Johns-Manville
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Edmund M. Fenner
Vice President
Director, Environmental Services
Health, Safety & Environment Department

December 22, 1977

Mr. Gene E. Fax
ABT Associates Inc.
55 Wheeler Street
Cambridge, MA 02138

Dear Gene:

Dr. Kotin, our Senior Vice President for Health, Safety and Environment, has reviewed, from a medical/scientific standpoint, the introduction and opening lecture portion of your Trainer's Guide "What Should We Do About Asbestos" - A Course for Brake Shop Manufacturers dated 7 October 1977. He has asked me to write you and convey the following comments:

1. Page 4, paragraph 2, second sentence.

   "...even when fiber concentrations are relatively low."

   Dr. Kotin is concerned, as was I, over the terminology "relatively low" since this could be interpreted many ways depending on the reader. It should be realized that short term exposure can in fact be a heavy exposure in the absence of environmental control or personal protection.

   We believe that an occupational exposure limit of 2 fibers per cubic centimeter 8-hour time-weighted average will eliminate excess risk of contracting any asbestos related disease.

2. Page 15, paragraph 4, second sentence.

   "This particular cancer is called mesothelioma and is extremely rare except among people who have been exposed to asbestos."

   A number of epidemiological studies, including a series conducted by Muriel L. Newhouse, M.D. in the United Kingdom, indicate that approximately 30% of the people afflicted with mesothelioma have no known or recorded

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exposure to asbestos; either occupationally, para-occupationally or from living in the vicinity of an asbestos-using operation.

3. Page 19, paragraph 3, sentences 1 and 2.

"...but asbestos fibers are long and sharp. These are chrysotile fibers, the most common type currently in use."

The amphibole fibers such as amosite and crocidolite tend to be sharp and needlelike. However, most chrysotile fibers tend to be soft and curly. Photomicrographs of typical J-M chrysotile are attached.

4. Page 21, paragraph 2, sentence 3.

"...is extremely rare; almost every case can be attributed to the victim being exposed to asbestos, even if the exposure was very slight."

As noted in paragraph 2, many cases of mesothelioma have no known exposure to asbestos. The latent period for development of mesothelioma is very long, generally 30 years. Exposure levels 30 years ago, in factories, homes of workers and areas around fiber-using production operations were not known, but it is believed they were high; much higher than the present OSHA exposure limit.

5. Page 23, subparagraph 3, first sentence.

"...they almost always find high concentrations of asbestos fibers."

This is not true. There is no established correlation between quantity of fiber found in the lung at autopsy and mesothelioma.

6. Page 25, paragraph 3, first sentence.

"...it is important to realize they were intended mainly to prevent asbestosis, not cancer."

This is not so. Cancer was considered in promulgation of the emergency standard and the present standard for occupational exposure to asbestos. Many of the papers referenced in the OSHA rationale for the exposure limits specified in the standard discussed cancer.

7. Page 25, paragraph 3, third sentence.

"Nevertheless, they conclude, there is no evidence for a safe level of asbestos exposure."

The majority of medical/scientific opinion today accept that there is a time-dose relationship for the causation of asbestos related disease; that there is a dose, not necessarily zero, below which disease will not be created. The problem is, there is no agreement among scientists as to the magnitude of the "no response" dose level.

8. Page 29, subparagraph 2.

"The power to INSPECT AND ENFORCE regulations."

Depending upon the action taken by the Supreme Court, a warrant could be required before OSHA could inspect a workplace.

For additional information on Johns-Manville's posture relative to asbestos and health, I enclose a copy of our response to the OSHA Notice of Proposed Rulemaking - Occupational Exposure to Asbestos dated October 9, 1975.

Please call me, or Dr. Kotin directly, if you have any questions relative to these comments.

Very truly yours,

EMF:jh
Encl.

