

PRIVILEGED AND CONFIDENTIAL -
ATTORNEY-CLIENT COMMUNICATION/
ATTORNEY WORK PRODUCT

M E M O R A N D U M

To: File J-10-49
From: Wondie Russell
Date: November 3, 1982
Re: Asbestos Textile Institute Documents

The Asbestos Textile Institute ("ATI") was a private, voluntary trade association composed of members of the asbestos cloth producing industry. It was in existence from 1944 through 1976 and J-M was a member during the entire period. Personnel including Clifford Sheckler, Kenneth Smith and Hugh Jackson were active participants on ATI's Air Hygiene Committee. The activities of this committee are of interest in the context of asbestos health litigation. Committee activities must be analyzed for evidence of knowledge of the risk of asbestos exposure on the part of J-M, the asbestos industry, and the insurance industry.

The following is an index to the ATI minutes which were offered in evidence at the Speake v. J-M trial (Speake Trial Exhibit No. 30). These minutes represent a segment of the total number of ATI minutes in existence. J-M has a complete set of the minutes dating from 1944 to 1976 at World Headquarters and a summary is available. At some later date,

Disc No. 9640
Rev - 11/29/82

MS 002080

MT-001484

descriptions of other significant ATI minutes will be added
to this memo. ^{*/}

1. Minutes, Dust Control Committee, 3/13/46. Discussion of methods for counting dust, types of respirators, bag opening problems, use of X-rays to monitor employee health.
2. Letter from Fehnel of Metropolitan Life Insurance Company ^{**/}
to Armstrong of J-M, 5/20/46. Fehnel states that the best dust counting technology available is the Greenberg-Smith impinger method and that five MPPCF is considered the tentative safe level for asbestos dust exposure since Dr. Lanza's 1935 report.
3. Minutes, Dust Control Committee, 6/13/46. Letters and reports from member companies were distributed and dis-

^{*/} Some pages are missing from the minutes included in Exhibit 30. We will obtain those pages from J-M.

^{**/} During the 1920's and 30's, Metropolitan Life sponsored and participated in studies to determine the effects of inhaling asbestos. One noteworthy animal study that Metropolitan funded was that of Dr. Leroy Gardner, Director of the Saranac Lab. Dr. Gardner's report was published in 1931 and called "Studies on Experimental Pneumokoniosis." At the request of the asbestos textile industry, Metropolitan, under the direction of its Medical Director, Dr. A.J. Lanza, performed a study to determine if asbestos dust was an occupational hazard. Dr. Lanza's report was published by the U.S. Public Health Service in 1935 and entitled "Effects of the Inhalation of Asbestos Dust on the Lungs of Asbestos Workers."

Also during the 1930's, Metropolitan industrial hygienists (William Fehnel, Otto Binder, Bill Petrie) conducted dust surveys of J-M (and Raybestos) facilities. In 1936, Otto Binder left Metropolitan and accepted employment at J-M where he was responsible for dust sampling at all J-M facilities. A report of his 1938 survey of the Pittsburg plant is Speake Trial Exhibit No. 53.

cussed. Topics were importance of dust control, lack of uniformity in measurement and collection systems. Committee recommended that members contact appropriate government officials, the Mellon Institute and Metropolitan Life for purposes of developing a uniform program aimed at providing technical assistance to the member companies. Advocated using the Greenberg-Smith impinger method for dust sampling, taking periodic chest X-rays, reducing dust levels through dampening of the yarn. Cannon of J-M assigned to collect and test respirators.

4. Portion of the Minutes of Dust Control Committee, 9/5/46 (page 1 is missing), attached is a document entitled "TENTATIVE PLAN, Industrial Hygiene Programme (sic) for Asbestos Textile Association, by Dr. Vestal." The Committee decided to table the Vestal plan until it could complete its assignment to contact the Health Departments of various states, the Mellon Institute and the Metropolitan Life Insurance Company and obtain their suggestions. B.F. Stanton of J-M in Manville, New Jersey was designated to receive and compile all materials concerning Health Department suggestions. In addition, Stanton was to present J-M's report concerning the testing of respirators. J-M distributed copies of its own in-house industrial hygiene program for consideration by the other members.

Inter alia, Vestal's plan strongly recommended annual chest X-rays and the diagnostic technique of serial com-

parison of film. Vestal emphasized the need to standardize interpretation of X-rays for diagnostic purposes and recommended the use of a mobile X-ray laboratory to serve the needs of smaller members of the Asbestos Textile Institute.

5. Minutes, Asbestos Textile Institute, 10/3/46. This meeting approved the change in name of the Dust Control Committee to the Air Hygiene Committee.
6. 1946-47 Report of the Air Hygiene Committee to the Asbestos Textile Institute, September 25, 1947. The Committee recommended that Dr. Vestal's plan be tabled pending advice and information from state health departments, the Industrial Hygiene Foundation of America and the Metropolitan Life Insurance Company. The primary mandate of the Air Hygiene Committee was described as the elimination of dust at its source as opposed to treating/curing dust-related diseases.
7. Minutes, Air Hygiene Committee (the new name of the former Dust Control Committee), 11/19/47. The Committee recommended approval of the amount of \$5,000 for the next one-year period to begin implementing a program to reduce dust and improve diagnostic procedures.
8. Minutes, Asbestos Textile Institute, 6/17/48. It was agreed that at present it would not be advisable to begin a program to educate the public and/or manufacturers of asbestos safety clothing re the merits and limitations of asbestos textiles. Dr. Shaw read a progress report No. 8

(originally attached to the Minutes but not part of Exhibit) on research activities of the ATI Fellowship. Member companies had not yet approved the Air Hygiene Committee's proposal to commission research by the Industrial Hygiene Foundation.

