

of their size and aerodynamic characteristics, and remain suspended indefinitely. The Mt. Sinai representatives stated that they have regularly been finding street level concentrations of from 4 to 100 fibers per cubic centimeter. As a comparison, the tentative ambient air quality criteria proposed by the EPA is .04 fibers per cubic centimeter. They were emphatic in their assertions that braking systems which they have investigated to date do not readily convert all the asbestos through dehydroxylation to forsterite. They claim that micron and submicron particles are readily detectable both under laboratory and street conditions. This would suggest braking surface temperatures of around 500°C or below. This is counter to previous research which has revealed light braking temperatures of 800-900° C and heavy braking temperatures of 1700-1800°C.

Although I have not yet been able to confirm their assertion, it appears that the Federal Government has extended a large grant to Mt. Sinai with which to complete their causative study of cancer induction by asbestos. With the grant, Mt. Sinai has recruited researchers from a wide variety of disciplines to concentrate their efforts to this end. This not only includes medical research teams, but environmentalists as well to document the pervasiveness of the problem.

They are also very aware of the problems associated with the use of baghouses for asbestos collection purposes. The statement was made that they have observed high levels of submicron particles in the vicinity of asbestos manufacturing plants utilizing these systems. The explanation is as follows.

When considering baghouse efficiency on a weight basis, it is relatively easy to get high efficiency with particles whose size is in excess of 5 microns. However, efficiency falls off with a decrease in particle size, and apparent high efficiencies are much less meaningful in terms of numbers of fibers. It can be assumed that 10^3 average fibers of asbestos weigh approximately 1 nanogram. If 1 gram of asbestos material approaches a baghouse filter rated even as high as 99.999% efficiency, then the quantity passing through will be 0.00001 grams or 10^4 nanograms. And since 1 nanogram is approximately equal to 10^3 fibers, then a total of 10^7 (10 million) fibers will pass through the filter for every 1 gram