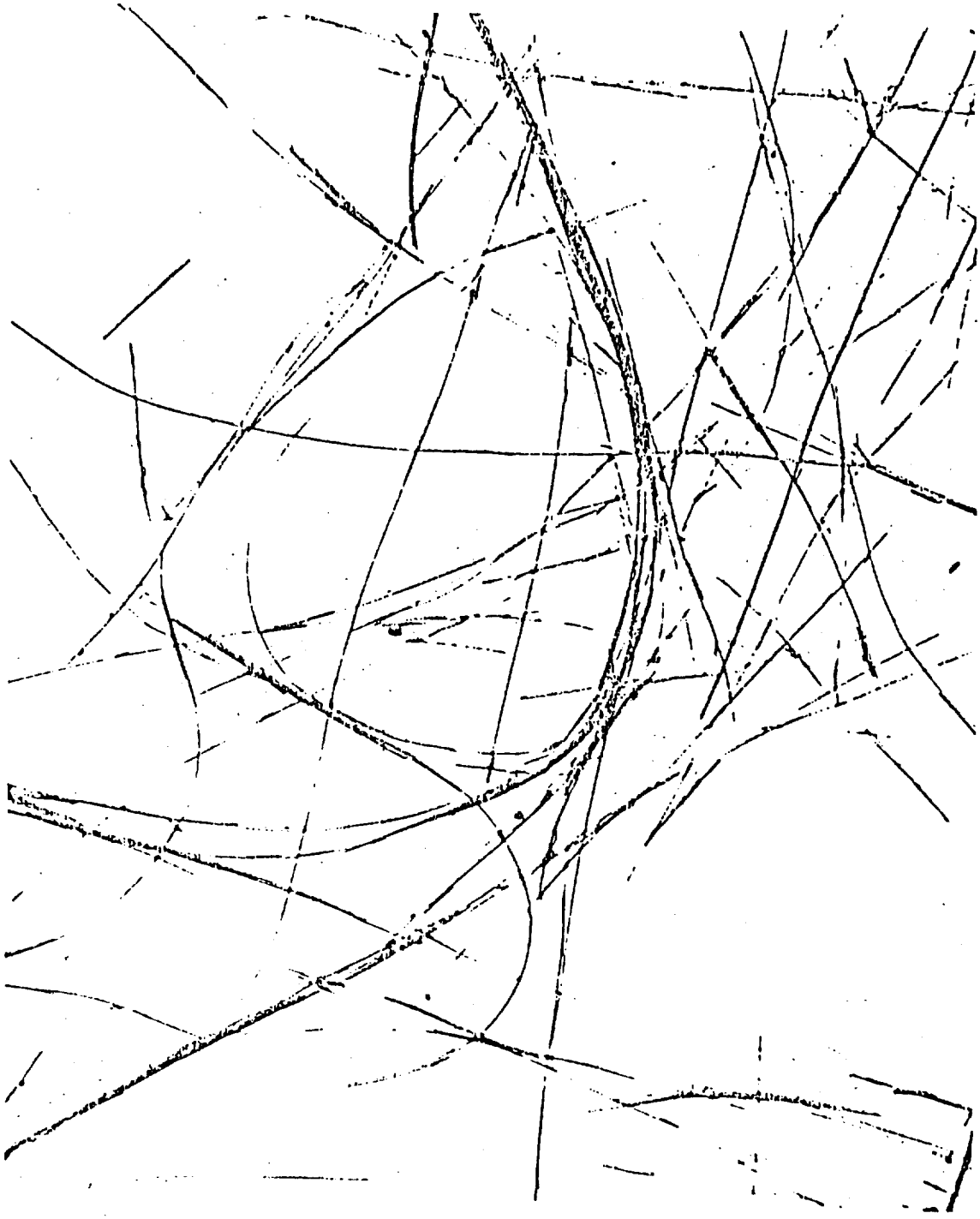
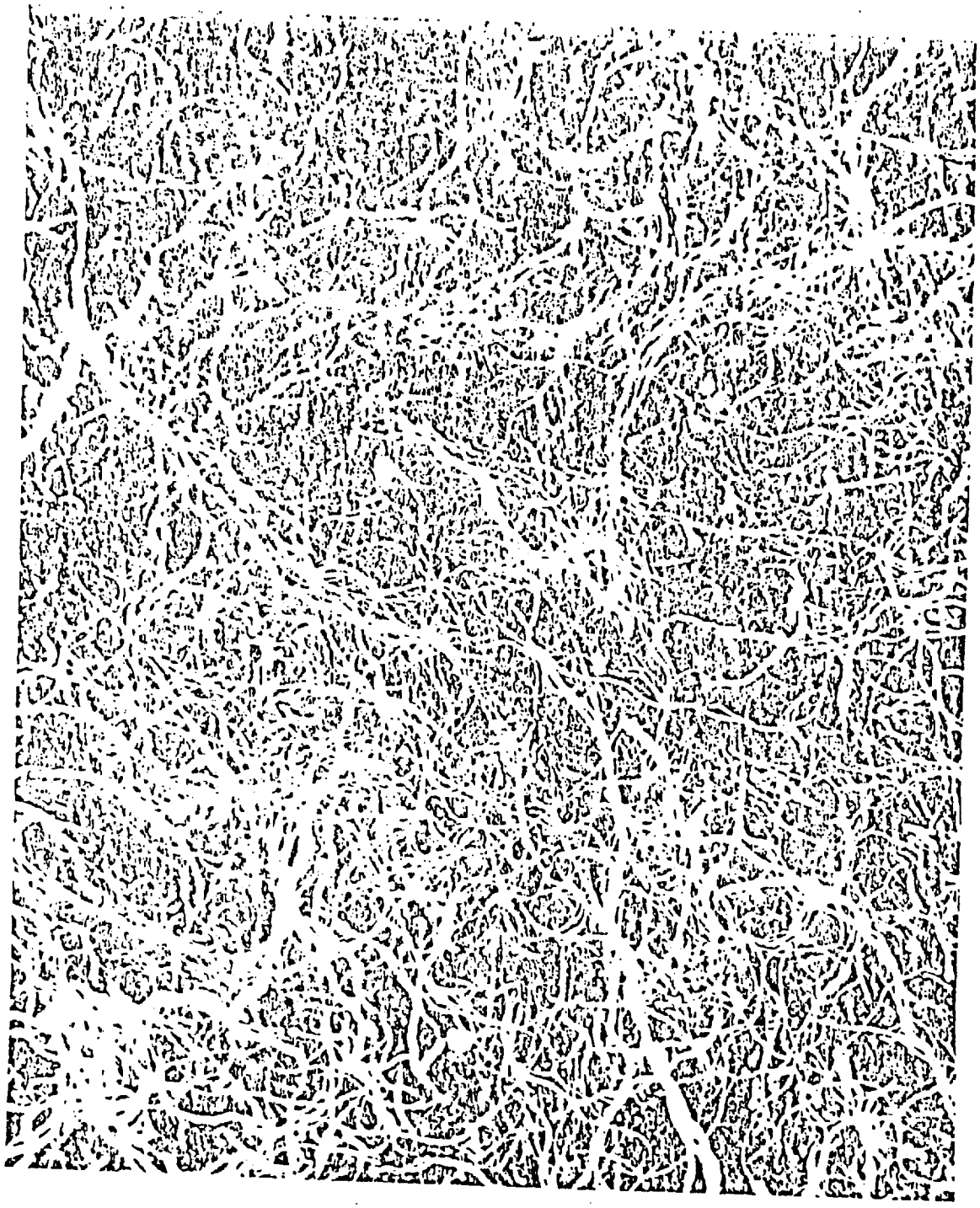


FIGURE 16

ELECTRON MICROGRAPH OF JEFFREY CHRYSOTILE

8000X

123 6856



100 microns

FIGURE 18

SOFT CHRYSOTILE

200X

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