



UNCONFIRMED
MINUTES

MINUTES OF THE MEETING

of the

ASBESTOS STUDY COMMITTEE

Monday, April 28, 1975, at 9:30 AM

Institute Office, E-210 Route 4, Paramus, N.J.

MEMBERS PRESENT

I. H. Weaver, Chairman
H. Wagner
A. StJohn (For D. E. Stone)
J. Dunderdale
E. E. Feierabend

Raybestos-Manhattan, Inc.
Carlisle Corporation
Bendix Corporation
Royal Industries
Abex Corporation

FOR THE INSTITUTE

E. W. Drislane

Friction Materials Standards Institute

MEMBERS NOT PRESENT

E. P. Stefl
M. Jacko

H. K. Porter Co.
Bendix Corporation

The meeting was called to order by Mr. Weaver, Chairman, at 9:30 A.M.

MINUTES OF PREVIOUS MEETING

The Secretary read a summary of the Minutes of the Meeting held June 14, 1974. These minutes had been released and a motion for their acceptance had been obtained.

Upon motion duly made, seconded and unanimously passed, it was

RESOLVED: To accept the minutes of the June 14, 1974 meeting as distributed.

SUGGESTED WORK PRACTICES FOR OSHA STANDARD

In late 1974 the Asbestos Information Association submitted some recommended work practices for manufacturers and fabricators using asbestos friction materials. These were to be sent to OSHA for their consideration. OSHA has been considering a new or revised standard in which work practices might be emphasized. Mr. Drislane reviewed the AIA suggested work practices, before they were submitted and made some suggestions for change. A draft on the suggested work practices was circulated to the membership of this committee.

Raybestos-Manhattan had done work on the subject entitled, "Asbestos Dust Control in Brake Service Centers." It was suggested that these procedures might be applicable for fabricators. There were several suggestions on how

to handle the suggested Raybestos procedures. One suggested that these be forwarded to the Asbestos Information Association to be included in their recommended work practices for OSHA. Another suggestion was for this to be distributed to our members for their distribution to their customers. It is considered likely that when the revised OSHA standards come out that the suggested work practices will not be included. There does not appear to be any action that this Committee can take at this time as regards work practices except for the suggested practices in the Brake service centers.

The OSHA Regulations and the Membrane Filter Method for Measurement

Originally this subject was to be two items on this agenda: (1) The Membrane Filter Method for measuring airborne asbestos concentrations, (2) The OSHA standards with emphasis on the July 1, 1976 two fibers/cc limit. In discussing these subjects it was found difficult to separate the membrane filter technique from the OSHA standards. They are being combined for purposes of these minutes.

It was suggested that with the current economic climate that perhaps there might be some de-emphasis in OSHA regulations. There has been de-emphasis on seat belts, and bumpers, emissions control and it was suggested that perhaps OSHA might ease off on their regulations. One Committee member said that it was most unlikely that there would be any backtracking on the OSHA regulations. If anything they might be stiffened. One member stated that there were five different types of asbestos and that some were more harmful than others. It was suggested that while this might be so, all asbestos is apparently linked with lung cancer and asbestosis. It would be difficult to win an argument that there are some types of asbestos that are not harmful to the respiratory tract.

At this point the method for counting fibers was discussed. It was stated by one member that originally a fiber would not be counted if it was not totally within the field. This was from a Johns-Manville course on the use of the membrane filter technique. It was stated now that anything that is in the top or the left hand borders of the sample, even if only partly in the field, are to be counted. Another member indicated that when he took the NIOSH course at Cincinnati that this was the way that he was told to count: any fiber on the left hand or top border, even if not fully within the field being counted, would be counted in that field.

It was stated that the crystallization of the solvent used on the slide could sometimes make it appear to be an asbestos fiber. There is a method of preparing the slides so that the formation of crystals will not appear similar to asbestos fibers for counting purposes. This method is apparently used by most companies doing their own counting of the fibers. It was pointed out also that slides should not be re-used. Re-used slides may accelerate crystallization of the solvent.

