

A

To: Dave Penney  
From: Joe Ledvina  
Date: July 13, 1990  
Subject: VCM Risk Factors

Dave,

So far I've gotten three responses to my request to the Vinyl Institute concerning the VCM unit risk factor. Joe King of Occidental sent along the Pennsylvania Air Toxic Guideline where they use 2.4 ppb as a fenceline standard. That is 1/420 of the PEL. I believe the PEL for VCM is 1 ppm. If I did my math correctly, 2.4 ppb equals approximately  $10 \text{ ug/m}^3$  ( $\text{MW}/24.45 * 2.4$ ). Apparently, in Pennsylvania if fenceline concentration is less than  $10 \text{ ug/m}^3$  the facility is considered an acceptable air toxic risk. The use of PEL for carcinogens seems to be the old way of assessing risk. Both EPA and the State of California are using unit risk factors rather than fractions of the PEL to assess risk.

Bob Oubre of Dow - Freeport called to say that the State of Texas also uses  $10 \text{ ug/m}^3$  for VCM as an annual fenceline allowable when assessing air toxic impact. He said that Texas will consider proximity to residents and allow a higher number on a case-by-case basis.

Frank Borrelli of Georgia-Gulf in Delaware City, DE provided excerpts from EPA documents that show the VCM unit risk factor as  $4.1 \times 10^{-6}$ . A footnote states that oral studies suggest a unit risk factor of  $4.2 \times 10^{-5}$ . This is the factor Mississippi is using. If the Mississippi factor is based on oral studies, can we argue that it is inappropriate since the route of exposure is not oral but inhalation? This may allow us to argue for  $4.1 \times 10^{-6}$ . Is there some way you can check this out?

I'll pass along any other information I get through the Vinyl Institute.

  
Joe Ledvina

cc: TGG, RWS, FGJ