

Johnson & Johnson

New Brunswick, N.J.
February 7, 1977

Subject: Industrial Hygiene Survey -- Talc

Ms. C. I. Nofziger

A survey in the SHOWER-TO-SHOWER*, powder line, and powder primary departments was completed in December to determine employee exposure levels to talc dust.

Conclusions

1. Exposures in the SHOWER-TO-SHOWER* and powder filling line areas are within acceptable standards.
2. Exposures in the powder primary basement area can at times exceed acceptable standards. However, exposure time is usually short (generally less than 1 hour per day).

Recommendations

1. Exposures to talc may be held to a minimum by following good housekeeping practices and by correcting the cause of any leakage as soon as possible.
2. When it is necessary to go into an excessively dusty area, NIOSH-approved respirators should be worn.
3. The existing periodic medical monitoring program for powder primary employees should be maintained.

Discussion

The present occupational exposure standard for talc is set by OSHA at 20 million particles per cubic foot of air. The American Conference of Governmental Industrial Hygienists (ACGIH) has calculated that this value is equivalent to 3 milligrams per cubic meter (mg/m³) of respirable size particles and 6 mg/m³ for all sizes of particles. Respirable sizes are those which may be inhaled and retained within the lungs. The ACGIH standard was used in this study to determine compliance with acceptable standards.

Talc has historically been associated with various pulmonary disorders. A great deal of controversy still exists on this subject. A review of epidemiological and animal study data reveals that various fibrous minerals, which exist as contaminants of some industrial grade talcs, are most likely to be the causative agents of pneumoconiosis and other pulmonary

(Continued)

February 7, 1977

SUBJECT: Industrial Hygiene Survey -- Talc

Ms. C. I. Nofziger

Discussion (Continued)

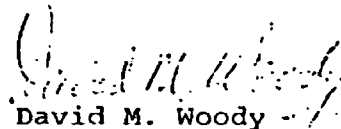
diseases. The fibrous minerals suspected include fibrous talc, tremolite, chrysotile, crocidolite, and amosite. Our cosmetic grade talc has been analyzed many times and found to be free of all fibrous minerals and it should, therefore, not be considered as a likely cause of pulmonary disease. Studies are still continuing on this subject (including an epidemiological study at our Windsor mines) and I will keep you informed of any new developments. To date, there is no evidence of abnormalities due to exposure to pure talc when the exposure level is at or below the current OSHA standard.

The results of this hygiene study are summarized in Tables I, II, and III. The respirable concentration levels are more hygienically significant since they represent that portion of the dust which can be retained in the lungs. As can be readily seen in the tables, most areas fall well within the standard for respirable dust. There are times when the primary basement area may exceed standards, but the time of exposure there is usually short and respiratory protection has been mandatory for several years. The use of respirators in this area should continue to be enforced.

While we do not expect any respiratory illnesses to result from exposure to talc, we should nevertheless consider it a good practice to continue our periodic medical monitoring program for the employees who work in the primary areas.

Please call if you should have any further questions.

* A Johnson & Johnson Trademark


David M. Woody

DMW:vad

cc: Mr. D. H. Cassidy
Mr. J. E. Dorsey
Mr. J. L. Furey
Mr. H. G. Hurff
Dr. J. E. McWhorter

Mr. C. M. Newman
Mr. O. M. Springall
Mr. D. W. Suter
Mr. J. T. Wakeling