

Society For Risk Analysis Annual Meeting 2010

Risk Analysis in Action

M3-E: Monday, December 6, 2010

Symposium: Reconstruction of Exposure & Dose

M3-E.3 14:10 Potential Health Hazards Associated with Exposures to Asbestos-Containing Drywall Accessory Products: A State-of-the-Science Assessment. *Phelka AD**, *Finley BL*;

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Abstract: Until the late 1970s, refined chrysotile asbestos was an ingredient in a large number of industrial joint cement compounds and consumer spackling and patching compounds manufactured in the United States. While some drywall accessory products were asbestos-free by the mid-1970s, in 1977 the Consumer Product Safety Commission issued a ban of consumer patching compounds containing “respirable, free-form asbestos” and asbestos was subsequently removed as an intentional ingredient from all U.S. manufactured joint compound products by 1978. Although hundreds of thousands of individuals may have experienced direct or indirect exposures to asbestos in drywall accessory products prior to the ban, there has been no systematic effort to summarize and interpret the information relevant to the potential health effects associated with handling of these materials. In this analysis, we evaluate 1) published and unpublished literature describing fiber type and fiber length data for historic joint compound products, 2) relevant animal toxicology data from inhalation exposure studies, 3) measurements of airborne asbestos collected during actual and simulated use of joint compound during home renovation and construction activities, and 4) epidemiology data available for career drywallers cohorts. As part of this review, we develop estimates of cumulative chrysotile exposure associated with different industrial and consumer use scenarios and compare these estimates to no-effect levels derived for this fiber type. Where appropriate, we describe information gaps and suggest possible areas of future research. We conclude that the current weight of evidence suggests that career drywallers, and consequently consumer home renovators and bystanders to drywalling activities, were not historically at risk for developing asbestos-related disease.