5 per cent probably have tissue changes as a result.

So far the changes have not caused cancer, Dr. Ochs told the Radiological Society of North America, but he said there is a possibility that they could, in some cases.

Growing exposure to asbestos in the environment is probably responsible for the new hazard, said Ochs.

Asbestos is used in cardboard, tiles, gutters, drain pipes, electrical insulation, pipe covering and a wide variety of other building materials. Vinyl asbestos floor tile also may be a significant source of airborne fibers.

"The major source of environmental asbestos, however, results from the automobile," said Ochs. "Brake linings, clutches, mufflers and transmission give off fibers."

He estimated 2.5 million tons of asbestos enters the atmosphere in a year.

Ochs believes it has taken 20 or 30 years of exposure to asbestos for the fibers to show up on routine lung X-ray pictures.

Detection of asbestos fibers by X-ray should become more common in the next 20 years as people are continually and increasingly exposed to asbestos, he said.

The inhaled fibers accumulate in the pleura of the lung's lining and cause a thickening.

About two cases a month are now being detected at Bethesda Hospital, Ochs said.

THE LOUISVILLE TIMES
LOUISVILLE, KY.

DEC 8 1975

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1/23 cc Brad Johnson

Gold mine report rebuked

BY EINAR W. KARLSTRAND
Of the News-Tribune staff

ROSEVILLE—A Homestake Gold Mine study linking asbestos fibers and cancer has been blasted as invalid, sloppy research by a noted occupational medicine consultant.

The study's conclusion—that asbestos-type fibers can cause cancer—is not supported by evidence, Dr. George W. Wright charges in a brief filed with the 8th U. S. Circuit Court of Appeals. Wright is chairman of the U. S. Bureau of Health, Education and Welfare medical advisory committee and a member of the Permanent Commission and International Association for Occupational Health.

The study was made of workers in the Homestake Gold Mine in Lead, S. D., by the National Institute for Occupational Safety and Health (NIOSH).

Some scientists have drawn close parallels between the report and conditions at Reserve Mining Co.'s Silver Bay taconite plant. Among them is Dr. William Nicholson of the Mount Sinai School of Medicine in New York City.

But Wright suggests the Homestake study might even indicate the opposite of the claim it was used to support. In any case, he says, deciding on any regulatory action on the basis of the study "would be unjustifiably premature."

The NIOSH researchers claimed they found exposure to asbestiform fibers carried "significant risks" of fatal lung diseases.

Other cancer-causing substances in the mine were at normal levels, they said, and so, "the observed excess of malignant respiratory disease can, therefore, be attributed to asbestos, singly or in combination with cigaret smoke."

Wright charges the researchers did not consider all the other materials, a failure he called "a serious shortcoming" of the NIOSH study.

"There is no documented justification for concluding that the excess of cancer of the respiratory system is related to the fibers—long or short—of the cummingtonite-grunerite series and not to the other co-existing airborne materials alone or in combination," Wright's brief says.

He criticizes the title of the NIOSH document—"Morbidity and mortality among hard rock miners exposed to an asbestiform mineral"—as "a serious false emphasis of fact.

"While it is true," he says, "that the (Homestake employes) examined in this study were exposed to asbestiform material, they were also exposed to free crystalline silica, radiation, arsenic, oxides of nitrogen and other end products of blasting powder, particles of the parent rock in which the vein being mined would lie, and, in all probability, other materials, including diesel engine exhaust fumes.

"Particles and gases are often deposited within the lung in various multiple combinations," he notes. "Acting together, materials supplement one another and produce effects, as a result of this combination, that do not occur when the materials are present alone.

"The authors are under the obligation of showing that the asbestos exposure is the only biologically active variable in the population study," Wright says. "This they did not do.

Wright claims. "It is difficult to believe that authors at this level of responsibility could violate scientific procedure so flagrantly."

Wright also criticises the NIOSH researchers for contending a connection has been established between asbestos and an excessive rate of gastrointestinal tumors.

First, he says, the connection has been observed only in situations in which the fibers were inhaled. Second, scientists disagree on what length of fiber causes cancer.

During the Reserve hearings, Wright points out, the U. S. Environmental Protection Agency and its witnesses claimed fibers shorter than five microns would cause an excess of gastrointestinal cancer. They based their claims on studies of the effects of inhaling the short fibers.

