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19 - Letter from McCrone Research Associated Ltd. to R.W. Owens, Amtalc Association
dated November 11, 1983 (Pages 2048-2051)

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(R) (A)

Contract research and scientific instruments
Microscopy, X-ray diffraction, mineralogy

Mr. R.W. Owens
Amtalc Association Ltd.
7 Queens Avenue
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11 November 1983

Dear Mr. Owens:

We refer to the letter received from R.T. Vanderbilt Company Inc., dated October 31, 1983, relating to the analysis of the 3X Talc carried out by us for Expandite Ltd. in London (reference our Reports ME 907 and ME 907A).

We apologize for the error in the reports, which stated that an estimated quantity in excess of 90% tremolite asbestos was found in the 3X Talc. This should have read in excess of 90% tremolite. The actual tremolite asbestos content is between 30% and 40%.

Since receipt of the letter from R.T. Vanderbilt Company Inc., we re-examined the 3X Talc samples submitted for analysis by Expandite Ltd., using optical microscopy and X-ray diffraction analysis. The results of this re-analysis, with estimated quantities, are as follows:

Antigorite <2%
Calcite <2%
Quartz <2%
Talc <4%
Tremolite >90%

The antigorite was identified by X-ray diffraction analysis.

The results of the re-examination agree with those reported to Expandite Ltd. in Report ME 907, dated 21 September 1983. The high percentage of tremolite in the 3X Talc has also been confirmed.

An additional study of the Talc by optical microscopy had shown that the tremolite occurs as prisms, needles and fibres. Respirable fibres are defined as those particles having a length greater than 5µm, a width less than 3µm, with an aspect ratio of greater than 3:1. Within the submitted samples of 3X Talc, between 30% and 40% of the tremolite particles conformed to the regulatory definition of respirable fibres.

It is known that fine fibres become airborne much more readily than large particles, especially if the large particles are platy. In order to assess the amount of fibres that would be encountered in an airborne cloud

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Mr. R.W.Owens (continued)

2

of 3X Talc, about 10 grams of the powder was placed into a polythene bag, 12" x 8", and this was gently shaken. A sample of the airborne dust generated inside the bag was collected on a membrane filter, through which air was drawn at 2 litres per minute. This dust was evaluated by optical microscopy and it was found that the percentage of respirable fibres in the airborne dust was between 70% and 80%. This indicates that work on the Talc powder enhances the percentage of respirable asbestos in an airborne cloud.

One of the recommendations of the U.K. Advisory Committee on Asbestos, 1979, is that, wherever possible, a substitute for asbestos should be used. It is known that there are many sources of fibre-free Talc and, to comply with this recommendation, one of these should be used in place of Talc which is significantly contaminated with asbestos.

The U.K. Health and Safety at Work etc. Act, 1974, places the responsibility on all manufacturers and suppliers to warn users of potentially damaging materials in their products, and failure to do so is to contravene this Act. Individual products containing asbestos in the U.K. are voluntarily labelled as such by the manufacturers, even when the product is well bonded with virtually no potential for the asbestos fibres to become airborne.

Your method of transport of the 3X Talc containing loose asbestos in such concentrations, in paper sacks, is contravening all British regulations.

If you have further enquiries regarding the suitability of this material for use in British industry, please contact either ourselves, the Asbestos Information Centre or the U.K. Health and Safety Executive.

Yours sincerely
for H R A Ltd.

gn/ph

Jean Prentice

Gary Nichols

cc: Dr. R.C. Moore
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