It was stated there is as much variation in readings of fiber count as there are people making readings. One member suggested that he used the NIOSH manual as a Bible. It was stated that this manual was subject to wide interpretation. A member indicated that he exchanged samples with NIOSH in Cincinnati and has had decent correlation with their counts. It was stated that on the lower counts that three different readings would come out plus or minus 10% on the count. However, when higher counts were read, the

three different readings would come out with plus or minus 50% in the count. Over how long a period were these samples collected? One member stated that OSHA takes 8-hour samples. Another stated that they took samples for a minimum 3-hour period with a 30-minute cycling. Another had three one-hour periods for collecting samples using one filter. As regards differences, it was stated by two members that the OSHA inspectors have actually picked up lower counts than some of the members. It was stated that there were differences in results depending upon whether the counts were done in house, by outside organizations, or by government people. With these differences in fiber count, a question was raised as to how can one solve a problem when they don't know how severe the problem is. In response to a question as to what this Committee could recommend it was suggested that members should at least test each operation every six months.

In attempting to get counts down to the 5 fiber limit and eventually down to two fibers a member stated that good housekeeping is required. Several members mentioned the Nilfisk vacuum cleaner. This particular vacuum cleaner can be used for getting into places that a central unit cannot reach. It has a plastic bag liner and runs on a 15 amp circuit. Of the movable type vacuum cleaners the members seem to prefer this Nilfisk. This is a Swedish make vacuum cleaner. More information will be gathered on this vacuum cleaner for distribution to the members. In addition it was suggested that one must have a good central collection system. One that was mentioned was the Jii modified central vacuum system, which utilizes the main duct system as a central vacuum system. Several members stated that good housekeeping was one of the main things that must be taken care of in order to bring the fiber counts down. It was suggested that there are three points for good housekeeping: (1) Good shrouding and good dust collection; (2) There should be a central cleaning system for the work area; (3) The Nilfisk vacuum cleaner should be used for general housekeeping in the work area. In addition it was stated that there should be no dry sweeping in the work area.

It was suggested that the friction materials business is different from regular asbestos manufacturing. In addition to asbestos, we have other materials in the product such as resins, carbon blacks, friction dust and various minerals. It is possible that some of these may be picked up during the sample gathering before the count. In some cases these will be counted by operators as being asbestos fibers. In essence it is more difficult to count asbestos in a friction material environment than it is in a textile environment. It is felt that there may be greater difficulty in getting consistent readings on fiber counts in the friction materials business. For that reason friction material manufacturers would prefer a work practices oriented standard.

It was stated that the membrane filter method should not be abandoned as it is the only tool for measurement. However, reliance on this tool for enforcement may be almost unbearable in friction materials factories. It was suggested that OSHA be advised of our industry's concern with the wide variation in fiber counts. Based on the fact that materials other than asbestos might be involved, it is necessary that the counts be interpreted realistically. In other words, while the membrane filter method may be the only method that is available currently for measuring airborne asbestos, and it is not felt that there is another method that can take its place, it is a tool that should be used by manufacturers only in trying to clean up their areas. It is not felt that this tool is accurate enough to be used for enforcement purposes. It is suggested that OSHA inspectors must realize

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this before factories are closed down and fines are levied when there is doubt as to how accurate the measurement is. Because of the wide variation in results there is concern among members as to the millions of dollars now being put into control methods. Even with these expenditures, there is no way of knowing positively whether industries are getting their counts down to the required levels. Various words were used to describe the reliability of the membrane filter method for enforcement: One indicated that it was "unreliable," and another indicated that it was "inadequate." The emphasis was that it is the only tool now available but it is not the proper tool for enforcement.