9. Minutes, Asbestos Textile Institute, 4/7/49. The Report to the ATI presented by the Air Hygiene Committee included the opinion that the British asbestos textile industry was ahead of its American counterpart with regard to protective measures. The reason for this was believed to be the strict legislative scheme in England. Portions of an article entitled "Cancer and Environment" by Graff Conklin, published in Scientific American, Vol. 180, No. 1, January 1949, were read. The findings therein were deemed unjustifiably incriminatory of asbestos as a carcinogenic material, and it was suggested that some clarification through Dr. A. J. Lanza of Metropolitan Life Insurance Company was in order. A conference with Dr. Lanza was approved.
10. Minutes, Asbestos Textile Institute, 6/16/49. G. W. Marshall of Raybestos-Manhattan reported his discussions with Dr. A.J. Lanza in follow-up to the ATI's concerns based on the article "Cancer and Environment." Correspondence between Marshall and Lanza was attached to the ATI minutes. (No correspondence is attached to the Exhibit.) The ATI unanimously agreed that the matter would be tabled.

11. "Report". This document is three pages long, dated February 13, 1952 and signed by J. Tesniere of S.A. Francaise du Ferodo of Paris. The Report summarizes the findings of a French factory physician based on the X-ray reports of 88 workers in an asbestos manufacturing plant in France. 15 workers among the 80 who had been employed permanently in the manufacturing departments were found to have asbestosis to a "more or less marked degree." The doctor determined that the number of asbestosis cases increased with seniority. The doctor carefully described the characteristics of the shadows created on the X-rays by asbestos exposure. He urged that X-rays should be taken after the patient had taken a deep breath and that photographic paper of 60 inches by 72 inches be used for the purpose of greater clarity. Once the disease process begins, the first symptom is generally dyspnea. "As soon as the worker has difficulty breathing, it is normal that the aggravation advances faster. Nasal respiration becomes insufficient at certain times. The worker has to breathe through the nose and mouth at times; the air is not filtered by the nasal passages. The dust particles penetrate in greater numbers to the base of the small bronchi and penetrate to the avelia (sic) of the lungs and furthermore, these patients become more susceptible to infections of the larynx, the trachea and the bronchi."
12. Minutes, Air Hygiene Committee, 3/11/53. Dr. Kenneth Smith attended as a guest and discussed the "medical

aspects of asbestosis." Smith stated that asbestosis does not predispose to tuberculosis; asbestos dust is relatively innocuous and it is asbestos fibers that create disease; amosite is more dangerous than chrysotile; individual susceptibility varies; medical programs and engineering programs to control dust are essential; individuals with prior chest problems should not be exposed to asbestos. There was a discussion of the inadequacy of current air sampling techniques to measure fibers as opposed to dust particles,^{*/} and the Committee recommended an investigation into the best method of measuring fibers. H.M. Jackson was Chairman.

13. Minutes, Asbestos Textile Institute, 3/12/53. A Report to the ATI was made on behalf of the Air Hygiene Committee by Hugh Jackson. Based on this presentation, two specific actions were taken by ATI. The portion of the Minutes

^{*/} Since the 1920's, there have been instruments and methods of collecting and counting dust particles. Until the mid-1960's the standard instrument used to collect the samples was an impinger. When using this method of collection, the MPPCF (million particles per cubic foot of air) standard was employed. The drawback to the impinger method was that it captured all airborne, insoluble matter, and it was impossible to separate and count the various types of dust present. Therefore, an accurate count of the asbestos dust present could not be made. In the mid-1960's, a new collection device, the membrane filter, was perfected, which enabled technicians to isolate and accurately measure asbestos dust alone. The standard then changed to fibers per cubic centimeter (F/CC). A fiber is defined as having a length at least 3 times its diameter.

which would describe these actions was not attached to our copy of the Exhibit.

14. Minutes, Air Hygiene Committee, 6/10/53. Medical directors of the various members were in attendance at this meeting. The Committee identified the following "unanswered questions": "(1) What dusts or fibers are significant in the production of fibrosis? (2) How can the dust or fiber be measured in the work environment? (3) How can clinical experience be correlated to exposure? (4) What medical standards are available for the uniform evaluation of disease occurrence and extent? The resolution of these questions would lead to the answer of the fifth problem. (5) How can the effectiveness of engineering control be evaluated?"

The Committee concluded that industrial hygiene surveys made to date which fail to differentiate between particles and fibers are "practically without value." The doctors agreed upon the following: Individuals who are asthmatics, mouthbreathers, who have respiratory difficulties, chest deformities, cardiac disease or are overweight should not be exposed to asbestos. Single PA and lateral pictures should be taken on a periodic basis. Pulmonary Function Tests should be included in examinations. Pre-employment histories should be obtained to identify prior dust exposure. It was agreed that significant X-ray changes

generally do not occur in less than five years of exposure. Valid diagnosis requires a series of X-rays, complete employment history, and identification and evaluation of exposure. The doctors were in agreement that the "presence of asbestos bodies [presumably in sputum] are not an indication of the disease but only of the body's defense mechanism." The doctors were to attend the next meeting and at that time to bring X-rays exemplifying the four diagnostic classifications they had agreed upon (borderline, early, moderate, advanced) and were to bring a summary of the work force of each plant indicating diagnosis, X-ray classification and length and type of exposure for each individual. The doctors praised the prior Saranac research and discussed areas where further investigation was needed. The areas for further research are not listed.

