

From: Robert Palla, *NREN*
To: Jason Schaperow
Date: Fri, Aug 11, 2000 1:24 PM
Subject: Important — Distances at which consequence measures are calculated

I realize that the latent cancer fatalities reported in NUREG-1150 and CR-4551 are for the entire region, not for 50, 100, or 500 miles as reported in the consequence writeups. Thus, I need to ask you for latent cancer fatalities for the entire region in order to provide a more meaningful comparison with 1150 results. (The person-rem results in 1150 are for 50 miles so the results you forwarded in you last e-mail are OK for person-rem.)

In the original consequence writeup (Appendix 4) you showed results for 100 miles and 500 miles. Latent cancer fatalities increased by a factor of 10 in going from 100 to 500 miles in that appendix. I don't know how much higher it goes in your calculations when you consider the entire region. In NUREG/CR-6451 they increased by a factor of 4 in going from 50 miles to 500 miles. The only 1150 plant for which latent cancer fatalities are reported for both 50 miles and the entire region is Zion. The numbers reported in NUREG/CR-4551 for Zion indicate only a small difference (within a factor of two) between latent cancer fatalities for 50 miles and for the entire region. I don't understand why this difference is so small and the differences you report in Appendix 4 are so large. (I know much of it may be explained by the large SFP source term, but a factor of 10 is still a lot.)

Can you pls double-check the latent cancer fatalities numbers to make sure that they make sense, and then provide latent cancer fatality results for the entire region for those cases that I used in the PPG appendix. Thanks

CC: George Hubbard, Timothy Collins

4/249