

From: "E. A. Connell" <eac3@email.msn.com> Edward Connell, NRC
To: "Diane Jackson" <DTJ@nrc.gov>
Date: Wed, May 26, 1999 2:06 PM
Subject: Re: Draft Paper for your review

Diane - I did a quick skim of the draft report. I still do not agree w/ the 800C threshold being used by SRXB for self-sustaining oxidation is technically valid, based on the Mellor report. It is however extremely conservative. The rate equation referenced in Sect 3.2.4 from DOE is for small zirconium samples, I do not believe that necessarily makes the equation valid for bulk samples, such as fuel tubes. If you want to keep it the report should be complete and say what the range of tested sample sizes were. The present statement is misleading.

On the simple PRA done by SPSB I have several comments:

For Case 3 the report states that "none of the assumptions in the minimal state are precluded by current NRC regulations." I do not believe this is a valid statement. It is not clear to me how a licensee could comply with 50.48(f) with "no firefighting equipment available" with fuel still stored in the SFP.

For Case 1 & Case 2 - It appears that SPSB is only considering manual fire suppression. No consideration is apparently given to automatic suppression systems or passive systems such as fire barriers.

Some of the failure frequencies used by SPSB appear high as well.

✓ The frequency for the failure of the DFP of 1.8E-01 seems high to me. Although I am not familiar with the reference in Table 4.2. I would expect it would be closer to the value for the EFP on the order of E-02. Factory mutual has this data for general industry, if it is important we could purchase it from them. Pat & I both have a contact there.

✓ The failure frequency to recover inventory using offsite fire equipment is way to high. If all that is required (based on SNL 0649) is 100 GPM w/in 40 hours (Case 2) I would expect that the most remote plant in the country could have over 100 pieces of fire apparatus arrive on site within that time frame provided the initiating event is anything but a huge earthquake that takes out all the roads. At least an order of magnitude reduction would be my best guess.

I don't have any major problems w/ the rest of the frequencies used by SPSB in their PRA.

I am planning on being in late tomorrow morning for a least a little while depending on how I feel if you want to discuss further.

Ed

CC: OWFN_DO.owf2_po(KSW)

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