Ironically it had been suggested by some government people in the past that the friction material industry would be the first to comply with the OSHA standards. NIOSH felt that the friction materials business could most readily meet these standards. At this meeting, industry members are indicating that it may be more difficult for the friction materials business to meet the levels because of the difficulty in counting the fiber samples. It was suggested that if we're having difficulty meeting the 5 fibers/cc limit currently, it would be near impossible to meet the 2 fibers/cc limit due July 1, 1976. It was suggested that the Industry should oppose this change.

It was stated that realistically it is unlikely that OSHA will not go to the 2 fibers/cc limit on July 1, 1976. The only question is will they go lower than the 2 fiber limit? Dr. Selikoff has spoken of a 1 fiber/cc limit and has even said no fibers. It was stated that the Asbestos Information Association had circulated information concerning the NIOSH suggestion that the friction materials business would come under the standard now. Such literature was never received by the Institute. Most members on the Committee were unfamiliar with this NIOSH suggestion.

As had been suggested earlier, it is necessary to make the counts as accurate as possible. For this reason suggestions on counting procedures, possible crystallization of solvents, and a prohibition on the re-use of slides are important. Mr. Weaver pointed out that in a recent publication he noted that a plastic shroud is placed about the entrance to the pump being worn at the work place, in order to keep large particles of asbestos from getting pulled in to the filter. This shroud would prevent material from being taken from a worker's clothes as well as from some large pieces that would ordinarily fall to the floor without being inhaled. He stated that Turner Brothers has been using such a shroud. The unit is completely open on the front and it is felt that this technique gets rid of some sporadic high counts. Mr. Weaver will get a copy of this and distribute it to the members. This could be another possible improvement in the sampling technique which might make the membrane filter method more palatable. It was suggested that this be considered and perhaps a proposal be made to OSHA for its use. The problem is twofold: (1) Improving the reliability of the membrane filter technique, and (2) The use of the membrane filter as a tool for enforcement with its lack of reliability.

This subject had been fairly well covered. There was some agreement about the problems in using this technique as a tool for enforcement of the OSHA regulations. The question was what should be done about it? One member stated that the Committee would be remiss if it did not advise the members of these difficulties. It was suggested that the Board of Directors be advised that there is a problem and that there is going to be more of a problem when the 2 fiber limit is put into effect. To repeat the problem:

while we need the membrane filter method as a tool for measurement, this tool is not suitable for enforcement purposes. It is suggested that when the 2 fibers/cc limit takes effect that this will become a most serious problem.

Recommendations should be put into effect on instructions to employees, the use of vacuum cleaners, the use of dust collecting systems, disposal, etc. When these work practices are put into effect the area will be cleaner. It was suggested that the Institute contact the Asbestos Information Association concerning the use of the membrane filter technique for enforcement. (See later section of these minutes concerning Asbestos Information Association.) The Industry must concentrate on collecting, cleaning and housekeeping, using the membrane filter as a tool to see how the levels are being reduced.

One member brought along a work sheet with target dates for completion of various items that will help in meeting the OSHA standards. This is essentially a schedule with dates projected for each step which will move their factory nearer to compliance. The aim is to have the factory at the 2 fiber limit by July 1, 1976. Various critical areas are covered with detailed steps projected to clean up each area. It was suggested that this was almost necessary for control and would certainly help in proving intent to comply with the regulations.

In another area, a question arose as to what were the Canadian standards. At the present time, there is no national standard in Canada. However it is likely, with the recent furor over asbestos in Toronto, that Canada will be moving to a 2 fiber/cc limit. Upon motion duly made, seconded and unanimously passed, it was

RESOLVED: That the Committee requests guidance from the Board of Directors concerning the problem of the 2 fiber/cc limit and the lack of reliability of the membrane filter method for measurement of fiber counts.

ASBESTOS FIBERS SHORTER THAN 5 MICRONS

Those promoting standards for the work place and the environment are now expressing concern about the asbestos fiber which is shorter than 5 microns. Their feeling is that fibers shorter than 5 microns are medically significant. There may be a problem with lower efficiency systems filtering out sub-micron material. It may be simpler for sub-five micron particles to by-pass filters and any natural filtration in the human respiratory system and more readily get into the lungs.

