Miller, Diane M. (CDC/NIOSH/EID)

From: Tom Laubenthal [tom.laubenthal@atcassociates.com]

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To: NIOSH Docket Office (CDC)

Subject: Asbestos and Other Mineral Fibers: A Roadmap for Scientific Research, NIOSH Docket Number NIOSH-099

Current NIOSH asbestos air sampling method: NIOSH 7400

Since the implementation of P&CAM 239 (precursor to the 7400 method)...the purpose of the NIOSH asbestos sampling/analysis methods has been for monitoring of workplace personnel. In the asbestos control industry, the NIOSH 7400 method (the Method) has been stretched far beyond what it was designed for and now is used primarily for project monitoring work pursuant to asbestos removal activities. In this we are taking air samples in relatively distal air with, in most cases, low fiber concentrations. These include, but are not limited to, area samples outside of abatement regulated areas and final clearance samples. The Method clearly states in the "range" that we are to attempt to collect between 100 -1300 f/mm^2. While this might have been possible when sampling asbestos product manufacturing workers at Johns-Manville in the 1970's, it is infeasible in the applications in which the Method is employed in today's market. Unless the person employing the Method is performing personal air sampling with materials being disturbed that are very fibrous and relatively dry (a NESHAP violation) the occasion for this type of loading is rare.

As a general assessment, the Method was, from its roots, devised to do personal air monitoring in asbestos manufacturing facilities. It is now used for anything but that. Even in its rational form, as a personal air sampling tool for regulatory compliance purposes, the use of the Method as such is a minority in today's marketplace. If the Method use is to continue NIOSH must reevaluate how it is being used. From required fiber densities (which do not exist in most sampling applications today) to fiber re-count calculations (which are irrelevant at low fiber levels) the Method does not work to provide statistically reliable data as employed in a majority of sampling situations. It has been this way for years.

NIOSH needs to reevaluate the statistical base on which this method is built to accommodate low fiber levels. If this is not an option, the use of the Method (sampling & analysis) for low fiber levels should be abandoned and prohibited by Federal regulation. This would indeed have grave consequences as many Federal (AHERA) and State regulations allow the use of PCM (as in NIOSH 7400) for area and final clearance air sampling. PCM is indeed a rapid and inexpensive method for air sampling and analysis...but what is the data worth if there is no reliable way to validate it? And from more than 20 years in this industry and teaching asbestos programs including NIOSH 582; despite all best efforts to inform otherwise, a minority of labs or individual counters perform any in-house statistical validation of their own data. In the absence of other apparent options within Method-related statistics we should move in difference to other established methods such as TEM that were designed for lower fiber concentrations. Most asbestos removal projects in this country are NOT in schools (AHERA, 40 CFR Part 763) where TEM is required for larger projects. The biggest shift should be on TEM final clearance for all removal actives within buildings where tenant re-occupancy is planned. How long will we allow PCM data that has no practical statistical relevance (both method and practitioner failure) be issued to the public?

Fiber differentiation by PCM.

Differential fiber counting (as in section 2.3.3) by PCM is merely assisting the mining and mineral industry in this country. If differential fiber counting is deemed necessary by the lobbyists of mining and mineral interests, PCM is not the answer. There will be far too much fraud by those that merely "count away" the portion of the air sample that would cause a regulatory violation. This kind of fraud is already rampant in other forms with asbestos abatement air sampling. Differentiation should be made because of true mineral data as with the TEM versus a supposedly trained ballpark guess in the PCM. Unless there is hard data to support this kind if morphology based "fiber" counting, it would be irresponsible to allow its use without massive regulatory oversight, very clear training requirements and a defined structure of fines or criminal prosecution for fraudulent use of the method(s).

Tom Laubenthal
Technical Chief
The Environmental Institute
1841 West Oak Parkway, Suite F
Marietta GA 30062
770-427-3600
tom.laubenthal@atcassociates.com