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CONFIDENTIAL

Ambler | November 10, 1964 | Ambler Safety

Mr. M. S. Davis, Jr. | See Below

L. D. Horowitz -ep

cc: Mr. R. L. Lunz - Ambler (THIS COPY FOR)
Mr. J. L. Anderson - Ambler
Dr. M. C. Shaw - Ambler

Subject: Conference on Biological Effects of Asbestos
New York Academy of Sciences
Section of Biological and Medical Sciences
New York City - October 19-21, 1964

A report was submitted by Dr. Shaw on November 3, 1964 which thoroughly covered the important issues discussed at this conference. The present report will cover on those points which require further emphasis.

The discussion at our meeting with the four representatives from Turner Brothers Asbestos Company the evening before the conference was mostly on the accomplishments of the Asbestosis Research Council of England. Although we did not discuss the direct help they could give us (Certain-teed Products Corporation) they did point out that they are many years ahead of the U. S. in awareness of the medical problems associated with asbestos by emphasizing the following:

1. As a result of an investigation of the effects of asbestos in the lung by the Factory Department in 1926, the United Kingdom formulated Asbestos Industrial Regulations in 1933 for proper dust control in industry and a Pneumoconiosis Board was established in 1931. The Board of Insurance has accepted asbestosis as a cause of lung cancer since 1931. A great improvement was seen as a result of these regulations.

2. Dr. Knox said that U. S. industry, in general, does not want to accept the fact that asbestos is very hazardous and they will accept any doctor's view if he intimated that it is not hazardous.

3. All present agreed that several doctors in the U. S. have been recently trying to make names for themselves by exposing asbestos as an extreme hazard as evidenced by the Press Release covering the conference and submitted to 1100 cities in advance.

4. There is no organization in the U. S. equivalent to The Asbestos Research Council which was established in 1957 in England. All the English asbestos companies are members and they have accomplished much research in the medical and environmental aspects of asbestos.

5. They are convinced that the method used for dust sampling and counting in the U. S. is not adequate for asbestos dust because it does not include long fibers and very small dust particles which their research has convinced them are great contributors to the problem.

6. They are also convinced that the Maximum Allowable Concentration used in the U. S. for asbestos dust is too high and it should be reduced.

Concerning the conference itself, there appears to be an accumulation of evidence of the association of asbestos with cancer. The purpose of the conference was to exchange information on this subject. This meeting, which was the first of its magnitude on this particular subject, included many papers relating asbestos exposure

mesothelioma cancer. These papers covered diversified subjects such as the ge logy, chemistry and physical properties of asbestos; the medical aspects such as biological effects, pathological and electron X-ray studies as well as means of prevention and protection of those exposed.

Some of the observations made which, if proved conclusive, would effect our industry are as follows:

1. Malignant mesothelioma (cancer associated with asbestos) has been found in cases with no occupational exposure to asbestos. These have included people a animals who lived in areas surrounding a factory or a mine. People in the area ma be effected by waste dumps outside a plant or mine.
2. The suspicion that the asbestos fiber is virtually indestructible so that even small concentrations have an effect if lodged in the body for long periods (20 years or more).
3. Asbestos fibers found in the base of the lungs of urban dwellers as remot as Capetown, South Africa and Miami, Florida with no occupational exposure to asbe The possibility being that asbestos products used in every day life may release as bestos fibers to the air.
4. The suspicion that long asbestos fibers accumulate at the base of the lung and small doses can thereby have a cumulative effect.
5. Increased evidence that insulation workers and laggers, with low exposure to asbestos dust, are subject to mesothelioma.
6. Increased world production (2/3 in asbestos-cement products) has increased exposure to asbestos.
7. Increased age at death has made those exposed more subject to cancer where previously death was caused by T. B. etc.
8. The possibility that prior exposure 20 or more years before will cause can in some susceptible individuals in spite of removal from exposure.
9. There is a possibility that there is a relationship between smoking and asbestos dust inhalation whereby the carcinogens in cigaretta smoke are trapped by fibers in the lung and thereby cause the cancer.
10. Persons with asbestosis will have greater possibility of death by cancer.
11. The possibility that cancer of the gastro-intestinal tract as well as lung cancer may be caused by exposure to asbestos dust.

It was obvious that the evidence presented at this conference was not conclusi and further research is indicated. For this reason, the International Union Agains Cancer met for two days after the conference for coordinated work to find answers t the many questions introduced at the conference. The purpose is to bring people to gether tohalp facilitate research for cancer study and set up small groups of peopl in specialized projects.

The questions that need answers are as follows:

1. From the pathological point of view, what is an asbestos fiber and how can it be positively identified?
2. Gravitational effect of asbestos fiber in lung.
3. Effect of duration of fiber in lung.
4. Study to see if different types of asbestos result in different types of cancer, if at all.
5. Relationship of smoking and air pollution, etc. to asbestos dust with resp to cancer.
6. Possible other causes of mesothelioma besides asbestos, i.e., other dusts.
7. Is asbestosis a precondition to lung cancer?

9. Need for more and better epidemiological (includes all exposures) stud ver a wide range.

10. Is there a detectable stage of asbestosis at which progression can removal of dust exposure?

11. International agreement on minimal clinical, radiological and lung func criteria for diagnosis of asbestosis.

12. International agreement on type of dust measurement to be made to contr all asbestos dust hazards.

What can Certain-teed Products Corporation do to meet this problem?

1. We must enforce our respirator program and include all areas where dust exposure may be intermittent or even seemingly negligible and dust control is not available. This would include maintenance and clean-up men.

2. Provide dust control in all areas where exposure to asbestos fiber exist

3. More frequent monitoring of dust areas to evaluate effectiveness of dust control measures. The use of millepore filters and personal samplers should be i troduced to meet the more acceptable dust counting methods for asbestos.

4. Use a lower limit (perhaps 2-1/2 million particles per cubic foot) as an allowable concentration for asbestos dust in our plants.

5. Cooperate with the U. S. Public Health Service when they approach us to c the epidemiological study in our plants.

6. Cooperate with other asbestos industries in any research projects similar to the Asbestosis Research Council in England.

7. Enforce the X-ray program so that all plants obtain 14" x 17" X-ray pictu at pre-employment and annually. Educate employees to know that the X-ray program a control program used as a preventative measure to remove the employee from excess exposure before he is permanently damaged.