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AMERICAN SMELTING AND REFINING COMPANY

SALT LAKE CITY 1, UTAH

DEPARTMENT OF HYGIENE

3422 South - 700 West

October 31, 1960

NOV 4 1960

Mr. E. A. Farrell
Lake Asbestos of Quebec, Ltd.
P. O. Box 127
South Plainfield, New Jersey

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Toxicity - Chrysotile

Dear Mr. Farrell:

In my letter to Mr. Rimbault of May 25 I wanted to make clear the distinction between dusts classified as "pneumoconiosis-producing" silica and asbestos for example - and dusts classified as "toxic" lead, arsenic, etc.

Except for the fact that there is a complete lack of information, in the literature at hand, about the oral toxicity of chrysotile asbestos, I cannot document my statement that "Asbestos is not toxic". Determinations of oral toxicity, so far as I can determine, have not been done. The sole proved effects of asbestos on man seem to be those of asbestosis, via inhaling asbestos dusts, and asbestos warts, via having fibers of asbestos penetrate the skin. Dr. Brofman's reply to Dr. Pinto's letter may elicit more information.

Oral toxicity tests of asbestos may have been neglected because its use internally was regarded as unlikely; because it is an insoluble magnesium silicate like talc; or because neither the magnesium ion nor the silicate ion is regarded as toxic. I have found one reference on solubility, a paper by Clark and Holt on "Solution of Chrysotile Asbestos in Water, Acid, and Alkali" in Nature, Vol. 185, p. 257 (1960). An abstract appeared on page 14876 f of Chemical Abstracts for August 10, 1960.

There is no doubt about the lung fibrosis which can be caused by inhaling asbestos dust, but the question of lung cancer and its causal relationship to asbestosis is controversial. For a case against any connection see the paper by Braun and Truan, "An Epidemiological Study of Lung Cancer in Asbestos Miners". This paper appeared in the A.M.A. Archives of Industrial Health of June, 1958, and says in summary, "---- it seems fair to conclude that the asbestos miners in the Province of Quebec do not have a significantly higher death rate from lung cancer than do comparable segments of the general population." There is a good bibliography.

Mr. E. A. Farrell

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To my knowledge there are no papers on the matter of the carcinogenic properties of asbestos taken internally. I'm quite sure no work on the subject has been done.

Isn't asbestos cement pipe approved for use in water mains? Perhaps some research was undertaken by J.-M. to prove that asbestos was safe for such use.

If we must furnish proof of non-toxicity and non-carcinogenicity (orally) we are faced with long-time, expensive experiments which had best be supported by the asbestos industry as a whole.

I formerly worked with the Division of Pharmacology of Food and Drug in Washington. If there is any way my contacts there might be useful, please let me know.

Very truly yours,

K. W. Nelson

KWN/mb

cc: Dr. Pinto