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Mr. J. Marsh. 22

Mr. R.H. Mereness,
Executive Director,
Asbestos Information Association/NA,
1660 L Street N.W.,
Washington D.C.20036,
U.S.A.

26th February, 1975.

SHs/CMT
Copy: JM/RM.

Dear Bob,

Insulation Hygiene Progress Report - Volume 6 No. 1

Thank you for sending me a copy of the above report, which I have read with considerable interest.

The burden of the argument seems to be that dust measurements showing a low average level may be deceptive in insulation workers where exposure is intermittent and may include high peaks of short duration. As it is believed that disease may be associated with these high peaks the validity of a standard such as the 2 fibre/ml U.K. standard, is called into question.

For some considerable time now, I have talked about the significance of high peak exposures and recommended that safeguards to cover such situations should be built-in to standards. In my evidence at the Public Hearing in Washington in March 1972, I included the following statement on the U.K. standard:-

> "It was realised from the beginning that the standard had certain limitations. The information on which it was based was scanty and was drawn from a textile plant, where dust concentrations did not fluctuate widely. That it might be unwise to apply it to situations experiencing high peaks of concentration was recognised and it was recommended that the time/concentration concept should not be used above 10 fibres/cm^3, because too little was known about the effects of high concentrations for short periods of time, which might interfere with the normal lung clearance mechanisms."

Cont'd...

Asbestos Information Association/NA,
Washington.

Again in my final recommendation I said the following:-

★ "It is my view that a sizeable part of the health problem facing the asbestos industry today is due to the effect of peaks of very high dust concentration, albeit only for short periods, attending uncontrolled operations, such as are encountered in the insulation industry. A standard which removes the worker from the effect of such peaks is probably more important than one which imposes unreasonably strict average levels."

I returned to the same argument in my paper entitled "Environmental Data in Industry" at the Lyon Conference in October 1972 where I said:-

> "It is well known that the threshold limit value of 2 fibres/ml was calculated from the BOHS chrysotile standard, assuming an occupational exposure of 50 years. While this may be desirable for persons working full-time with asbestos, it is probably too tight a standard for many asbestos users who handle the material only intermittently. The possible effects of intermittent high dust concentrations have already been referred to; it is therefore recommended that whatever threshold limit value (TLV) is stipulated (based on the average concentration over, say, 4 hours) exposure of the worker to peaks higher than five times the TLV (measured over 10 minutes) should be avoided."

The Factory Inspectorate in the U.K. in operating the 1969 Asbestos Regulations have shown that they are aware of the situation by saying that while the TLV based on a 4 hour sample shall be 2 fibres/ml, levels above 12 fibres/ml, based on a 10 minute sample are not permitted. If the situation cannot be improved by tighter dust control, then the workers must wear respiratory protection. This is obviously directed at the insulation industry and its effect is to prevent the worker being exposed to these high peaks of concentration. Surely this is better than pitching the average level very low indeed to take into account the possible high peaks which might occur.

I hope these comments will be of help to you and I am sending a copy of this letter to John Marsh.

With kind regards,

Yours sincerely,

S. Holmes.