

conversion obtained at random. Thus the conversion of dust disease relationships to fiber disease relationships does not seem possible.”(Gibbs and LaChance 1974)

Gibbs and Lachance summarized their results as follows:

“...eighty-seven side by side midget impinger membrane filter samples were taken at five mines and mills showed that the correlation was poor and no single conversion effect was justified. Until more detailed information on the relationships between midget impinger and membrane filter counts can be obtained, it is recommended that safety standards, at least in this industry, should continue to be based on dust counts for which there is considerable epidemiologic support rather on fiber counts, for which there is no direct evidence.” (Gibbs and LaChance 1974)

They concluded, “The conversion of dust disease relationships for the Quebec Mining and Milling Industry to fiber disease relationships **does not seem possible** at the present time. Further information on the relationship of these two methods at each site within each plant is required. Without this, there is no way of estimating with any accuracy the total fiber exposure of persons in the Quebec Asbestos Mining and Milling Industry or indeed of deciding whether the dose response relationships would be better or worse than those obtained from particle counts.” [Emphasis added] (Gibbs and LaChance 1974)

The lack of scientific validity of these dose estimates did not stop the QAMA-McGill research team. They selected a single conversion factor for all processes and all subsequent publications relied on this single value. (They made minor adjustments to the value from time to time.) McDonald states in a 1973 IARC conference publication that dust-sampling methods, in addition to unreliable particle-fiber conversions, produced data too variable to be considered a reliable basis for estimating exposure. [REDACTED]