"The authors report their current study as an example of inhalation of short fibers of cummingtonite or amosite. In fact, they infer it is the same material being put into the air and water by Reserve Mining," Wright says.

But, in fact, he continues, except for lung cancer, there was less cancer of all types among Homestake workers than among the general population.

"It is difficult to understand" why the researchers did not notice this, he says.

"If the Homestake mine workers have, in fact, been exposed over the years to the inhalation of short fibers of cummingtonite-grunerite or amosite, without the development of an excess of gastrointestinal tumors, the inferences and possibly the conclusions are obvious," Wright contends.

The most that can be made of the Homestake study, he says, is that something about the environment in that particular mine during the years before 1973 may have led to an excess of pulmonary disease.

Wright warns against basing any decisions on the NIOSH study.

"To quote a paper of this caliber in support of such action displays little or no understanding of what constitutes adequate data to convert speculation to new knowledge and suggests that regulating agencies are looking for any straw to support them in their actions, no matter how feeble the straw is," he states.

"The rest of us interested in this field have a right to expect something better from NIOSH than this kind of presentation," Wright concludes.

Asbestos Story Told in Book

The story of asbestos — from origin, and mining to end-use applications, is told in a 20-page book, "Chrysotile," just published in colors by Johns-Manville's Asbestos Fiber Division. It also contains a "statement of fact" on asbestos and health, and covers technical data, processing, handling, packaging and shipping.

In connection with efforts to provide safety with every aspect of the asbestos operations, Johns-Manville has developed bags of woven polyethylene filaments for rigorous manual handling, as well as bags made of a single ply of low melt polyethylene film. Since these melts at about 235 degrees F., it makes it possible to introduce the unopened bags of asbestos into any process where the mixing is intense and the temperature is high enough, and where a tiny percentage of polyethylene can be tolerated in the end product. Thus manual handling is avoided.

Plastics with asbestos go beyond the popular vinyl asbestos floor tiles, as phenolics, polyesters, polypropylene, polyethylene can be filled with asbestos to make a variety of parts used in the electrical and other industries.

The book covers applications for asbestos fiber such as building products like asbestos-cement wall panels, shingles; vinyl-asbestos sheets for the home; friction materials; protective clothing in industry and fire fighting.

The statement of fact on asbestos and health discusses the occupational health question related to excessive inhalation of generated dust.

Of a more technical nature, the book features Chrysotile asbestos in terms of chemical analysis, physical properties, grades and textures. A breakdown of world consumption by end use is also given.

For a copy of "Chrysotile" (AF-82A) address a request, on company letterhead, to J. J. McCarthy, 1 West, Johns-Manville, Box 5705C, Greenwood Plaza, Denver, Colo. 80217.

JOURNAL OF COMMERCE
NOV 14 1975

DULUTH NEWS-TRIBUNE
DULUTH, MINN.
DEC 7 1975

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ACL Doc 17371 - Page 25 of 33

Asbestos levels threaten office workers

By Stuart Auerbach
The Washington Post

Yale University removed all the ceilings from its 10-story School of Art and Architecture because the amount of asbestos floating in the air from them reached levels known to cause cancer deaths.

The University of California at Los Angeles did the same thing in one of its new dormitories, because students roughhousing in their rooms shook loose the cancer-causing asbestos fibers.

The Yale and UCLA experiences are just two examples of what looms as a major occupational health hazard for millions of American office workers in New York City and elsewhere.

A new study by the Mount Sinai School of Medicine's environmental sciences laboratory in New York found dangerously high levels of asbestos fibers in office buildings around the country. "We are seeing inside the office buildings concentrations that are as high as we saw in areas near asbestos plants or where spraying was being done, where there has been illness or death," said Dr. William J. Nicholson, who ran the Mount Sinai study. "This significantly increased the risk of cancer to people who work in those buildings on a day in and day out basis."

The idea of condemning buildings is not a happy one for New York officials. "I don't know what we can do rapidly," Dr. Edward Ferrand of the city's department of air resources said. Nicholson recommended installing filters in buildings to screen out the asbestos fibers, but Ferrand said he isn't sure that would work. The federal Environmental Protection Agency, which financed the Mount Sinai study, also is looking into a possible solution.