The Hygiene Committee discussed the problems of finding a technique for measuring fiber concentrations and the issue of what diameter fiber was relevant for etiological purposes. While Saranac determined that the minimum length of fibrous-producing fibers was 10 microns, it did not discuss the issue of diameters. It was noted that the industry might have difficulty getting state governments which imposed TLVs, in terms of dust particles per cubic foot in their industrial hygiene codes, to adopt a fiber standard. The Committee recognized that it might

be necessary for industry to operate under dual standards for a period of time until the "self-imposed standard based on experimental and clinical evidence" should come to be accepted. It was noted that New Jersey was considering revision of its TLV and that copies of the Saranac reports and opinions had been presented to the New Jersey state officials.

A new design for dust control at the twister operation was discussed and copies of the design were to be made available upon request.

15. Minutes, Asbestos Textile Institute, 6/11/53. Hugh Jackson made a presentation on behalf of the Air Hygiene Committee. Jackson described the Committee's meetings with the medical representatives of most members. A full report covering the work of the Committee was attached to the Minutes. The Report is not included in the Exhibit.
16. Minutes, Air Hygiene Committee, 9/9/53. As at the prior meeting, medical directors of the various corporations were in attendance with the exception of Dr. Kenneth Smith. "A review of the X-rays presented by each of the participating doctors established that X-ray classifications of Negative; A-2, moderately advanced; and A-3, far advanced, were rather uniformly identified. There was considerable variance of opinion, however, in the borderline classifications of P-2, linear exaggeration and A-1,

early asbestosis. "It was a conclusion that this difference was a matter of individual interpretation and one which could not easily be resolved." Difficulties of diagnosis in obese persons was discussed. It was agreed that asbestosis was not an aggravating factor to heart conditions caused by overweight. It was proposed that an investigation into the relationship of off-the-job behavior to disease production be undertaken. Factors essential to a diagnosis of "disabling (compensable) asbestosis" were enumerated: exposure of five or more years in a visually dusty atmosphere; X-ray patterns and indication of emphysema; symptoms such as shortness of breath, dry cough, easy fatigue on exertion in moderately advanced asbestosis and easy fatigue without exertion in far advanced asbestosis; cyanosis might be present if right heart strain were evident; decreased chest expansion accompanied by moist, crackling rales; lung function studies indicating a marked reduction in timed vital capacity and blood arterial oxygen before and after exercise; lung biopsy if feasible. It was noted that symptoms could be relieved through the use of breathing exercises using oxygen and bronchodilators. The doctors recommended that X-ray diagnosis should automatically dictate a job transfer to a location of less exposure for workers under the age of 40. If progression were seen on

serial films, job transfer should be made regardless of age. It was recommended that further study be done concerning the roles of different types of fibers in disease production and the relationship of heart function to asbestosis. It was agreed that each member company would present a review of its experience with dust collection equipment at the next meeting. In addition, it was agreed that each doctor would compile a list showing the years of employment and X-ray classification of each employee at each asbestos textile plant in order to thoroughly survey the status of asbestosis within the industry.

17. Minutes, Air Hygiene Committee, 12/9/53. Morning session devoted to study of survey of asbestosis incidence within the industry based on the data submitted by member companies. Results indicated that from 5 to 11 percent of employees working in exposed areas are affected. Note that the relevant industry is the asbestos textile industry. There was also a discussion of the effectiveness of "forced breathing therapy." It was reported that Travelers Insurance Company's ^{*/} Engineering Laboratory in

*/ During the 1950's, dust samples from the Pittsburgh plant were sent to Travelers for analysis. Speake Trial Exhibits No. 182 and 183 are examples of Travelers' dust analysis reports. Other documents pertaining to the dust analysis work Travelers did for the Pittsburgh plant can be found in J-10-60 Speake Workfile #12. Perhaps similar documents exist somewhere for other plants.

Hartford had agreed to undertake a study of "particle size and diameter." In addition, the Committee announced that the U.S. Public Health Service had agreed to address the issue of comparative efficiency of various dust sampling equipment to monitor fibers as opposed to particles. At the afternoon session a report was made by each member of its dust collection equipment experiences. It was agreed that the American Wheelobraiter (sic) was the best dust collector currently on the market. The Committee proposed consideration of the elimination of dry weaving as a production technique because of the uniform inability to control dust generation on this operation.

A copy of a summary of the data collected concerning the incidence of asbestosis is attached to the Minutes and entitled "ASBESTOSIS INCIDENCE STUDY", December 8, 1953.

18. Minutes, Asbestos Textile Institute, 12/10/53. D. R. Holmes made an oral report describing the activities at the December 9, 1953 meeting of the Air Hygiene Committee. A written report of the activities at that meeting was attached to the Minutes but does not appear as part of the Exhibit.
19. Minutes, Air Hygiene Committee, 3/10/54. Results of Traveler's survey analyzing both fiber and particle counts contained in samples supplied by the member companies were discussed. Generally, fiber counts were found

to be below the proposed one million fibers per cubic foot standard recommended at the 1952 Saranac Symposium. Noted that ACGIH had received the Saranac research work but had not yet made a determination concerning a change in TLVs. Comparison of dust counts where wet as opposed to dry weaving methods was in use was proposed. Discussion of fiber conditioning methods. Committee was to prepare an outline of information to be distributed to those making inquiries concerning the health and hygiene aspects of asbestos fiber exposure. A report received from the "French Associates" of ATI was discussed. The French doctors had concluded that there was no relationship between asbestosis and pulmonary cancer; that asbestosis did not predispose to tuberculosis but did make recovery from TB difficult; and identified a positive correlation between alcohol abuse and asbestosis. The U.S. Public Health Service study on instrumentation for dust counts was still underway. Member companies had submitted their samples.

