From: Goutam Bagchi, NRR
To: Diane Jackson, Glenn Kelly, Tanya Eaton
Date: Wed, Sep 29, 1999 2:11 PM
Subject: Re: Seismic leakage rate

As we discussed, the seismic failure mode would be shear or flexural cracks in the concrete wall. These cracks would rip apart the very thin liner plate and effective crack areas could be 12 to 20 (24 inch long by 0.5 or 0.75 inch wide) square inches at several places. The crack area would be equivalent of several 4 to 5 inch diameter holes.

Thank you,
Goutam Bagchi
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>>> Tanya Eaton 09/29 9:56 AM >>>
Glenn,

I question came to me after our meeting yesterday with Goutam. You mentioned that given a seismic event, we are looking at spent fuel leakage rates of 5,000 gpm or greater...is this correct?

The reason I need to know is because I (fire protection) am currently looking into early mitigation of the zirconium fire incident. One of the suggestions has been the use of foam. Given a 5,000 gpm, I am wondering how exactly does the spent pool liner fail. Are we talking cracks or huge holes that develop in the liner equivalent to diameters of huge 6" diameter piping or greater? Our draft report says only that the spent fuel pool stucture will fail, the pool will drain, and there will no no recovery. It is important for me to understand the primary failure mechanisms, to adequately address any mitigation through the use of foam, which involves water.

I know you leave Thursday, so if you can call me or email me, I would appreciate it. Also Goutam or Diane, if you find you can also answer these questions, please notify me.

Thanks,

Tanya

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