Affected are thousands of buildings put up across the country between 1958 and 1970, many of them in New York and in Washington, in which asbestos replaced concrete as the fire-retarding wrapping for steel beams. By 1970, the large office buildings in the country used asbestos spray.

One method was to spray a mixture of asbestos and water directly on the steel beams. Over time, the asbestos fibers come loose and are circulated through the air conditioning and heating systems. Nicholson estimated that half the new office buildings in the country and virtually all of the 1,000 buildings put up in New York between 1968 and 1970 used that method of fireproofing.

In New York alone, 700 tons of asbestos were sprayed in buildings in 1969 and 1970 as fireproofing. The spraying stopped in 1970, as word of its health hazards to workers spread; and now there is little if any asbestos spraying in the city, although the asbestos remains in the buildings.

The Mount Sinai study checked asbestos levels in 19 buildings in five cities across the country—New York, Boston, San Francisco, Berkeley and Chicago. It found little additional contamination in buildings where the asbestos was mixed with light cement before it was sprayed.

Four of six buildings in which asbestos mixed with water was sprayed showed levels of asbestos fibers averaging three times higher than asbestos in the outside air. "It was worse in the newer buildings," Nicholson said.

In addition, the study found four other buildings in which asbestos was sprayed for either acoustical or decorative reasons in which there were abnormally high levels in some rooms.

Asbestos levels are hard to measure, and there is no known threshold level between safe and unsafe exposure. "We are finding asbestos disease at lower and lower levels," Nicholson said.

About seven in 100 asbestos insulation workers die of mesothelioma, a cancer of the lining of the chest and abdomen that occurs about one in 10,000 times among the general population. The spread of cancer follows the workers from the job into their homes and neighborhoods, where the levels are much lower. One in three members of families of asbestos workers in Paterson, N.J., showed X-ray signs of exposure to asbestos fibers. About one in 100 of them dies of mesothelioma, according to a Mount Sinai study done by Dr. Henry A. Anderson.

Those people are being exposed to levels about the same as Nicholson's team found in some office buildings. /II

NEWSDAY
GARDEN CITY, N. Y.

DEC 11 1975

Asbestos hazardous to workers, families

By PATRICIA WILLIAMS

NIAGARA FALLS, Ont. (DCN) — An estimated 40 per cent of all fatalities among members of the Asbestos Workers' International Union in Canada and the United States are caused by asbestos-related diseases, a union convention was told.

Roy J. Steinfurth said asbestos can pose a health hazard to other trades as well as to families of asbestos workers.

He said there have been many documented cases of workers' families suffering from asbestosis, mesothelioma (a rare cancer) and other usually fatal diseases associated with the trade.

Steinfurth is administrator of the Washington-based insulators' health hazard program, an educational and research group set up by the asbestos workers' union in 1972.

The program was established, Steinfurth said, "because of the inexcusable and needless increase in the number of severe illnesses, total disabilities and deaths among members of the union."

HIGH INCIDENCE

Steinfurth said studies have shown that there is a high incidence in the numbers of people contacting occupational diseases from being indirectly or lightly exposed to asbestos.

He gave several examples:

- Working near asbestos workers.
- Working near pipefitters or boilermakers when they are stress-relieving welds which are usually wrapped with asbestos paper or cloth.
- Working in close proximity when painters are sanding the seams of drywall panels or when pipefitters are cutting asbestos pipe or when floor finishers are sanding asbestos floor tile.

He said painters have an "enormous" occupational health problem, being exposed not only to drywall sanding but also to epoxy paints, chemicals, solvents and sandblasting.

He said laborers are one of the "most over-exposed" trades, being exposed to toxic dusts and chemical solvents in clean-up work on construction sites.

TIME LAG

Dr. Irving J. Selicoff of the Mount Sinai School of Medicine of City University, New York, said there is a time lag of about 20 years between the initial exposure to asbestos and the appearance of an asbestos-related disease.

"As a result, workers are being lulled into a sense of false security," said Selicoff, an acknowledged U.S. expert on the subject.

He said two-thirds of all asbestos is used in the construction trades.

He said scientists don't yet know the effect of fibreglass on humans. "But we know it causes cancer in animals."

