Jonathan Rowley - Fwd: Re: ACRS and reactor vessel nozzle fatigue

From: Jonathan Rowley
To: dmannai@entergy.com; hmetell@entergy.com
Date: 02/01/2008 3:13 PM
Subject: Fwd: Re: ACRS and reactor vessel nozzle fatigue

The ACRS may asked to questions on the concerns stated by David Lochbaum in his email to the ACRS on 1/30/08.

>>> Charles Hammer 01/31/2008 8:27 AM >>>
Jonathan,

FYI, a comment from Dave Lochbaum. The staff will want to be ready to address this at the Feb 7 ACRS meeting, if it is brought up.

Thanks, Gary 415-7363

>>> Frank Gillespie 01/31/2008 7:44 AM >>>
E mail is alway better aand I appreciate your input. we will distribute this to the members. As you may know the answers to the RAI's did not make it in time for complete consideration at this meeting and a second full committee meeting looks likely in March to finish off this fatigue issue. The March meeting will finish what is not done in Febuary and I can not define that split exactly. My reply and your e mail will be forwarded today to the members today as they prepare for the meeting and it will be made part of the FACA record by way of being place in the prepared material for the members. If you would like so time as we offer in the FRN to ensue the committee understands your concern we coould schedule 10 minutes or so on the agenda and if you do not use it that fine. Also we are setting up a phone bridge and we can forward you the number if attending is not possible. Soo ar I think some local press and possibly the State of VT reps might be on the bridge.

Gary Hammer on the staff here is the lead engineer and contact. I have put him donw for a CC of this.

Gary please forward the bridge number to David and schedule some time if David requests it in a reply to this e mail.

Frank Gillespie

>>> "Dave Lochbaum" < dlochbaum@ucsusa.org > 01/30/2008 11:10 AM >>>
Hello Frank:

I called a moment ago and got your voicemail. Rather than leaving a long, rambling voicemail message, I thought a long, rambling e-mail might be better. Not good, but better.

I attended a recent meeting between the NRC staff and the Vermont Yankee licensee regarding the response to the staff's RAI on reactor vessel nozzle fatigue.

I didn't come away from the meeting with a warm, fuzzy feeling that the staff had their arms around the problem.

There was considerably discussion about the identification of limiting nozzle locations (the feedwater nozzle on the BWR being ultimately selected) and the way that the cumulative usage factor (CUF) was calculated for the nozzle. The talk covered accounting for operational history and finite-element modeling of the stresses on the nozzle.

The CUF, if I recall correctly, was determined to be around 0.325.

Little discussion was made of the multiplier (FEN) applied to the CUF. The multiplier as 2.0 and the adjusted CUF thus is on the order of 0.650.

What troubled me about the meeting was the seemingly huge interest in CUF (the small term) and nearly zero interest in FEN (the large term). If makes little sense to me to ensure the CUF ciphering is within 1 percent accuracy if one doesn't also ensure the term that is nearly six times larger is correspondingly more precise.

When the comment period of the meeting arrived, I asked about things affecting FEN that appeared missing from the RAI response. For example, the licensee detailed how it had captured every reactor scram, heat-up and cool-down cycle, etc. when deriving the CUF. That history certainly helped define the temperature profiles associated with the stress term. But I asked about similar accounting/consideration of water chemistry transient history. No answer was provided, the staff merely asked me to supply my questions in writing for the written record.

I understand the ACRS will be reviewing the VY package in the near future. Do you think they will be likely to probe the FEN part of the nozzle fatigue issue, or simply re-trod the well-trodden CUF path? Do you think they will likely probe why VY counted scrams but not chemistry excursions?

If you think the ACRS is likely to cover these grounds, I will sit in the audience and watch with great interest.

If you think the ACRS is unlikely to cover these grounds, is there an option for me or others to pose these questions/issues to the ACRS for their consideration?

Thanks,
Dave Lochbaum
UCS

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From:	Jonathan Rowley
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