

From: Don Marksberry *DMB*
To: Gary Demoss *GES*
Date: 8/28/02 9:01AM
Subject: Re: Fwd: Draft Task Plan for RPV Head Penetration LERs

Gary,

Good comments. Try to get the ANL stuff as soon as you can. I would let the Brits figure out the applicability of Appendix J. They are very familiar with App J from the Summer pipe crack ASP analysis (which you should be getting soon). They did not spend a lot of \$\$\$ when they did Summer, so I think it's safe letting them proceed thru the first step. After about a staff-week of effort, they should provide a best estimate on what it would take to finish the analysis. But, let's get them NRC generated info before they start.

Don

>>> Gary Demoss 08/28/02 08:51AM >>>
Don,

Any approach we come up with will be easier to criticize than to improve upon. I'm still concerned about using NUREG/CR-5750, Appendix J. Basically, there are two models in Appendix J.

1. Probability of a rupture given a through-wall crack as a function of pipe diameter (page J--9) - we don't have a defensible pipe diameter for the vessel head. I agree that the small LOCA is more likely, but I'm not sure how we can justify plugging a small pipe diameter into this model.

2. Probability of rupture from the SKI report, which is a Bayes update of the Jefferys prior based on a large number of degraded pipes. We don't have a similar data based for vessels, and with our sample size, we would generate very high frequencies.

Neither of these models takes into account "...the exact location, size and orientation of the crack." as suggested in item 1 of the plan. ANL did a Monte Carlo analysis on the circ. cracks at Davis Besse that gave a probability range for a through crack going to rupture. That model requires plant-specific material properties, but maybe we can get some generic insights from that work. I have a call in to Steve Long to get some more info.

Gary
>>> Don Marksberry 08/27/02 02:58PM >>>
For your review

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