Steinfurth said he hopes it doesn't take as long to determine the effect of fibreglass on humans as it has with asbestos.

They spoke at the annual convention of the Provincial Building and Construction Trades Council of Ontario.

DAILY COMMERCIAL
NEWS AND CONSTRUCTION
RECORD

NOV 11 1975

UCC 015356

INDUSTRIES

The seller's market in asbestos

Producers of asbestos have been pushing up prices in big jumps this year, and more of the same is in store for 1976. As a result of their moves, the costs of a vast variety of products that use asbestos—from brake linings to boiler gaskets and floor tiles—are moving up steadily and will continue to do so next year.

This year's troubles started with a disastrous fire at a major Canadian asbestos mine and a landslide that halted operations at a second large mine. Then a wave of strikes, including one seven-month shutdown, crippled additional Canadian production. Canada, the world's largest asbestos producer, supplies about 95% of the asbestos used in the U. S. Normally it produces about 1.8 million tons annually, but this year that figure will be down by some 40% to only 1.1 million tons. Output is back to normal now, but producers point to costs and narrow profit margins and maintain that these will force them to keep on raising prices.

The price boosts that followed the disasters and the labor settlements came fast. Canadian Johns-Manville Co., which with a rated output of almost 700,000 tons annually is Canada's largest asbestos producer and the industry price leader, started out the year with a 17% increase. It followed with a 7% jump in May and an additional 15% increase on long-fiber asbestos this month. "It's a seller's market now," says one Johns-Manville executive.

Users are worried, and some are bitter. "Our suppliers have a 'spear your friends' policy," says Hugh M. Wells, president of Cincinnati-based Blemker Co., which uses large quantities of asbestos to make gaskets, brake and clutch facings, and insulating cloth tape. "Because of that policy many of our materials costs have doubled in the past 12 months. We've had to double our own product prices in that same period. And I expect materials prices to go up at least another 10% to 14% early next year."

Bootleg asbestos. Most users tried to plan ahead in anticipation of price rises and shortages earlier this year but many still suffered. Frank J. Mattes III, controller of Gardner-Martin Asphalt Corp., a Tampa (Fla.) roofing product maker, says his company built up sizable inventories of asbestos early in the year but when strikes and shortages hit "it was nip and tuck for us for four months." Once the inventories were worked down, says Mattes, "we had to buy asbestos bootleg and had to pay as much as four times our normal price for it."

Johns-Manville's estimates for next year give users little hope for anything better. The company figures that output will not catch up with demand for at least three to five years. Asbestos markets were barely touched by the recession. It takes about three years to get a new mine into production. Despite rising prices, only one major new mine is under construction in North America. That belongs to Abitibi Asbestos Mining Co., 55% owned by Brinco Ltd., of Montreal, a subsidiary of Rio Tinto-Zinc Corp.

One user that is also a producer, Jim Walter Corp. of Tampa, Fla., also is worried about rising asbestos prices. Its Celotex Corp. subsidiary, which buys some of its asbestos from the company's own Canadian mine, last month raised by 6% the price of its asbestos-containing coatings.

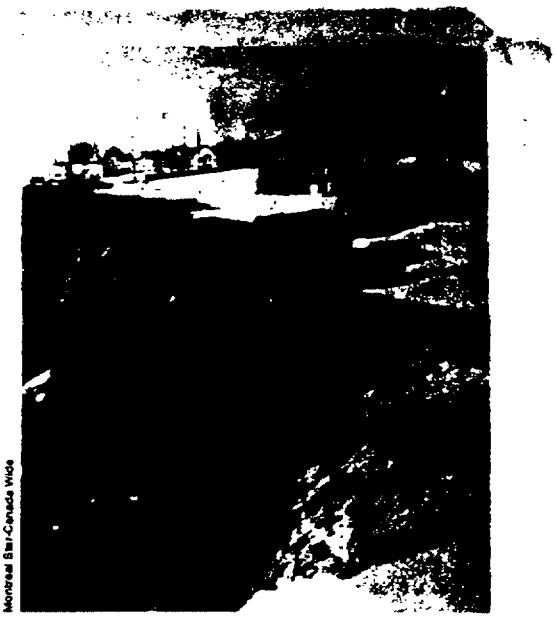
Substitutes. Some users have been pressing the hunt for substitutes for asbestos but so far they have had little success. Richard T. McDermott, president of A. W. Chesterton Co., a Stoneham (Mass.) maker of mechanical packings and seals for pumps and valves, is studying the use of Teflon and graphite fibers as substitutes for asbestos.