20. Minutes, Air Hygiene Committee, 6/9/54. Committee outlined the information which should be provided for dissemination to "interested industrial hygiene and health personnel." It was observed that the current industrial hygiene survey program (presumably that underway at USPHS

or Traveler's) had indicated that while the 210x magnification permitted identification of a larger number of fibers than the 100x magnification, the ratio is fairly constant. A chart permitting conversion from the older counting technique to the predicted count using the new technique was attached to the Minutes. (No materials are attached to this Exhibit.) Further studies should be done concerning the relationship of heart disease and asbestosis and the effects of Intermittent Positive Pressure Breathing on asbestosis. The New Jersey State Department of Labor rejected the proposed change to a fiber TLV because the ACGIH was unable to specify a maximum allowable concentration in terms of fibers as opposed to dust particles. The need to conduct further autopsies was emphasized. Several member companies had requested guidance in obtaining air hygiene sampling services "since state agencies are not available for frequent checks." The Committee recommended the Industrial Hygiene Foundation, Mellon Institute, William Fehnel (formerly of Metropolitan Life Insurance Company, Industrial Health Laboratory).

21. Minutes, Air Hygiene Committee, 10/6/54. Doctors including Kenneth Smith of J-M and Gerrit Schepers, Medical Director of the Saranac Laboratory were in attendance at this meeting. A Dr. P.A. Theodos representing Asten-Hill made a presentation of his proposal for research regarding

heart function and asbestosis. Theodos pointed out that by describing the diagnosis as "pulmonary fibrosis" a member company could obtain indemnity from the company's employee medical insurance carrier. In such instances it was recommended that the question whether the illness or disease were caused by the occupation be answered in the negative. It was noted that this had never been challenged by the insurance companies and that the claims had been paid without comment. Schepers reviewed slides showing autopsy evidence of asbestosis. Kenneth Smith explained how to obtain autopsy specimen studies from Saranac Laboratory. Such autopsy reports to the submitting company would permit an evaluation of the extent of disease in a manner not possible through X-ray and clinical diagnosis and thereby the extent of workers' compensation liability might also be ascertained.^{*/}

Schepers presented a summary of articles by Knox and Beattie which dealt with mineral particle and fiber content of lungs after exposure to asbestos dust. Schepers then made a presentation on the relationship of asbestos to lung cancer. Schepers summarized findings in West Germany and Britain which suggested a clear correlation.

^{*/} In the 1940's and 50's Saranac performed autopsies of certain J-M employees at J-M's request. An index to some of those Saranac autopsies is located in Group 16 of our J-M Knowledge Seminar Documents.

One study in England found that females develop lung cancer at an earlier age and after a shorter exposure time than males. It was noted that the experience in North America did not support the European findings and it was hypothesized that the difference was probably based on the use of amosite fiber in Europe and chrysotile fiber in North America. Schepers was asked to submit a proposal for further research by the Saranac Institute.

Attached to these minutes was a copy of a "Prospectus for the Study of Asbestosis" by Dr. P.A. Theodos. This proposal suggests that a group of 50 patients be studied for a period of one year during which detailed workups including electro-cardiograms, cardiac catheterization, lung biopsies, pulmonary function tests X-rays and so on should be completed.

22. Minutes, Asbestos Textile Institute Board of Governors, 10/6/54. The portion pertaining to the Report of the Air Hygiene Committee describes that Committee's meeting with member company doctors and Dr. Schepers. The study by Dr. Theodos was approved and the recommendation for a study to determine the relationship between asbestosis and lung cancer was returned to the Air Hygiene Committee for a more detailed proposal.
23. Minutes, Air Hygiene Committee, "3/55" has been noted in handwriting at the top of the first page of these minutes. The Committee reviewed a research proposal received

from Saranac Laboratory for study of the relationship of pulmonary cancer to asbestosis. It was decided that an additional research proposal should be solicited. It was noted that one of the ATI member companies was currently contending with a workers' compensation claim alleging that a worker had pulmonary cancer as a result of asbestos exposure. In response to Dr. Schepers' observation that some of the fiber conditioners contained oils and lubricating products which might be carcinogenic, the Committee decided to investigate this potential hazard more fully. The Committee recommended regular inspection of all dust control equipment by use of a manometer to insure that the dust collection system was operating properly. In addition, preventive maintenance, including replacement of bags, hoods and pipes, was recommended.

24. Minutes, Air Hygiene Committee, "6/55" noted in handwriting at the top of page 1. The Committee voted to approve Theodos' proposal for cardio-pulmonary studies. The individual workups completed during the study were to be distributed both to the company's physician and to the individual's private physician, if the worker desired. It was noted that the study would facilitate evaluation of the validity of pending or potential workers' compensation claims as well as the extent of individual disability and the liability of the employer. In addition, it was agreed

that further autopsy studies should be conducted by Schepers at Saranac Laboratory. After a series of case studies, Schepers was to summarize and report to the ATI his findings and observations.

25. Minutes, Air Hygiene Committee, 9/7/55. Three representatives of the Quebec Asbestos Mining Association were in attendance (including Ivan Sabourin, General Counsel to QAMA). The three guests described the activities of QAMA, the experience of the Thetford clinic in diagnosing asbestosis and lung cancer (15 cases in 10 years operation), and dust controls in mines and mills of QAMA members.
26. Minutes, Air Hygiene Committee, 3/7/56. Dr. Kenneth Smith was among the guests at this meeting. He had asked to attend because of "recent developments in the compensation field regarding asbestosis and cancer." Smith described a compensation case which had been decided in favor of the worker by the Pennsylvania State Compensation Board. The referee relied on the findings of Dr. Hueper of the National Cancer Institute as set forth in Public Health Monograph, No. 36, U.S.P.H.S.
- Dr. Kenneth Smith strongly recommended a study of the relationship of lung cancer to asbestosis to be conducted by the IHF. The study would be similar to that under proposal for QAMA. Smith described reports written or

MS 002098

-19-

MT-001502

circulated by W.C. Hueper, Chief of the Environmental Cancer Section of the National Cancer Institute, National Institute of Health, Bethesda, Maryland. Item 2 is a description of a proposal by IHF to conduct a dust survey for each member company of the ATI. Item 3 is a description of the methods used to condition fibers in the industry. A mineral based conditioning oil was recommended because it was considered "comparatively harmless." There was a description of dust concentrations in the weave room at Garlock.

