From: Steven Arndt
To: Mark Rubin, Robert Palla
Date: Mon, Jul 24, 2000 11:19 AM
Subject: Additional information on Effect of Source Term and Plume-Related Parameters on Consequences

Gentlemen,

In response to you request yesterday, for additional information on the calculations that Jason Schaperow did for the spent fuel pool risk study (the individual risk of an early fatality within one mile and the individual risk of a cancer fatality within ten miles). Jason has checked the results from the runs that he has preformed and informs me that the information is available under the MACCS output variable TYPE8OUT. This variable gives the population-weighted risk as described on page 6-54 of the MACCS2 code manual. In the earlier runs he made, this variable was set to give the results you requested. For the early fatality risk, this variable was set for 0 to 2.1 km (.52 km Exclusion Area Boundary). For the cancer fatality risk, this variable was set for 0 to 16.1 km. The following are the results you requested:

Case 45a	early fatality risk	3.66E-2
Case 45a	cancer fatality risk	5.16E-2
Case 45b	early fatality risk	3.23E-2
Case 45b	cancer fatality risk	4.98E-2
Case 46b	early fatality risk	1.40E-3
Case 46b	cancer fatality risk	2.55E-3

Yesterday, you also indicated a possible need for results with a different reactor power than that used in the earlier runs. (The reactor power is a multiplier on the fission product inventory in the spent fuel.) Because the early fatality risk and cancer fatality risk models are non-linear, the easiest way to get results for a different reactor power is to rerun the code. If you need to have this done please let Jason know with a copy to me (i am Jason's acting section chief for the next few weeks).

We intend to provide a final version of Appendix 4A by Tuesday, July 18. This final version will include the above early fatality risk and cancer fatality risk numbers (but not the new runs at this point). If you have any additional comments on the draft version of Appendix 4A. Please provide them directly to Jason Schaperow.

Steven Arndt

CC: George Hubbard, Jason Schaperow, John Flack, Ri...

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