Rising costs and narrow margins force producers to keep boosting prices

But, he admits, "for the time being asbestos is still a critical material for this company's products." This means a very bleak outlook for McDermott who expects a 25% increase in the price of the asbestos fibers he buys early next year and doubts he will be able to pass all of it on to his customers.

"Asbestos is close to pricing itself out of the market," asserts Anthony Notorangelo, president of General Gasket Corp., a St. Louis (Mo.) producer of boiler gaskets. "Ceramic materials have been around for some time that would replace asbestos in some applications," he says, "but in the past they were too expensive. Now they are looking a lot more attractive." Still, Notorangelo's company has not switched to ceramics because asbestos still maintains a slight price advantage.

Some asbestos users fear that they are bound to lose markets to competing products if they cannot find substitute materials. Certain-Teed Products Corp., for example, makes asbestos pipe, and it fears that if it keeps passing along higher asbestos prices, buyers will shift to using cast iron pipe. "Our price increases will lead people to use competitive products," says Waldfried R. Werner, Certain-Teed's product manager. The company's pipe prices have increased 70% since 1973, largely because of asbestos.



Montreal Star-Canada Wide

A landslide at Johns-Manville's mine at Asbestos, Quebec, crippled production.

Safety standards. New occupational safety and health rules are also pressing users to seek asbestos substitutes. Current rules require that workers cannot be exposed to an atmosphere containing more than five 5-micron fibers of asbestos per cubic centimeter of air in an eight-hour day. This standard will be tightened next July.

Some companies are losing sales rather than meet the cost of reaching these standards. Western Chemical & Mfg. Co. of Vernon, Calif., tried substituting mineral wool and fiber glass for asbestos in the flooring materials it produces but found that these could not compete with asbestos-containing products. "We found that there's really no replacement for asbestos," says Gareld W. Johns, president.

Asbestos producers worry about the long-term impact of the safety issue, especially because the U. S. rules have prompted Canadian asbestos miners to demand greater protection, which leads to higher-cost mining operations. But they seem to have little fear that either rising prices or safety concerns will soon lead to the development of economic substitutes for asbestos. "There'll still be confusion in this industry, especially for users, for at least two years," says William W. Oughtred, president of Asbestos Corp., a major Canadian producer that is 54% owned by General Dynamics Corp. "But for the long haul I'm very optimistic." ■

BUSINESS WEEK UCC 015357

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ACL Doc 17371 · Page 27 of 33

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UNION CARBIDE CORPORATION
270 PARK AVENUE, NEW YORK, N.Y. 10017

RECEIVED
JAN 6 1976

December 31, 1975

Messrs. J. B. Rhodes
W. C. Thurber

RE: Comments on OSHA Proposed Standards for "Occupational Exposure to Asbestos"

Gentlemen:

I have reviewed the proposed revised standards for "Occupational Exposure to Asbestos," and have found certain areas upon which I feel we should comment, both from a labor relations and general legal standpoint.

In Section II of the proposal, "Toxicological Considerations of Exposure to Asbestos" OSHA advances opinions and states "facts" based solely upon that which is rather innocuously classified medical evidence or medical research. Experience has shown that governmental agencies habitually rely upon evidence that is either sparse or unreliable. OSHA should therefore be compelled to present well researched, competent and complete evidence as to the effects of exposure to asbestos. This would be a change from the type of evidence generally presented which is of a quality that would be severely questioned in a courtroom, and I see no reason why OSHA should not be held to courtroom standards.

A portion of the discussion in Section II C (2)(a) is devoted to the greater risks of contracting lung cancer risked by asbestos workers who smoke. Obviously, in such cases the chance of an employer incurring liability for a "work related ailment" is increased by the employee's non-work related activity, e.g., smoking. This issue should be discussed in any response to the proposed standard. However, although we raise the issue with little difficulty, solutions are harder

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ACL Doc 17371 · Page 28 of 33 asbestosclaims.law/library/17371/28

to arrive at. Suggestions such as adjustments in liability insurance whereby a portion of the premium might be paid by the smoking employee, partial releases by the "smoker" employee, or partial "hold harmless" agreements, might be possible solutions worthy of discussion.