27. Minutes, Air Hygiene Committee, undated, page 4 only.

This document sets forth the Agenda for the next meeting, also undated. Agenda includes review of proposal of the Industrial Hygiene Foundation regarding asbestosis and cancer; review of proposal regarding the IHF Environmental Dust Survey; report on general improvements and elimination of dust by whatever means; continued discussion of the effectiveness of oil as a fiber conditioner. Note that the Board of Governors meeting on March 7, 1956 granted approval to the Committee for a preliminary fact finding survey on the asbestosis/cancer relationship. Funds not to exceed \$1,000.

28. Minutes, Air Hygiene Committee, 6/4/56. Dr. Kenneth Smith again was in attendance and the focus of discussion was the Taylor compensation case from Lancaster, Pennsylvania

MS 002099

which had been discussed at the previous meeting. The IHF proposal entitled "Proposed Epidemiological Study of Lung Cancer in Asbestos Workers for the Asbestos Textile Institute" was discussed. IHF proposed to inquire into whether there was a relationship between asbestosis and cancer and also whether a relationship existed between heavy asbestos exposure and lung cancer. There was a discussion of a request from Dr. Kenneth M. Lynch, President of the Medical College of South Carolina, for industry funding of his research into the question of the possible link between asbestosis and lung cancer. The Minutes note that Dr. Kenneth Smith had worked along with Dr. Lynch for many years and that Lynch's research had previously been funded by the National Cancer Institute of the U.S. Public Health Service. ATI decided to respond to Lynch's request in the negative on the basis that they were already funding other research in the same area. There were further discussions of fiber conditioners and of the Wheelobraiter (sic) dust collection system.

29. Minutes, Air Hygiene Committee, 9/5/56. Morning session continued discussions of the Wheelobraiter (sic), twisting operation and use of fiber conditioners. The first topic discussed at the afternoon session was whether yearly X-ray examinations might result in a radiation exposure risk to employees. The issue was tabled pending collection of additional information. All companies were

reported as having improved in their dust control results. Credit was given to the "free exchange of ideas within the Committee." The issue of whether to approve the IHF proposal regarding a study of lung cancer in asbestos workers was tabled.

30. Minutes, Air Hygiene Committee, 3/7/57. The proposed IHF investigation of the link between lung cancer and asbestos exposure was rejected for several reasons. To begin with, it was felt that the QAMA study (conducted by the IHF, but investigating miners as opposed to textile workers) essentially duplicated the issue raised in their own study.^{*/} In addition, "there is a feeling among certain members that such an investigation would stir up a hornet's nest and put the whole industry under suspicion." And, finally, there was a feeling that there was insufficient evidence of cancer and/or asbestosis to warrant the survey. The Committee also voted against the proposal to fund a survey of environmental dust levels within the member companies. The decision was based on the conclusion that individual members could locate their own trouble spots and correct them. The members also felt that it might be possible to use the facilities of Traveler's Life

^{*/} For other documents which discuss the IHF/QAMA and the proposed IHF/ATI studies, see the documents referred to in Kathy Rogers' memo to file J-10-49, dated 10/27/82.

Insurance again on a cheaper basis. The remainder of the meeting dealt with methods of dust control.

31. Minutes, Air Hygiene Committee, 12/5/57. It was reported that the QAMA study had been completed. The Committee agreed that a greater effort should be made to provide new workers with correct information concerning the industry and to acquaint the medical profession with conditions within the plants. There was a discussion of re-use of air exhausted from dust collection equipment. There was a discussion of the selection and use of respirators and a three-page summary of this information prepared by Hugh Jackson was distributed. This document is attached to the minutes. Respirators therein are described as the last line of defense.
32. Minutes, Air Hygiene Committee, 6/5/58. Discussions focused primarily on techniques of dust control at specific operations. The Committee was informed of the formation of an Asbestosis Research Council in England. The Raybestos-Manhattan representative described a patented method for "neutralizing the lung fibrosis producing properties of finely pulverized 'siliceous' materials." In reference to this, the minutes state "the idea of introducing a foreign material into the air taken into the lungs was new to the Committee members, but Dr. Shaw advised that it has been in use about 10 years."

33. Minutes, Air Hygiene Committee, undated but bears handwritten notation "9/58" on page 1. The Committee discussed the QAMA Report and there is a quote from page 649 of that report included in the minutes. The quoted portion of the Summary and Conclusion was to the effect that the rate of lung cancer among asbestos miners compared fairly closely to the rate within the population at large. There was a brief discussion of two recent compensation cases.
34. Second Annual Report for the Twelve Months Beginning First October, 1958, Asbestosis Research Council.
35. Third Annual Report for the Twelve Months Beginning First October, 1959, Asbestosis Research Council.
36. Minutes, Air Hygiene Committee, 3/3/60. One member company (unnamed) reported on a comprehensive survey by its insurance carrier (unnamed^{*/}) and promised that when the results were available they would be presented to the Committee. This company reported that based on X-rays they believed that they had only 7 cases of first stage asbestosis (each individual had been employed for 15 years or longer) as opposed to 85 cases evident for similarly employed workers as of 1936. "This is 'Living Proof' that dust removing systems have and are now benefiting all concerned." Four

^{*/} Efforts should be made to determine which asbestos textile company and which insurance company are being referred to.

