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From: John Hannon NRR
To: Parry, Gareth NRR
Date: Wed, Aug 16, 2000 3:48 PM
Subject: Re: Spent Fuel Pool Decommissioning: Seismic Screening

ok, thanks. I will defer to your judgement from here on - GOOD LUCK!

>>> Gareth Parry 08/16 11:46 AM >>>
John:

I have problems with the write up also. There's a lot of stuff that's extraneous and confusing, and some that's wrong. I'm particularly concerned about correctly representing what is a source of conservatism as opposed to what is uncertain. Conservatisms are things we know for sure are bounding, uncertainties are associated with not knowing where we are. I'm going to provide some suggestions, which I hope to finish this afternoon. Nilesh has agreed with the concerns I expressed in my e-mail, and so has Goutam I think.

>>> 1st paragraph. Is "frequencies of exceedance" the same thing as "return frequencies"? I would understand better if the latter term were used.>>> It's not quite the same, because it basically means the frequency with which one would expect to see an earthquake of that magnitude or greater.

>>>3rd paragraph. I am still confused by this paragraph and do not find that it has addressed my original point: Which of the two studies (LLNL & EPRI) most closely models the expected ground motion? It appears that this paragraph is discussing two different comparisons (thus my confusion): (a) comparing the two seismic hazard estimates, and (b) comparing point estimates of seismic risk with other initiators. It seems to me that the problem could be greatly simplified if you did not have to compare the LLNL and EPRI estimates; just pick one and go with it as best estimate for risk analysis purposes.>>> You're right, the stuff about comapring with internal events is somewhat irrelevant, it's the seismic events we're concerned about as they are the dominant contributor.

>>>Key assumption 2. I don't believe we should be using upper bound in risk analysis - we should be using best estimates. If EPRI is equally valid then why not use it for our risk analysis if it more closely represents expected ground motion from the earthquakes of interest. What do we lose if we don't use the LLNL data? Am I missing something fundamental here?>>> Both estimates are equally valid in that we don't have any reason to believe one over another. None of us has the depth of knowledge to say whether EPRI or LLNL best represents the expected ground motion frequency. Therefore, we have to take both into account when making decisions.

>>>Source of Conservatism 2. Use of EPRI hazard estimate will eliminate this source of conservatism and appears to be justified on the basis of obtaining best estimate for risk analysis purposes.>>> See above. There is no defendable basis for saying EPRI is a best estimate.

Hope this helps

Gareth

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