Another problem area which should be the subject of comment and criticism is the burden placed upon small businesses by the proposed standards, especially the comprehensive monitoring requirements. Although comments and objections to this burden may not have a great effect on OSHA, it may lay the groundwork for later legal action by small business associations petitioning against the morass of governmental regulations which make profitable operation of small businesses next to impossible.

I am in complete agreement with the suggestion that we support the system of "representative employee" monitoring, although organized labor will most assuredly voice its most strenuous objections to this section of the proposal. Admittedly, the monitoring of a "representative sample" is never the most accurate method of monitoring, especially considering evidence that individual reactions to asbestos or individual susceptibility to disease may be dependent, to some degree, upon age, sex, race, etc. The savings in money and the general reliability of the "representative sample" method, however, certainly outweigh its deficiencies.

As we discussed at our meeting several weeks ago, the proposal's provision for the transfer of employees unable to perform their assigned duties while wearing a respirator may cause problems in the labor relations area. The proposal calls for transfer or rotation of effected employees to another job in the same geographical area (which realistically would mean within the same facility) without loss of seniority, benefits, or pay rate. I think it is safe to assume that many employees and/or unions would object most vehemently to an employer's disregard of posting, bidding, and seniority provisions of the collective bargaining agreement even though such disregard is mandated by OSHA. We could expect even more opposition so far as the "no reduction in pay rate" provision is concerned. There may be, in fact, a serious question as to whether OSHA has the authority to promulgate standards and

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ACL Doc 17371 · Page 29 of 33 asbestosclaims.law/library/17371/29

regulations that may, arguably at least, infringe upon the process of free collective bargaining. I do think that is is fair to state that labor would have more trouble "selling" this provision to its members than management would have accepting and implementing it; however, the refusal of labor unions to accept this rule might result in making the provision unworkable.

One last legal issue raised by the proposed standards concerns the employees' right to refuse a medical examination. When we are concerned with exposure to a possible carcinogen, as we are in the case of asbestos, the employer is faced with a high degree of liability. It would be extremely dangerous for the standard to allow employees the right to refuse examinations without affording the employer at least a small measure of protection. I would suggest two possibilities. First, employers should have the right, unhampered by contractual grievance procedures, EEOC or NLRB investigations, to terminate employees who refuse to submit to medical examinations required by the standard. In the alternative, employees who refuse to submit to said examinations could be required to execute and sign a release agreeing to hold their employer harmless in the event an ailment related to, or caused by, occupational exposure to asbestos is discovered at a later date. It is doubtful that the "release"would act as a "total release" which would automatically free the employee from liability in the event a work related ailment is discovered; however, it would serve as grounds for an affirmative defense to the employees' workman's compensation claim.

I am not competant to comment on the technical aspects of the proposed standard, but I hope my analysis of those areas in which I think more detailed comments should be directed to OSHA will be of some help. Please feel free to call upon me at any time for whatever assistance I might be able to give.

Very truly yours,

David M. Mintzes

DMM:kak

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UNION CARBIDE

INTERNAL CORRESPONDENCE

BUSINESS CONFIDENTIAL

UNION CARBIDE CORPORATION P.O. BOX 1029, GRAND JUNCTION, CO 81501
METALS DIVISION

To (Name)	Mr. W. C. Thurber	Date	September 30, 1982
Division	Metals - Section J1398		
Location	Danbury, CT	Originating Dept	E/R - Occupational Health
Area			
		Area	
Copy to	S. L. Baye	Subject	Calidria Asbestos Potential Liability - Chemicals and Plastics Operations/Bound Brook, New Jersey (2.2.23)
	R.F.X. Fusaro		
	M. T. Manupella		
	J. L. Myers		
---	M. A. Smith		
	R. F. Wolff		

K-1

Mr. Wolff has asked me to review the subject noted above and to summarize the situation re Calidria Asbestos involvement. Basically, the Chemicals and Plastics Division manufactured asbestos containing phenolic resins at Bound Brook from the 1940's through the early 1970's. These molding compounds are in themselves quite dusty, so during the early part of this period this was a quite dusty operation by present standards. (At least one serious dust explosion.) The contribution of the asbestos to the general dustiness has not been well defined.