It has been stated that in the EPA "No Visible Emissions standard" that there are probably many fibers less than 5 microns that are not visible. In order to measure these fibers one would have to go to electron microscopy. It was stated that a measuring device called the Nucleopore can make measurements down to 0.1 micron. A problem is that industry is having so much difficulty with the standard for particles greater than 5 microns, so what can they possibly do about those shorter than 5 microns? There is no reliable means of gathering sub 5 micron particles in wide usage today. It was suggested that if work practices and control procedures now being put into effect are effective in reducing the 5 micron and larger particle counts down to acceptable levels, that at the same time industry would

be reducing the sub 5 micron particle level.

EFFLUENT GUIDELINES - ASBESTOS INDUSTRY

One of the requirements of the EPA effluent guidelines is that manufacturers must use the best technology available in effluent control. This essentially means that they must use the dry bag house. Some members did not want to abandon wet dust collectors. Regardless, most have now moved to the dry bag house. There are problems with the dry bag house. In particular one is when a bag is broken. Another is the continual problem with fires. It was suggested that there should be pre-separator before the bag house. Some members use a Cyclone.

As at an earlier meeting, one member pointed out that when they enforced a smoking ban in the work place, they stopped the fires in the bag house. Another member indicated that he had tried this but that it did not work. It was stated that one could use fire proof bags but they are expensive. It was also suggested that while this problem can be solved, the solution is expensive. However, as regards the effluent guidelines, the way to compliance is by the use of dry bag house.

NATIONAL EMISSIONS STANDARDS FOR ASBESTOS

It was pointed out that the Friction Materials Standards Institute did comment to the EPA concerning the proposed amendments to the National Emissions Standards for Asbestos. This comment was made on December 3, 1974. The FMSI pointed out that there were two problems: (1) The inclusion of fabricators of friction products in the requirements, and (2) The requirement for warning signs on inactive waste disposal sites.

The first problem is that the fabricators were not aware that they were coming under the National Emissions Standards and there was not sufficient time for them to comment to EPA. One member took the proposed amendments and the letter to EPA and circulated these to his customers so that they would be aware of the problem and possibly comment to EPA.

The other problem affected industry directly is that private contractors were hauling the material to public land fills. The problem is the warning signs on inactive waste disposal sites and the fact that this could effectively remove the land area from future development. Mr. Weaver advised that the Asbestos Textile Institute had commented concerning the difficulties with the various EPA solid waste requirements. In particular they commented concerning sludge removal that might have to be transported to a land fill, and the requirements for covering a land fill. ATI indicated that some of the regulations were moving at cross purposes. For example, OSHA prefers wet methods to control dust whereas EPA wants dry methods to prevent water pollution. This land fill problem is going to be a major problem if implemented as indicated in the proposed amendments to the National Emissions Standards.

ASBESTOS INFORMATION ASSOCIATION (AIA/NA)

One member stated that he was disappointed that the Institute did not take steps to have closer liaison with the Asbestos Information Association. Mr. Drislane advised that this was a subject on the Board of Directors

agenda at the June Meeting. The Institute has always tried to maintain an independent course and has not affiliated with other organizations. We have, however, tried to cooperate with the Asbestos Information Association. The general feeling is that the Asbestos Information Association is doing a good job for the Asbestos Industry, including friction material manufacturers. We have maintained our contacts and links with the Asbestos Information Association.

The Secretary advised that at a March meeting of the Board of Directors a resolution was passed that we would contact the Asbestos Information Association offering financial support. Whether this support would be a direct contribution by the Institute or a recommendation of support by individual members has not been decided. The Secretary contacted Mr. Mereness of the Asbestos Information Association concerning this possible support.

