

**From:** Robert Palla , *NR*  
**To:** Timothy Collins *NR*  
**Date:** Thu, Oct 12, 2000 8:11 AM  
**Subject:** PPG/QHO Comparisons at 30 Days

I checked the margins to the QHOs at 30 days for plants operating at the PPG (1E-5/y). We are still below the QHO for individual risk of prompt fatality (which is limiting) but just barely for the high ruthenium source term and late evacuation (it went from 69% of the QHO at 1 year to 89% of the QHO at 30 days).

We do not have the numbers at 30 days for the "worst case source term in Appendix 4A", so didn't include this in the comparison. At one year, the individual risk of prompt fatalities for this source term was only slightly higher than that for the high ruthenium, late evacuation case. Thus, if we had the numbers for this case it would probably come in at about 95% of the QHO.

I can either include an additional table (in Appendix 4C) for QHO comparisons at 30 days (attached table), or just add a statement to the appendix saying that we also evaluated the risk at 30 days and found that it continues to meet the QHOs. I think the latter approach is cleaner, and could avoid a lot of questions. Pls let me know what you think.

**CC:** George Hubbard

*10/12*

*10/12/00*

Table 2 - Comparison of Spent Fuel Pool Accident Risk 30 Days After Shutdown with Quantitative Health Objectives (QHOs)

Case	QHO for Individual Risk of Prompt Fatalities					QHO for Societal Risk of Latent Cancer Fatalities				
	Ind. Early Fatality Risk (per event)	PPG (events per year)	Prob of Early Fatality (per year)	QHO (per year)	% of QHO	Ind. Latent C. Fatality Risk (per event)	PPG (events per year)	Prob of Latent C. Fatality (per year)	QHO (per year)	% of QHO
Low Ruthenium Source Term, Early Evacuation	8.36E-4	1E-5	8.36E-9	5E-7	2	9.92E-4	1E-5	9.92E-9	2E-6	<1
Low Ruthenium Source Term, Late Evacuation	1.27E-2	1E-5	1.27E-7	5E-7	25	1.88E-2	1E-5	1.88E-7	2E-6	9
High Ruthenium Source Term, Early Evacuation	2.01E-3	1E-5	2.01E-8	5E-7	4	4.79E-3	1E-5	4.79E-8	2E-6	2
High Ruthenium Source Term, Late Evacuation	4.43E-2	1E-5	4.43E-7	5E-7	89	8.24E-2	1E-5	8.24E-7	2E-6	41