During the time period in question, Union Carbide's Calidria Asbestos Department supplied the quantities of asbestos to Bound Brook shown in Table 1. (Source - King City sales records.) It is evident from the table that Calidria was a small supplier, i.e., only about 265 tons (530,000 lbs) in 1965 and about 40 tons (probably experimental) in 1973 out of a very much larger total asbestos usage. The exact total is now being reconstructed by the Bound Brook location and is not yet available.

Many of the familiar names in the asbestos litigation are now involved in the Bound Brook action. They include Tony Mazzochi, Steve Wodka, and Dr. Irving Selikoff. The plaintiffs' law firm is Frederick M. Baron and Associates of Washington, D.C., represented by local counsel in New Jersey. They give the impression that they think they have a "live" one.

At the present time, about 100 of the employees have been examined by a team from Massachusetts General Hospital. Opportunity for examination has been offered to all employees, salaried and union. Results for 50 of these examinations are back with 25 alleging some sort of lung changes relating to their occupational exposure. If this pattern is typical, at least 50 cases can be expected. Four workmen's compensation cases have so far been filed with three for asbestosis and one for mesothelioma. The latter employee worked one year for J/M in Manville and about 14 years for UCC.

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ACL Doc 17371 · Page 31 of 33 asbestosclaims.law/library/17371/31

The mesothelioma case is particularly important because a third party liability suit has also been filed against Union Carbide as the asbestos supplier not as the employer. As you are well aware, Manville has filed for bankruptcy. A motion has been made by one of the defendants to stay all asbestos liability cases in New Jersey until the J/M situation has been resolved. This motion is due for a hearing on October 4, 1982.

If the stay is granted, the present thinking is that we will sit tight and see what develops. If it is denied, we will immediately file a motion for dissmissal on the basis that the plaintiff's recovery from UCC is limited to workmen's compensation. Although the New Jersey law is quite clear on this matter, a similar case in Ohio (Blankenship) was declared in favor of the plaintiff, based on the rationale of wanton, reckless, disregard. In the event the judge rules that we can be included, there is some same measure of protection against large losses in the fact that we were only a very minor supplier.

If you have any questions, please give me a call. I have asked Mmes. Smith and Baye to keep me informed of any important new developments.

Very truly yours,

H. B. Rhodes

HBR/sw

Attachment

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ACL Doc 17371 · Page 32 of 33 **asbestosclaims.law/library/17371/32**

TABLE 1

UCC METALS DIVISION SHIPMENTS
TO
UCC PLASTICS DIVISION
AT
BOUND BROOK, NEW JERSEY

Date	Pounds	Product	End Use
5/4/65	110,000	Filter Grade Open	Bakelite Phenolics
8/12/65	100,000	" " "	" "
9/28/65	100,000	" " "	" "
10/29/65	100,000	" " "	" "
11/1/65	100,000	" " "	" "
12/28/65	120,000	" " "	" "
1965 TOTAL . . .	530,000	(265 Short Tons)	
12/29/70	210	RG-144	Unknown*
1970 TOTAL . . .	210	(~0.1 Short Ton)	
8/31/71	2,100	RG-101	Unknown*
8/24/71	2,000	RG-101	"
10/20/71	6,000	HPP	"
11/16/71	1,040	RG-101	"
12/16/71	510	RG-101	"
12/17/71	105	RG-144	"
1971 TOTAL . . .	11,755	(~5.8 Short Tons)	
12/8/72	4,000	SG-100	Baklite Phenolics
1972 TOTAL . . .	4,000	(2 Short Tons)	
5/3/73	26,000	SG-200	Bakelite Phenolics
5/3/73	25,100	SG-200X	" "
9/12/73	510	RG-110	" "
10/2/73	17,850	SG-210	" "
10/5/73	17,850	SG-210	" "
1973 TOTAL . . .	87,310	(~43.7 Short Tons)	

*These are highly refined products. It is very unlikely that they were used in in the phenolics and in any case the quantities are too small to be regular production.

HBR - 9/3/82

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