At this point, it was stated that we had considerable discussion earlier in the meeting about the difficulty friction materials manufacturers are having in meeting the existing 5 fibers/cc standard and will have in meeting the 2 fibers/cc limit. The question is: Are other manufacturing groups having this same difficulty? It was suggested that the Secretary contact the Asbestos Information Association to find out whether other users of asbestos are having this difficulty. While the membrane filter method is the only method available, the members are questioning its inherent inaccuracy and the difficulty in training people. Have other industry accepted the 2 fiber/cc limit? Perhaps the friction material industry is having more problems with the membrane filter technique than other industry groups. This question will be asked of the AIA. To summarize: Have other industry groups questioned the existing 5 fiber/cc limit and the 2 fibers/cc limit that goes into effect July 1, 1976.

Upon motion duly made, seconded and unanimously passed, it was

RESOLVED: The Asbestos Study Committee wishes to go on record in favor of support of the Asbestos Information Association.

As a comment, the words "financial support" were not used, as the Committee suggests that the Institute either give direct financial support, or as an alternative recommend direct support of the Asbestos Information Association to the members of the Institute.

POSSIBLE WORK SHOP--ASBESTOS PROBLEMS

It was stated that perhaps the Committee members were not the best qualified to handle the asbestos problem. Perhaps some members are environmental people. Others may be factory people. Others might not be directly involved with the problems of asbestos. Perhaps it would be well to call on others who might be able to give specific expertise. It was pointed out that Bendix had two members on the Committee with different expertise. It would be completely reasonable for the members of this Committee to bring along to future meetings people skilled in different areas in the asbestos problem. Such attendees would be welcome at any meeting.

At this point it was suggested that the proposed seminar that had been suggested two years ago might be worthwhile. A more formal program dealing with asbestos problems only could be scheduled. For example, most people who attended the

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Johns-Manville seminar were quite pleased with it. Perhaps they have up-dated some of their work. This is a half day session that was put on in various parts of the country and to which several members of the Institute were invited. Perhaps Johns-Manville would be willing to put on such a seminar again and it was suggested that Mr. Bill Reitze of Johns-Manville be contacted. Methods on air sampling could be discussed at a J-M seminar. Mr. Weaver suggested that he would contact Johns-Manville concerning this subject.

It was suggested that if the Institute were interested in sponsoring a work shop, the Johns-Manville program would be ideal for the first half-day period. To strengthen our ties with the Asbestos Information Association it would be well to have someone from the AIA address those attending. In this way we could indicate some of the problems the friction materials industry has that the AIA might not be aware of. Also it might be possible for the Asbestos Information Association to solicit support of the Institute and Institute members at such a session. Upon motion duly made, seconded and unanimously passed, it was

RESOLVED: That the Committee recommends that the Institute sponsor a one day work shop on the asbestos problem in the early Fall of 1975.

OTHER BUSINESS

It was suggested that the Asbestos Study Committee might enlarge their activities beyond the field of asbestos. There was a recent article in one of the newspapers concerning the health hazards of nickel. Nickel is a substance found in asbestos and it apparently is found in cigarettes as well. Nickel does not get into the cigarettes from the plant, but apparently is picked up during processing. It was suggested that perhaps this was a cause of the lung cancers that have been associated with asbestos. It was also stated that this might be "grasping at straws."

A real problem in the workplace may be encountered by those using lead or lead oxides in the workplace. OSHA is talking of lead concentrations in the .20/.1 mg/cubic meter. It may be worthwhile to bring lead into this committee's activities. It was suggested that the committee be re-named the "Hazardous Materials Study Committee." No action was taken in this area.

It was also stated that because of the heavier lung cancer risk for those who smoke as against those who do not smoke that anti-smoking campaigns should be promoted. Even Dr. Selikoff has indicated that a non-smoker working in an asbestos work place may be no more likely to be effected by lung cancer than a person in the general population. However cigarette smoking coupled with exposure to asbestos in the work place multiplies the problem.

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There being no other business brought to the attention of the Committee, upon motion duly made, seconded and unanimously passed it was

RESOLVED: To adjourn.

Adjourned at: 2:00 P.M.

E. W. Drislane
Executive Director