

U. S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH

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ADMINISTRATION HEARING ON PROPOSED OCCUPATIONAL ASBESTOS

EXHIBIT *JM-14*

STANDARD --- WASHINGTON, D. C., MARCH 14, 1972 ---

STATEMENT OF E. M. FENNER, DIRECTOR OF ENVIRONMENTAL CONTROL

JOHNS-MANVILLE CORPORATION

PLAINTIFF'S
EXHIBIT
GF-2209

My name is Edmund M. Fenner. I am Director of Environmental Control for the Johns-Manville Corporation. I am a graduate Mechanical Engineer and a Licensed Professional Engineer. I have thirty-one years of experience in the asbestos industry.

The Johns-Manville Corporation in 1958 established four Industrial Hygiene Laboratories: one each in New Jersey, Illinois, California and Quebec, Canada. These facilities presently are staffed by 20 professional people. Industrial Hygiene Surveys have been performed within our company for over 30 years. Most of our hygienists have received the supplementary training offered by the U. S. Public Health Service.

For over three years, we have been using the membrane filter method recommended by the National Institute of Occupational Safety and Health for monitoring airborne asbestos fiber in our plants.

We believe that Johns-Manville has more experience and more expertise in evaluation of asbestos fiber dust levels than any other industrial, academic or governmental group.

GAF 15992

The comments I will make concerning the proposed OSHA standards for asbestos are based upon our collective corporate experiences of many years. They are directed in support of the Emergency Standard's TLV of 5 fibers per milliliter. I will discuss five major areas as presented in the NIOSH criteria for the proposed standards, in the Advisory Committee recommendations, and in the Emergency Standard itself.

The five areas are Monitoring, Engineering Methods, Work Practices, Signs and Protective Devices.

Monitoring and Engineering Methods

The first paragraph of the NIOSH criteria document states:

"This standard is amenable to techniques that are valid, reproducible and available to industry and governmental agencies."

We believe that this sentence refers to both monitoring and engineering methods. While we concede that the monitoring methods as outlined in Appendix 1 of the NIOSH document are valid, we cannot agree that they are reproducible nor that they are generally available to industry at this time. Some reproducibility of monitoring results at fiber levels of 10 to 12 fibers per milliliter is possible but our experience has shown that reproducible results in the 2 to 3 fibers per milliliter range are very difficult to obtain. Appendix 1 of the NIOSH

criteria package contains a theoretical demonstration of the accuracy of the analysis including confidence limits. We do not dispute these, but wish to point out that the accuracy of the analysis is heavily dependent upon human judgement, human error and the visual acuity of the Technician. At the low levels of 2 to 3 fibers per milliliter, even a small variation in technique may cause an erroneous result.

Additionally, we understand that the enforcement of the Emergency Standard will be such that any fiber dust level above the TLV of 5 fibers per milliliter - such as 5.1 fibers per milliliter - will be held to be a serious violation. Appendix 1, Air Sampling Methods, of the NIOSH Criteria document, states that the 95% confidence limits of the analysis technique would be plus or minus 20%. We recommend that the OSHA enforcement practices include provisions that take into account this variability when considering a citation.

While monitoring facilities and personnel are readily available to Johns-Manville, they are not at this time available to the thousands of other asbestos users. OSHA's own staffing problems will attest to the shortage of trained Industrial Hygienists.

In the Emergency Standard, paragraph (f) Monitoring, subparagraph (1) Personnel, the implication is that all employees engaged in the operations covered under this paragraph shall be monitored individually. We believe that this standard should be reworded to conform more closely with the established NIOSH procedures, wherein,

if a number of workers are performing the same job on the same equipment, only a representative number of these workers would be monitored. Therefore, we suggest that an opening phrase "A representative number shall be selected . . ." should be added to the beginning of the sentence so it reads:

"A representative number shall be selected from the employees engaged . . ."

In the same paragraph in the Emergency Standard discussing monitoring, in subparagraph (1) (i) Method, I believe the described technique of mounting the sampling device on the exterior of the respirator face piece is contrary to normal NIOSH procedures. Therefore, we recommend that the entire sentence,

"Employees wearing respiratory protective devices shall have the sample taken from a point located on the exterior of the respirator face piece"

be stricken from the standard. We base this recommendation on our understanding that it is NIOSH practice to mount the filter holder on the worker's shirt collar or coat lapel.

