**Tremolite Asbestos Exposures Associated with the Use of Commercial Products.** Amanda Phelka, Brent Finley, Jennifer Pierce, Rebecca Adams, Dennis Paustenbach, Kerry Thuett, and Christy Barlow. 2115 Poster Board -539.

**ABSTRACT:** Tremolite is a member of the amphibole group of minerals and may be present in some chrysotile, talc, and vermiculite deposits. Increased incidence of malignant mesothelioma has been suspected to be caused by exposure to fibrous or asbestiform tremolite in certain occupational (Thetford Mines, Canada and Libby, Montana) and non-occupational settings. However, very little is known regarding the magnitude of exposure to tremolite asbestos that occurred in these occupational environments, and even less is known about asbestiform tremolite exposures experienced by consumers handling or otherwise coming into contact with chrysotile, talc, and vermiculite-containing products. The purpose of this analysis was to develop estimates of cumulative tremolite asbestos exposure in various consumer product use scenarios and compare these values to a lowest-observed-adverse-effect level (LOAEL). Using measured and estimated airborne tremolite asbestos concentrations for simulated and actual product use, we conservatively estimated the following cumulative tremolite asbestos exposures: career auto mechanic: 0.028 f/cc-year; non-occupational use of joint compound: 0.0006 f/cc-year; non-occupational use of vermiculite-containing gardening products: 0.034 f/cc-year; home-owner removal of Zonolite insulation: 0.0002 f/cc-year. In a separate analysis of the tremolite asbestos exposure-response relationship observed for the Thetford chrysotile mines and the Libby vermiculite workers, a LOAEL for mesothelioma of 35-73 f/cc-year was derived. Consequently, the estimated cumulative tremolite asbestos exposures experienced from handling chrysotile, talc and vermiculite-containing consumer products are well below the derived LOAEL for asbestiform tremolite.