

great assurance that the particle/fiber ratio applied in the circumstance under investigation.” [Emphasis added](Liddell et al. 1998c)

Liddell (1998) again recognized the inadequacy of their dose estimates.

“Liddell et al. (1984) estimated a factor to convert dust counts to fibre counts as about 3.5 (fibres/ml), mpcf but stated this would be quite **unreliable** except applied to mean dust levels for substantial groups of Quebec asbestos workers. **For the many jobs in which the 2217 men included in their study had worked, the fibre:dust ratios had ranged from 0.3 to 30 (fibres:ml):mpcf virtually independently of the dust level; in the current study ratios job by job must have varied similarly so that the classification of jobs by dust category would not be a reliable classification by fibre count.**”

[Emphasis added] (Liddell et al. 1998c)

They also understood why the dose estimates were so inaccurate. Fiber dust ratios differed by orders of magnitude for different types of work. In addition fiber dust ratios differed by orders of magnitude for the same work process at different points in time.

“The two important reports by Gibbs and Lachance (1972); Gibbs and Lachance (1974) give some indication of the inherent complexity; a simple example is that work on the tailings dump in 196X was extremely dusty but, as most of the fibre would have been extracted the fibre: dust ratio must have been quite low.” [REDACTED]

The exposure data was so inaccurate that "taken at face value" exposures were protective for the workers. In other words, un-manipulated, the exposure data indicated that **chrysotile exposure prevented** workers from developing pneumoconiosis, lung cancer or mesothelioma. The QAMA- McGill researchers realized that this result was so extreme the scientific community would not accept it. It would expose the inadequacies of the entire 40-year study program and