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MEMORANDUM

TO: → J. A. Zapp, Jr.
J. W. Clayton, Jr.

FROM: G. J. Stopps

C-00227

THE MEDICAL ASPECTS OF THE USE OF ASBESTOS AND ASBESTOS PRODUCTS WITHIN THE DU PONT COMPANY

Meeting held at Haskell Laboratory for Toxicology and Industrial Medicine, October 25, 1966.

Present:

C. A. D'Alonzo, M.D. - Medical Director
J. R. Zahn, M.D. - Assistant Medical Director
J. A. Zapp, Jr. - Director, Haskell Laboratory
J. W. Clayton, Jr. - Assistant Director, Haskell Laboratory
W. E. Neeld, Jr., M.D. - Medical Director, Chambers Works
A. L. Linch - Manager, Industrial Hygiene Laboratory
S. Pell - Biostatistician, Medical Division
W. H. Zane - Design Division, Engineering Department
G. J. Stopps, M.D. - Chief, Physiology Section, Haskell Laboratory
C. F. Reinhardt, M.D. - Physiologist, Haskell Laboratory

Statement of Problem:

Asbestos has been recognized for many years to cause a chest disease called asbestosis. This is a fibrosis of the lung and is associated with several years' exposure to asbestos fibers at concentrations above the Threshold Limit Value of 5 million particles per cubic foot. More recently (within the past 10 years) an association between asbestos exposure and cancer has become apparent. This association shows itself in three ways. One, persons with established asbestosis have an incidence of cancer of the lung or pleura of approximately 13 per cent compared with a rate of 1.32 per centfor persons suffering from silicosis. Two, persons not suffering from asbestosis but who have a history of exposure to asbestos show a tenfold increase in the incidence of cancer of the respiratory system. Three, among the persons developing cancer who have been exposed to asbestos, a small number show a type of tumor which is very rare in the general population. In cases showing this tumor, the occupational history of the person has almost always revealed a period of exposure to asbestos.

The association of cancer with asbestos is of special concern at this time because of the lack of data upon which to base a safe dust concentration and the very long incubation period between the initial exposure and the development of cancer. This time interval varies from 15 to 45 years.

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Objectives of Present Study:

1. Assess the risk to the health of employees from asbestos within the Du Pont Company.

2. Examine the handling procedures for asbestos from an industrial hygiene viewpoint and prescribe safer procedures where indicated.

Plan of Attack:

A. Exposure.

1. Define asbestos dust levels for as many asbestos handling operations as possible.

2. Define materials containing asbestos and, where possible, type of asbestos.

3. Define operations where exposure may occur.

4. Define adequate respiratory protective procedures.

5. Consider need for substitutes for asbestos.

B. Medical.

1. Study records of respiratory cancer cases in search for an association with asbestos.

2. Develop registry of all known asbestos workers throughout the Company.

3. Examine records of asbestos workers and compare them with records of a non-asbestos exposed control group to assess possible hazard of working with asbestos.

4. Develop a smoking and respiratory function questionnaire for use as a routine in all plants as part of the periodic health examination for all personnel.

5. Develop pulmonary function tests for routine application during annual physical examination.

Items 4 and 5 will be of general value in the medical programs of the Company with special relevance to the asbestos study.

Implementation:

Implementation of the program to be through a working party on health and asbestos. Suggested make-up of working party:

Medical Department:	
	- G. J. Stopps, Physician
	- S. Pell, Biostatistician
Engineering Department:	
Engineering Service Division	- J. L. Parsons or his representative
Design Division	- W. H. Zane
Safety	- K. E. Keuper
Chambers Works:	
Industrial Hygiene Lab.	- A. L. Linch

Funding:

It is anticipated that the working party will be engaged in the collection of data on asbestos dust at a number of Company locations and in correlating health records with the duration of the exposure. This will require funding which can not be precisely forecast at this time but would almost certainly be below the cost of losing one third-party suit brought by a workman claiming pulmonary disability due to unsafe working conditions. The more important justification for a program such as that outlined above is the Company's traditional concern for the safety of its employees. It has been shown that some workers with asbestos have an increased risk of dying of cancer. It is of the utmost importance to discover whether under the conditions existing within Du Pont plants this is true for our employees who handle asbestos.

This project is in the general interest of the Company and affects many operating departments, thus funding should not be borne by a single operating department.

Duration of Study:

To be of value medical information on those working with asbestos must be kept current by an annual review. The initial correlation of existing records with exposure data would probably require about 30 days of full-time work by the biostatistician and the physician once the records were identified and collected in one place. These 30 days would probably be spread over a period of about four months. Dust sampling is impossible to forecast at this time since the scope of the program must be defined by the working party. When the program is working, a few days of work per year should keep the medical information updated.

Starting Date:

It is anticipated that the working party should meet within one month and field work should start during the first week of January.

Progress Reports:

A target date for a first medical report would be the first of June, 1967, and yearly thereafter.

Preliminary data on the dust levels, types and sizes of asbestos fiber would be expected to be available by the first of March; but due to the need to consider outside work and different climatic conditions, a more definitive report would not be available until July 30.

GJS/dyb
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