

From: Jason Schaperow *RES*
To: Glenn Kelly *ver*
Date: Fri, Apr 21, 2000 4:44 PM
Subject: Evacuation Sensitivity

Please see attached note.

CC: Charles Tinkler, Farouk Eltawila, Mark Rubin, R...

R/12

April 21, 2000

To: Glenn Kelly, NRR
From: Jason Schaperow, RES

The first table below shows the MACCS results presented at the April 5, 2000, ACRS meeting. These results are based on evacuation of 99.5% of the people from the 10-mile Emergency Planning Zone. The 99.5% number is a best estimate from the NUREG-1150 study. You requested sensitivity calculations using an evacuation of 95% of the people. The second table below shows the MACCS results for this sensitivity. This sensitivity shows that the early fatalities increase by a factor of 10 for the scenario involving evacuation before release.

Mean Consequences for Surry Population Density (within 10 miles, 1 out of 200 people do not evacuate)					
Case	Decay Time Prior to Accident	Distance (miles)	Early Fatalities	Societal Dose (person-rem)	Cancer Fatalities
Base	1 year	0-100	1.01	4.54×10^6	2,320
11	1 year (100% ruthenium release)	0-100	95.3	9.53×10^6	9,150
14	1 year (100% ruthenium release) ¹	0-100	.132	6.75×10^6	6,300

¹Based on evacuation before release.

Mean Consequences for Surry Population Density (within 10 miles, 1 out of 20 people do not evacuate)					
Case	Decay Time Prior to Accident	Distance (miles)	Early Fatalities	Societal Dose (person-rem)	Cancer Fatalities
1	1 year	0-100	1.01	4.54×10^6	2,320
45	1 year (100% ruthenium release)	0-100	92.2	9.50×10^6	9,150
46	1 year (100% ruthenium release) ¹	0-100	1.32	6.84×10^6	6,430

¹Based on evacuation before release.