MS 002103

-24-

MT-001507

member companies announced that they were conducting annual X-rays for all employees. It was reported that several member companies were conducting and encouraging group visitations by occupational health study groups and student nursing classes. The Committee urged the expansion of such visits to include groups from throughout the medical profession. J-M was reported to be conducting a study to compare the Greenberg-Smith impinger with the Midget impinger. There were discussions of bag dumping equipment, including the handling of paper bags. The Committee received a copy of the Second Annual Report of the Asbestosis Research Council of England. A copy of the report was attached to the minutes but is not included in the Exhibit.

37. Minutes, Air Hygiene Committee, 6/6/60. There was a preliminary discussion of an environmental health survey of employees, detailed discussions of dust collection equipment and systems of members and of safety equipment in use at various plants.
38. Minutes, Air Hygiene Committee, 9/8/60. There was a discussion of the acquisition of a portable aerosol photometer by the North Carolina State Department of Health. The equipment was described as a sophisticated method for detecting the nature and concentration of dust particles in the air. It was noted that some states had

MS 002104

-25-

MT-001508

begun inspecting employers for noise levels. There was a recommendation that employers begin including hearing tests in pre-employment physicals to facilitate defense in subsequent compensation claims. There was further discussion of recirculation of air exhausted from dust collection systems and it was noted that this practice is not permitted in England.

39. Minutes, Air Hygiene Committee, 9/7/61. Prior to this meeting, each Committee member had received a composite copy of a report describing the dust sampling and counting techniques of all other members. The Committee decided to establish an ATI approved dust sampling and counting technique based on the use of the Greenberg-Smith impinger. It was also decided that at the next meeting (December), each member would bring its dust control technician. There was a suggestion that a sub-committee composed of the company doctors be created and directed to meet a minimum of once each year to exchange medical information. It was also suggested that the ATI Board of Governors approach the U.S. Public Health Service to request a survey of the industry for the purpose of determining whether there is a connection between asbestosis and cancer.^{*/} No decision was reached. A publication

^{*/} See Kathy Rogers' memo to File J-10-49, dated 10/20/82, for a brief summary of the medical literature regarding asbestos/asbestosis and cancer.

MS 002105

MT-001509

sponsored by H.K. Porter Co., Inc. (one of the member companies) entitled "Health Progress in an Asbestos Textile Works" was distributed to members. The document had already been published in the Archives of Environmental Health and permission had been requested to reproduce the article in England. The Committee responded favorably to the positive publicity generated by this article. The Minutes reflect additional discussions of dust control equipment and acknowledgment of receipt of the Third Annual Report of the Asbestosis Research Council of England.

40. Minutes, Air Hygiene Committee, 3/8/62. U.S. Public Health Service ready to commence a study in North Carolina to evaluate statistics re death among asbestos workers between the years 1940 and 1950. The doctors of five member companies were present and met under the direction of Dr. Kenneth Smith. Medical programs were discussed in detail and the Committee recommended that the doctors meet twice each year and that each Company be furnished with a list of competent consultants and expert witnesses.
41. Draft, Environmental and Medical In-Plant Occupational Health Study of the Asbestos Products Industry, January 15, 1963, Department of Health, Education and Welfare, Public Health Service, Division of Occupational Health. This is a description of the study then underway in the asbestos products industry.

MS 002106

-27-

MT-001510

42. Minutes, Air Hygiene Committee, 1/24/63. These Minutes indicate that three doctors were in attendance including "Dr. Sheckler on behalf of Johns-Manville Corporation." Three other physicians attended on behalf of the U.S. Public Health Service and made a presentation describing their industry survey (Crawley, Enterline and Kushner). ATI agreed to sponsor Dr. Paul Gross of the Mellon Institute as a representative to meetings of the Asbestos Research Council in England. Discussions included the use of hygienic masks and employee attitudes concerning such use.
43. Minutes, Air Hygiene Committee, 6/6/63. The Committee learned that Dr. Irving Selikoff would read a paper at the next AMA meeting concerning his study of approximately 1,500 workers in the asbestos insulation industry and that this report would indicate a large incidence of lung cancer among such workers. Cralley of the U.S. Public Health Service reported on his visit to the Asbestosis Research Council in England. He noted that in England dust counts were analyzed solely in terms of fibers rather than particles. The U.S. Public Health Service Survey of the North American asbestos industry was expected to get underway by beginning to conduct environmental studies in the fall of 1963 and to commence physical examinations of workers late in 1964. The survey would begin in the

asbestos textile portion of the asbestos industry and then evaluate other segments. Textiles were selected because they were thought to offer the best source to study the possible results of asbestos exposure in the absence of other contaminants such as might be found in the insulation industry.

44. Minutes, Air Hygiene Committee, 10/3/63. The Committee agreed to make inquiries to the Asbestosis Research Council in England concerning the membrane filter method of counting fiber concentrations. In addition, American manufacturers of membrane filters were to be contacted. There was a brief discussion of Dr. Selikoff's paper entitled "Asbestos Exposure and Neoplasia"^{*/} which had been presented at the American College of Chest Physicians of the AMA on June 17, 1963 in Atlantic City.
45. Minutes, Air Hygiene Committee, 6/4/64. Cralley of the USPHS presented a comparative chart showing dust concentrations in 1934 versus 1964. The Committee noted that the results were very encouraging. There is a list of four research papers received from the Asbestosis Research

^{*/} Dr. Selikoff conducted an epidemiological survey of insulation workers and discovered a higher incidence of asbestosis, lung cancer, and mesothelioma present in insulation workers than in the general public. Most of Dr. Selikoff's information came from union records of members of the New York insulation trade dating from 1942 through 1962. J-M acknowledges that after the publication of Dr. Selikoff's paper, it became aware that there was an asbestos health risk to insulation workers.

