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Telephone # 392-8058 Area Code 514

January 29, 1974

Mr. John Marsh
Raybestos-Manhattan
205 Middle Street
BRIDGEPORT, Conn.
06603

Dear Mr. Marsh,

Further to our discussions on Friday, January the 25th, I would like to clarify one or two points which you raised. The method used to mount the membrane filters was that adopted by the British Occupational Hygiene Society. There are essentially two reasons for using this method. One, we were transporting samples considerable distances before counting. The British method calls for treatment of the filter at the site with a "plexiglass in chloroform" solution which essentially fixes the fibres in place, reducing the risk of disturbing the particles before they reach the laboratory. Secondly, the American method calls for the preparation of a special solution containing dissolved membrane filter which must be fairly fresh when used, it requires some time for preparation and we have found that counts using the British and American methods are comparable.

With regard to the sub-micron diameter fibres, we chose scanning electron microscopy rather than transmission electron microscopy because virtually all techniques for examining airborne dust using transmission electron microscopy involve transfer of dust from the filter to the electron microscope grid. This can lead to serious loss of fibres under some circumstances and the fibre is unlikely to be observed in the same condition as it was collected. Because we were interested in the actual airborne fibre concentrations, we decided to eliminate the possibility of fibrilisation etc. by collecting samples on nucleopore membrane filters and examining the samples directly.

The airborne fibre concentrations at Plant 2, raise a serious problem. There is no doubt in my mind that it should be impossible for a man to be unknowingly exposed to fibre concentrations exceeding those permitted in an asbestos industry. As you know, we agreed in our contract that the results of our studies would not be published until one year from submission of the final report to Raybestos-Manhattan. In the meantime, I would like

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to ensure that companies manufacturing asbestos safety garments are made aware that garments do exist which give rise to fairly high concentrations of asbestos in a man's breathing zone. I would appreciate any suggestions you might have.

There are probably two further investigations which are worthwhile

1) Tests of specially treated (eg coated inside and out) asbestos garment both in the laboratory and in the field. Although the dust concentrations released by the garments which we tested at plant 1 did not exceed the 5 fibres/cc standard, some of them would exceed the 2 fibre standard if the work practice adopted at a particular plant required men to wear them more frequently than at this plant.

2) Further investigation of the Novatex material Exactly where to go with this material will be known in about 3 weeks when we have completed our tests.

If you have any further questions concerning the report on Phase or would like to discuss follow up studies on asbestos garments, plea do not hesitate to contact me.

Yours sincerely,

G.W. Gibbs, MSc, MSc, PhD
Assistant Professor

GWG/ssn

cc Dr. J. Nagelschmidt

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