

SFP Report

10/18/99

We looked at this issue indirectly when we were investigating the importance of cesium in the offsite consequence results.

In those calculations, we used MACCS to estimate offsite consequences when no cesium-134 was in the spent fuel pool. Cesium-134 has a relatively short half-life. We got up to a 20% increase in long-term consequences when we zeroed out the cesium-134 inventory. The code developers at Sandia said that the increased dose had to do with the relocation criteria where people were moved back into their homes at certain times. They said that as a result of removing an isotope with a relatively short half-life from the calculation, the people were moved back into their homes sooner and got more dose.

With regard to your question, Sandia's initial response to me today was that the current effect is the same as that for removing cesium-134, that is, reduction in short half-life isotopes by decay is causing small increases in long-term consequences. We have asked Sandia to look into exactly what in the relocation criteria is causing this dose increase.

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