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Email from Dr. Jeff Miller, Treated Wood Council, 03 02 2006; 3:15 PM
Comments from Ken Brown during 2/28 conference call

Tom -

On behalf of the Treated Wood Council, I am submitting the attached copy of Dr. Kenneth Brown's oral comments from the 2/28 Arsenic Review Panel teleconference for distribution to the Panel.

Thanks.

Comments for 2/28/06 conference call (SAB arsenic review panel) Dr. Kenneth Brown

1. 1. If the panel is going to endorse heavy reliance on the S. W. Taiwan database, then some statistical measures of the quality of the proposed dose-response model are needed. I am not aware that statistical measures of fit have been applied, besides the AIC that is used for comparison purposes. I am thinking of things akin to a goodness-of-fit test, a generalized R^2 value, residual plots, plots of observed versus predicted, etc., The article by Morales et al. and the second NRC report show a plot of how scattered the observed points are about the dose-response curves that Morales tried, suggesting that probably none of the models can provide very good predictions.

2. 2. I would encourage you to analyze the subset of villages with single wells, or well concentrations within a very narrow range, separately. Those data should be less subject to bias from the ecological exposure. My own analysis, to be published in HERA found that:

.a. the data for that subset of villages are most consistent with a flat or decreasing response at low dose for both males and females (up to 150 ppb or so), contrary to the modeling effort of EPA. The quality of fit is poor, however, indicating that bladder and lung cancer mortality are poorly predicted from arsenic exposure even in this data subset.

.b. Additionally, the data indicate a much higher background cancer risk than the southwestern Taiwan comparison population, suggesting that the S.W. Taiwan study population is a poor model for the neighboring population and probably the U.S. as well.

3. In general, I encourage you to request data analysis in more depth before endorsing the S.W. Taiwan database too strongly, and then to include it as just one study, appropriately weighted, in a meta-analysis. There is considerable other study data to help inform response at the low dose level that would be useful to incorporate.