Council in England. The papers were described as interesting and very informative. The Committee decided that ATI should encourage all persons studying the effect of asbestos on health to forward their research papers.

There was a discussion of a medical report which had been published in Diseases of the Chest, Official Journal of the American College of Chest Physicians. The Report observes that while "total dust exposure may be higher in the asbestos mining industry, the health hazard is more serious in the asbestos textile industry. The explanation for this is that in mining 80% to 95% of the dust may be serpentine rock dust, which is biologically relatively inert." It was noted that the New Jersey Department of Health would be presenting a conference on the biological effects of asbestos exposure between October 19 and 21, 1964, but that the ATI would not take an active part in the conference.

46. Minutes, Air Hygiene Committee, 10/8/64. Progress of the U.S. Public Health Service Survey was described. There was further discussion of the New Jersey conference on biological effects of asbestos. The Committee was now concerned that the conference would be used as a vehicle for establishing a link between asbestos and cancer and for that reason desired to take an active role in investigating and rebutting information to be presented at the Conference.

47. Minutes, Asbestos Textile Institute Board of Governors Meeting, February 11, 1965. There was a discussion of the recent unfavorable publicity generated by the conference on "Biological Effects of Asbestos" held in October, 1964 at the Waldorf-Astoria Hotel, under the auspices of the New York Academy of Sciences. The need for an industry response to allay the fears of customers was discussed as was the formation of an association of the major asbestos fiber producers in Canada. The group was informed that this new association had authorized investigations into the health of member's employees and also intended to deal jointly with the problems of adverse publicity. It was decided to consult with Dr. Cralley of the Public Health Service to attempt to shape answers to the issues raised by the recent conference.
48. Minutes, Air Hygiene Committee, undated memo, page 2 only. There is a reference to two articles which were discussed: one, entitled "Dangerous Dust" published by Scientific American, December, 1964 and the other a newspaper article published in the Cleveland-Ohio Plain Dealer on January 12, 1965. Members were encouraged to forward the pamphlet "Method for Determining Asbestos Dust Concentration" to customers inquiring about dust control. In the period following the conference on "Biological Effects of Asbestos" which took place between October 19 and 21, 1964 and the

date of this meeting, the Committee mailed out 17 additional copies of the pamphlet.

49. Minutes, Air Hygiene Committee, 6/3/65. Doctors were in attendance including Kenneth Smith and representatives of QAMA. Cralley of the USPHS discussed recent research articles including one describing the "relationship of impinger counts to fiber concentration by membrane filters in asbestos textile plants" prepared by Ayer, Edwards, Fanney, and Lynch of the U.S. Department of Health, Education and Welfare. The Minutes note the following points based on these articles: (1) There is a 25% error in dust counting. (2) Where there is a 5,000 particle total count, the fiber count is considerably lower, around 1,000.

There was discussion of a direct dust counter light and photoelectric cell being developed by Bausch & Lomb. Once perfected, the unit was expected to eliminate manual counting.

There was a proposal to retain a dust control consultant to serve all member companies and to supervise a uniform industrial hygiene program including the performing of periodic surveys within the plants. Members were urged to balance the cost of such a consultant with the potential cost of future compensation cases.

MS 002111

There was a report on the distribution of the ATI pamphlet called "Method for Determining Asbestos Dust Concentration." Copies had been sent inter alia to Asbestos Magazine. Since the Committee was confronted by a surplus of approximately 859 copies, it was agreed that an ad would be placed in the Journal of Industrial Hygiene.

50. Minutes, Asbestos Textile Institute, 6/4/65, Thetford Mines, Canada. Numerous guests, many of whom were members of QAMA, were in attendance. Medical directors of various members of both ATI and QAMA were in attendance, including Dr. Kenneth Smith. Smith made a presentation which "stressed the desirability, indeed the necessity, of the asbestos industry telling the truth about the health of its employees and giving meaningful reports as to company experience. He pointed out that some of the more prolific writers on so-called 'asbestosis' have relatively little background of actual 'cases' on which to base their theories or conclusions as compared with our collective and also individual company experience over many years time. Dr. Smith urged full cooperation on the part of various companies to open their records, and full cooperation with the work of the U.S. Public Health Service. He stated that the general overall health of Johns-Manville long time employees compares favorably with industry in general and pointed to the steadily expanding membership in their 25 year club as

evidence of this fact." Ivan Sabourin, counsel to QAMA, described the work of QAMA to protect the health of asbestos workers and to pursue research. Cralley made a presentation summarizing the findings and activities of the U.S. Public Health Service in the environmental study of asbestos employees and textile plants in the United States. Two papers presented by the U.S. Public Health Service at the American Industrial Conference in Houston, Texas were discussed. One was entitled "Asbestos Study - Procedure and Findings" by Jeremiah B. Lynch and the other "Relationship of Impinger Counts to Fiber Concentration by Membrane Filters in Asbestos Textile Plants." The Minutes note that these papers are described more fully in the report of the Air Hygiene Committee which was originally attached to the the Minutes but does not appear as a part of the Exhibit. Cralley reported that after the conference on "Biological Effects of Asbestos," held in New York in October of 1964, the New York Academy of Sciences established a "Division of Environmental Sciences."

51. Minutes, Air Hygiene Committee, 10/7/65. Bausch & Lomb attended to demonstrate their optical system for dust counting. The unit made it possible to count particles of a particular size. The International Congress on Asbestosis was mentioned but discussion of the Report of that meeting was delayed until the portions drafted in French

could be translated. The idea of hiring a consultant to coordinate dust control and counting efforts was discarded because of the availability of personnel within the member companies to perform this function. This meeting included a review of the activities of the Committee during the preceding one-year period.