The Advisory Committee recommendations in paragraph (g), Monitoring and Records, subparagraphs (3) and (4) require personal samples to be collected and evaluated at least once a month from areas in excess of standard and that this monitoring be continued until the air levels are in compliance with standard.

Because of the tremendous work burden, this sampling requirement would place on the already overloaded Industrial Hygienists profession, we recommend these paragraphs be replaced with the following single paragraph.

"At all work stations where sampling has determined that the dust concentrations are above the Threshold Limit Value, engineering and administrative procedures to correct the situation shall be instituted immediately. Dust counts shall be taken as frequently as necessary during the time that the engineering and administrative procedures are being implemented, and at the time of completion of the installation of these procedures in order to determine their effectiveness."

We believe that sampling frequency greater than this does not help solve the problem. The employer should be spending his time and efforts to correct the problem and only monitor as often as is required to determine his progress toward compliance. As I previously mentioned, additional requirements for frequency of monitoring will critically increase the Industrial Hygienists' work load. The demands made by OSHA and industry for staff have created a critical shortage of Industrial Hygienists. Their work burden should not be increased by requirements for non-essential additional monitoring.

Regarding control methods, while there are valid techniques for controlling dust, the state of the art has not yet progressed sufficiently to permit engineers to consistently design on a practical basis to levels below 5 fibers per milliliter in all applications. The economic impact of attempting to control to such low levels will be discussed in a later presentation.

Work Practices

The Emergency Standard, in paragraph (b), Methods of Compliance, subparagraph (1) Engineering Methods, discusses clean-up procedures and states:

"Engineering methods such as, but not limited to, enclosure, vacuum sweeping and local exhaust ventilation shall be used. . ."

There are many instances where because of the nature of the material involved it cannot be satisfactorily vacuum cleaned. Both the NIOSH Criteria document and the Advisory Committee report recognize this problem and contain provision for wet cleaning methods. We endorse this proposal and recommend it be included in the final standard.

The Emergency Standard, in paragraph (d), Particular Operations and Products, subparagraph (2) describes the use of hand and power tools. We believe that this section could be interpreted to require dust control systems for hand tools such as carpenter saws, knives, awls or rasps for which there is no practical known method of control. Therefore, we suggest the following rewording:

"All power tools, whether hand-held or stationary, which produce asbestos dust . . ."

Again in the Emergency Standard, this same paragraph (d) in subparagraph (4) states:

"Asbestos cement mortar coatings, grout, and plaster shall be mixed in closed bags or other closed containers."

We suggest that the phrase "used in construction work" be inserted in order to remove from this section manufacturing operations which are more adequately covered in the Emergency Standard under Paragraph (b), Methods of Compliance, subparagraph (1), Engineering Methods. This paragraph (d) (4) would then read:

"Asbestos cement, mortar, coatings, grout and plaster, used in construction work, shall be mixed in closed bags or other closed containers."

In the Advisory Committee recommendations the work practices paragraph (e) subparagraph (3) requires that employees exposed to the spraying of asbestos, to the demolition of pipes, structures or equipment insulated with asbestos, be provided with personal protection in accordance with subparagraph (c) (6) of this report. Paragraph (c) (6) specifies the use of a Type "C" continuous flow supplied air respirator. It is our opinion that this level of protection is not required in all cases and should be related to the level of exposure. Therefore, we suggest that the (6)

be deleted and the reference read:

"... in accordance with paragraph (c) of this section."

The deletion of the specific reference to (6) will bring the recommendation in line with the intent of paragraph (c), that is, that the level of fiber in the air determines the appropriate respiratory protective equipment.

Signs

The Advisory Committee recommendations in paragraph (f) Warning Labels and Signs, subparagraph (2) require a warning sign in the work place. We are in agreement with the basic philosophy that signs may be needed but have suggestions for clarification of the requirement.

Our first suggestion is to reword the opening sentence in this subparagraph. The sentence now reads:

"Proposed warning sign to be used when material or products require an asbestos warning label or where known hazards exist."

Our suggested sentence is:

"Proposed warning sign to be used where known hazards exist."

