June 24, 1999

Mean Consequences for Severe Spent Fuel Pool Accident (after 30 days of decay)

Inventory	Distance (miles)	Prompt Fatalities	Societal Dose (person-Sv)	Cancer Fatalitites
all isotopes	0-100	1.75	47,700	2,460
	0-500	1.75	571,000	25,800
only cesium	0-100	1.66	46,700	2,420
	0-500	1.66	569,000	25,700
no cesium	0-100	0.00	2,700	83
	0-500	0.00	5,160	142
no Cs-134 ($t_{1/2}$=2.1 yr)	0-100	.25	45,600	2,220
	0-500	.25	685,000	30,600
no Cs-136 ($t_{1/2}$=13 days)	0-100	1.67	47,600	2,450
	0-500	1.67	571,000	25,800
no Cs-137 ($t_{1/2}$=30 yr)	0-100	.1	24,300	1,200
	0-500	.1	154,000	7,060
only cesium (1.5 cores)	0-100	.55	39,800	2,000
	0-500	.55	419,000	18,900
only cesium (6.0 cores)	0-100	5.14	56,200	3,070
	0-500	5.14	654,000	29,700

(1) (2) (3)

20% higher

20% higher

ask SNL?

Conclusions

Short-term consequences are solely due to cesium.
Short-term consequences are largely proportional to Cs-137 ($t_{1/2}$=30 yr) inventory.

Long-term consequences are almost solely due to cesium.
Doubling Cs-137 ($t_{1/2}$=30 yr) inventory results in small increase in long-term consequences.