



July 31, 1967

STATEMENT/BACKGROUND PAPER - ASBESTOS AND HEALTH

Purpose

For use in answering queries from the press, financial analysts, stockholders, employees, unions, customers, contractors, etc. To provide background information to responsible journalists who are writing articles on the subject of asbestos and health. To be used, if necessary, by J-M spokesmen in testifying before governmental bodies. To be used as orientation material by J-M directors and officers.

Format

- A. An expository statement concerning asbestos and health, as viewed by the American asbestos industry.
- B. Supplemental background papers covering such subjects as: asbestos bodies, mesothelioma, brake lining dust, asbestos & smoking.

Organization of the Expository Statement

- A. Indispensibility of asbestos.
- B. Industry's responsibility to protect its workers -- industrial hygiene.

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- C. Brief mention of job risks: Asbestosis; lung cancer and mesothelioma.
- D. These are occupational risks, not risks to the General Public.
- E. Details concerning:
 - (1) Asbestosis;
 - (2) Lung Cancer;
 - (3) Mesothelioma.
- F. What the asbestos industry is doing to protect its workers:
 - (1) In mines and plants;
 - (2) Contractors.
- G. What the asbestos industry is doing to find out more about these risks (medical and physical research).
- H. Long time period required for development of asbestosis, etc. Hence effects of industrial hygiene will take awhile to be felt.

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Asbestos Exposure and Human Health

Asbestos has been called "The Twentieth Century Mineral," even though its value as a fire-resistant agent has been known and utilized since antiquity. Modern day needs, however, have greatly increased the demand for asbestos, chiefly because of its ability to impart strength and safety in combination with other materials. Asbestos is not only heat resistant but fireproof. It has many essential functions in construction, industry and transportation. There are no practical substitutes for asbestos in most of its applications. Fireproof asbestos has saved thousands of lives and millions of dollars in property during the years it has come into common use. It is used in schools, theaters, ships, offices and other public buildings, furnaces, boilers and, of course, in fire-fighting equipment. The brakes on autos, trucks and trains are dependable because they are lined with unburnable asbestos.

The mining and processing of this indispensable substance, asbestos, like the modern mass production of hundreds of other natural and synthetic commodities, has brought with it the need to protect industrial workers from certain health risks, known or suspected. Industrial medicine has become an important part of industry, a distinct branch of medical practice and a function of public health authorities at all levels of government.

The asbestos industry has been aware for years that excessive exposure to asbestos dust constitutes a health risk for workers in factories and mines. With recognition of the lung disease called asbestosis, came protective measures to reduce the hazard to these workers. Indeed, when the first case of asbestosis was reported in 1907, the British author of the report observed that "considerable trouble is now taken to prevent the inhalation of asbestos dust."

No Known Risk to the General Public

Considerable effort is taken, today, to prevent workers in asbestos mining, fabricating, weaving and installation from inhaling asbestos dust.

However, no evidence has been advanced that the general public is in any danger from the normal use of asbestos products. In almost all of these products, asbestos is thoroughly combined with other materials - plastics, cement, resins, rubber etc. - which prevent the asbestos, itself, from getting into the air. There is no demonstration that any measurable amount of asbestos dust is released into the air from the normal wearing of asbestos tile in the home or office, from asbestos brake lining on automobiles or from the scores of other products utilizing asbestos. No one has ever been known to contract any disease from the normal use of such products.

Known and Suspected Occupational Risks

Among asbestos workers, the well-known and clearly established risk is a lung disease called asbestosis. This is one of a class

of lung diseases, called the pneumoconioses, caused by inhaling of any type of dust in heavy concentration over a long period of time. Other examples are silicosis, caused by stone dust; byssinosis, caused by cotton dust; anthracosis, caused by coal dust -- all considered industrial health risks against which various industries have instituted protective measures.

By no means clearly established, although reported and suspected, is the possible association between asbestosis and a subsequent increased risk of lung cancer. Published medical reports on this subject in recent years have created concern in the asbestos industry and among physicians.

Even though the risk is not high, even though the number of all asbestos workers who contract lung cancer is only a small fraction of the total number of workers in the asbestos industry, the industry considers the question a serious one. The problem has become the subject of much scientific research through statistical, clinical and pathological studies of exposed workers, through experimental studies with laboratory animals and through chemical and physical studies of asbestos and its components. The asbestos industry is supporting much research on this question.

Also under investigation is a very rare disease with which asbestos exposure has recently been associated, mesothelioma. This is a type of cancer of the chest and abdominal cavity different from primary lung cancer. Mesothelioma has been so rare that there

are not even accurate figures as to its incidence in the United States. In Britain fewer than 50 cases were reported in the last year of record. Some of these were persons known to have been exposed to asbestos; others were not. Investigations as to the cause of such a disease are obviously difficult. Nevertheless, research in this area is also going on.

Industrial Hygiene and Preventive Medicine

In North America, Johns-Manville Corporation has taken the lead in reducing to a minimum the hazard from dust exposure in the mines and plants which it operates. Much of the processing machinery is enclosed and equipped with exhaust pipes. Atmospheric dust levels are constantly controlled through the use of ^{regular} ~~electronic~~ monitoring devices. Filters and ventilators are installed where needed and the use of individual respirators is required where indicated. Employees are given careful periodic physical examinations, including X-rays.

In addition, a program of consultation with primary handlers of asbestos has been initiated in an effort to achieve thorough understanding of the risks and the widest possible adoption of sound industrial hygiene practices. Published case histories demonstrate that preventive measures can maintain the health of asbestos workers at the level of that of the general working population.

Asbestos and Health Research

The authors of a recent medical journal article, reviewing the state of knowledge regarding health risks of asbestos exposure, concluded by observing: "Asbestos is a most valuable material, essential in our industrial society. We recognize and study its dangers so that we may devise means of minimizing or avoiding them."

Scientific research on asbestos and health questions is directly sponsored and encouraged by the asbestos industry in laboratories and research institutions all over the world. Johns-Manville is a contributing member of the Asbestosis Research Council, with headquarters in England, which supports such research with grants-in-aid. Recently the Institute of Occupational and Environmental Health was formed in Canada, as a result of efforts by the asbestos industry. The Institute's program, now getting under way, is primarily concerned with asbestos-related research. The industry also cooperates with the United States Public Health Service and with other agencies and investigators on health problems relating to asbestos. In addition, studies on technical aspects of asbestos and human health are conducted in the research laboratories of the Johns-Manville Corporation and through projects with other research institutions.

Outlook

Medical reports associating asbestos with disease always include, either by direct statement or by implication, the important fact that diseases do not develop overnight. Asbestosis, for example,

occurs after an average of 17 years of unprotected exposure to asbestos dust. It has been estimated that mesothelioma, whatever its cause, takes about 40 years to develop. As for lung cancer, cancer scientists make various estimates of 20 to 40 years for that to develop.

Therefore, for the next few years at least, it could be that some new cases of asbestosis may continue to be reported among long-time asbestos workers. These cases could be expected as a result of exposure before adequate protective measures were in wide use. Inevitably there will be concurrent reports of new cases of cancer among the same groups, since, for a variety of reasons, the incidence of cancer among the general population is on the increase. The question of any relationship of such cases to asbestos exposure will continue to be studied closely.

The results of constantly improved industrial hygiene practices have been demonstrated in some British studies among asbestos workers, and, in time, damaged lungs from asbestos dust can be expected to be as rare among asbestos workers and ex-asbestos workers as among the general public.

In the meantime, the asbestos industry will continue its support of scientific research. If any of this research suggests additional safety measures to insure the health of those exposed to asbestos dusts, those steps will be taken.

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