52. Minutes, Air Hygiene Committee, 2/10/66. There was discussion of the relative merits of bags made of various materials for use in dust collection systems. Cotton was the preferred material. Cralley of the USPHS reported that all plant surveys within the asbestos textile industry had been completed. A report was expected in approximately one year's time. An article in the National Observer dated 2/7/66 written by John Henderson, M.D. was discussed. Henderson predicted that the incidence of asbestosis was rising and would do so over the next three decades. In addition, he described a rare tissue tumor, mesothelioma. "The increasing number of these articles, apparently being written for personal publicity reasons, is disturbing to the industry and points out the need for an impartial survey such as is being made by the U.S. Department of Health, Education and Welfare."

53. Clipping from the Asbestos Producer, November 1966. Announcement of creation of an "Institute of Occupational Environmental Health by QAMA."

MS 002114

54. Minutes, Asbestos Textile Institute Board of Governors meeting, October 5, 1967. Cralley reported on the status of the U.S. Public Health Service Survey and described his goal of compiling a complete medical record for every worker in the asbestos textile industry. E. H. Wells, Vice President of J-M, stated that J-M would be willing for the U.S. Public Health Service investigators to examine J-M asbestos workers.
55. Minutes, Asbestos Textile Institute Board of Governors Meeting, October 9, 1969 (pp. 3 & 4 only). Cliff Sheckler made a report on behalf of the Environmental Study Committee and announced that the U.S. Public Health Service was preparing a position paper on health aspects of asbestos. Sheckler had reviewed a preliminary draft and revealed that the U.S. Department of Health, Education and Welfare was of the opinion that the asbestos hazard could be controlled except for the problem of mesothelioma. It states that there is still disagreement as to what the TLV should be. The British standard of fibers per cc would be accepted but the precise number of fibers had not yet been decided. Both two and twelve fibers per cc had been suggested and it was believed that a compromise at six fibers per cc might be reached. Six fibers per cc was said to equate to one million particles per cubic foot. Sheckler also described an improved respirator which had

MS 002115

MT-001519

not yet been approved by the U.S. Bureau of Mines and therefore was not available on the market. While the Bureau might not specifically approve the mechanism for asbestos dust, but rather only for silicates, Sheckler favored use of the mechanism. Sheckler also stated that each plant should provide a clean filter to each worker each day and it is noted in the Minutes that this is more of a problem on construction jobs than for in-plant workers. The Minutes contain this note: "Commenting on legislation -- present and pending -- Mr. Sheckler mentioned that compensation cases were not decreasing -- quite the contrary in fact." Sheckler urged drafting of a booklet describing asbestos textiles similar to that already available from the National Insulation Manufacturers Association to be used in response to customer and general public inquiries.

56. Minutes, Air Hygiene Committee, 6/11/70. This meeting took place at Thetford Mines in Canada and was attended inter alia by guests from the Asbestos Textile Institute in Mexico. There was a discussion of the Provisional Notes for Guidance for Asbestos Textile Products issued by the English Asbestosis Research Council. Based on Cliff Sheckler's recommendation, it was agreed that a new booklet on the method for determining asbestos dust concentrations would be drafted to describe the membrane

MS 002116

-37-

MT-001520

filter method. There was a discussion of respirator maintenance and recommendations were made that three specific models be used.

57. Minutes, Asbestos Textile Institute General Meeting, June 12, 1970, Thetford Mines, Canada. Page 3 of these Minutes is missing. Page 4 contains a continuation of a discussion of a new TLV and a new method of taking counts.
58. Minutes, Asbestos Textile Institute Board of Governors Meeting, undated but based on substance dating between January 21, 1971 and April 28, 1971 (Page 4 only). Cliff Sheckler reported on behalf of the Environmental Health Committee and described the impact of the OSHA Act of 1970. He reported that common law product liability suits were proliferating and recommended serious consideration of voluntary labelling of asbestos products. Sheckler pointed out that in a lawsuit, the date on which label use commenced could eventually indicate whether a manufacturer had been negligent. Sheckler noted that new TLVs would come into effect pursuant to the Walsh-Healey Act as of April 28, 1971. He pointed out that these TLVs were not the same as those adopted by the ACGIH. The new TLV set a limit of twelve fibers per cubic centimeter and defined a fiber as five microns or longer or, in the alternative, set a limit of two million particles per cubic foot of

MS 002117

-38-

MT-001521

air. After April 28, 1971 various jurisdictions would have various and conflicting TLVs.

59. Minutes, Asbestos Textile Institute, Asbestos Advisory Committee, February 3, 1971. The meeting focused on preparation of the pamphlet entitled "Recommended Health and Safety Practices for Handling and Fabricating Asbestos Textile Products." The Minutes also describe an informational film entitled "Why Asbestos" produced by the Asbestos Information Committee in London, England and shown to ATI on February 2, 1971. The Minutes advocate development of similar materials to educate the public from the industry's perspective in the United States.
60. Minutes, Asbestos Textile Institute, General Meeting, February 4, 1971. Dr. Goodman, associated with Raybestos-Manhattan, spoke as a member of the Environmental Health Committee and reported upon his attendance at a seminar arranged by Dr. Selikoff on 6/15-18/1970. The doctor was surprised to find a "goodly number of representatives of labor in attendance" at that meeting. The conference opened with an announcement that the spraying of steel framework with asbestos fiber in new buildings under construction had been banned in New York State. Goodman described Selikoff as a "dangerous" man and warned that the asbestos industry would have to learn how to combat his tactics. Sheckler again made a presentation describing

the anticipated impact of OSHA and the proposed NIOSH. Copies of the Minutes of the various ATI subcommittees, including the Air Hygiene Committee, were attached to these Minutes but do not appear as part of the Exhibit (with the exception of the report of the Asbestos Advisory Committee).

MS 002119**-40-****MT-001523**