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On the 4<sup>th</sup> paragraph on page two, it states that "...a more thorough operational assessment for these forms of degradation would have predicted an increased probability of tube leakage or rupture by the end of cycle 14." The forms of degradation being referred to are ODSCC in the sludge pile region, and PWSCC in the U-bend region. However, the concern is focused on the licensee not addressing growth rates and associated NDE uncertainty. Growth rate and associated NDE uncertainty was not the culprit here. The issue was that the licensee claimed they used a qualified NDE method, when, in fact, it wasn't. Growth rate had nothing to do with the issue. The problem was that the crack was there and the licensee failed to detect it.

✓ and Prediction methods!!  
The 2000 Tube rupture

That is the problem I am having with the RES assessment. I can agree that the licensee did not do a good job of addressing crack growth and associated NDE uncertainty. However, I cannot conclude (as RES did) that if we knew the crack growth rates and associated NDE uncertainties better, we could have predicted increased probability. The RES implication is that somehow there as a small crack in the tube at the time of the '97 inspection that grew to a failure after they started up and ran. This is not the case.

What I think your group needs to address is whether you believe that, had the licensee and staff focused on crack growth rates and associated NDE uncertainties, we would have concluded that the probability of a tube leak or rupture was increased.

Brian

10/5 Add TP to 6.2 of report

Cond Ed operational assessment weak, but root cause not growth rate assessment (even though it too was weak).

EE/1