A known hazard would be present when the airborne asbestos fiber count in the immediate area regularly exceeds 5 fibers per milliliter.

Our other suggestions are concerned with the actual wording of the sign. The proposed warning sign now reads:

Danger
Asbestos Dust Area
Unauthorized Persons and Other Trades
KEEP OUT
When Asbestos Work is Being Done
Breathing Dust May Cause Asbestosis and Cancer

We recommend the replacement of the word "asbestos" with "hazardous" to permit a more uniform system of signs. In many instances there are several potentially hazardous dusty materials used in one area. For example, one manufacturing operation could use asbestos, silica and talc. If we were to display one sign for each of these materials the multiplicity of signs could readily confuse the workers.

We recommend the removal of the three line phrase:

"Unauthorized Persons and Other Trades
KEEP OUT
When Asbestos Work is Being Done"

The removal of these words is suggested because their requirement would not permit other trades to work in the same area when asbestos containing products were being fabricated or installed. If this same type of reasoning were carried further, similar standards might be forthcoming for the welding trade and their welding fumes

or the painting trade and their potentially noxious vapors. This could result in a situation where only one trade could work in a given construction area at a time, causing construction costs to soar out of sight.

With these recommendations incorporated, our suggested sign reads:

Caution
Hazardous Dust Area
Use Required Personal Protective Equipment
Avoid Making Unnecessary Dust
Unauthorized Persons
KEEP OUT

The Emergency Standard, in paragraph (e) Warning Signs, subparagraph (1) Posting, requires warning signs where asbestos dust hazards are present. We believe this paragraph should clearly specify when a dust hazard does exist, and therefore suggest the addition of another sentence to this paragraph using the same phrasing we recommended for the Advisory Committee statement. Then this paragraph would read:

"Warning signs should be provided and displayed at each location where asbestos dust hazards are present. An asbestos dust hazard shall exist when the airborne asbestos fiber count in the immediate area regularly exceeds 5 fibers per milliliter."

Personal Protective Equipment

The Advisory Committee report, in paragraph 3 on page 6, Personal Protection, specifies when respirators and other personal protective equipment should be used. We recommend adoption of this statement. It places responsibility on the employer to furnish and the employee to use personal protective equipment. This parallel statement of responsibility reflects the philosophy of the Occupational Safety and Health Act expressed in Section 5, Duties,

"Each employer shall furnish . . .
and each employee shall comply . . ."

The Advisory Committee report, Section C, Page 6, Respiratory Protective Devices, specifies the type of respirators to be used for different levels of exposure. We endorse this approach to the specification of respiratory protection.

The NIOSH Criteria Document, in Section 4 on Page I-7, discusses the requirements for personal protective equipment and clothing. Subparagraph (a)-(i) in this section requires the employer to make asbestos fiber measurements on the inside of the respirator. We believe that this requirement is totally impractical and unnecessary. The U.S. Bureau of Mines approval attests to the efficiency of the filter media and the effectiveness of face design. The inclusion of ANSI Standard for Respiratory Protection Z88.2 in both the Proposed Rule and Advisory Committee recommendations provides for the appropriate employee education, face fit tests, and equipment maintenance.

GAF 16002

The Advisory Committee report, page 8, Section D sets forth requirements for protective clothing. We endorse the recommendation that protective clothing be furnished by the employer for the employees in variance areas greater than 10 times the limit.

We disagree with the recommendation in the NIOSH Criteria document that all employees, regardless of the level of asbestos fiber airborne dust, be furnished protective clothing, since it would result in a substantial and unwarranted expense. Presumably, this provision is to safeguard against the transport of excessive asbestos fiber into the home of the employee via his work clothing. At the proposed Threshold Limit Values, the amount of fiber is indeed minimal and the TLV is designed with a substantial safety factor to protect the health of the full time employee. Obviously, the quantity of dust capable of transport via clothing would be far less. Therefore, the protective clothing requirement is appropriately related to only those experiencing a significant possibility of additional dust accumulation.

That concludes my comments on the three documents concerned with the Standard for Asbestos Fiber Dust Exposure. In summary, we have reviewed all three documents in considerable detail. All three contain some valid and necessary proposals. However, all three also contain some proposals that are unwarranted and unnecessary, and some proposals that need clarification.

Thank you very much for the opportunity of speaking here today.