Decay Time in Spent Fuel Pool	Distance (miles)	Prompt Fatalities	Societal Dose (person-Sv)	Cancer Fatalities
30 days	0-100	1.75	47,700	2,460
	0-500	1.75	571,000	25,800
90 days	0-100	1.49	46,300	2,390
	0-500	1.49	586,000	26,400
1 year	0-100	1.01	45,400	2,320
	0-500	1.01	595,000	26,800

Table 7. Mean consequences for the Base Case.

Looking at the societal dose for 0-500 miles...

The amount of radioactivity released to the environment goes down in going from 30 days to 1 year of decay. However, the societal dose goes up from 571,000 Sv to 595,000 Sv. Why?

Societal dose is made up of a) dose for the first week after the accident which includes plume passage and b) dose after the first week. The dose after the first week is from direct exposure (groundshine and resuspension) of people living in the region, dose from decontamination activity, and ingestion.

Societal Dose	Release after 30 days of decay	Release after 1 year of decay
total	571,000	595,000
first week	22,000	18,000
after first week	549,000	577,000
direct exposure	516,000	546,000
decontamination activity	8,200	6,700
ingestion	25,200	24,500

F17

The direct exposure dose increases by 5.8%. [(546-516)/516]

The number of people residing in the 0-500 mile region is 6,630,000.
For the release after 30 days of decay, 3,260,000 people remain in the region and 3,370,000 people temporarily relocate.
For the release after 1 year of decay, 3,540,000 people remain in the region and 3,090,000 people temporarily relocate. Less people relocate because the amount of radioactivity released is less.

The amount of people remaining in the region increases by 8.6%. [(3,540-3,260)/3,260]
As a result, the direct exposure dose would be expected to increase by 8.6%.
However, it does not increase by this much, because...