

From: Steven Long
To: Don Marksberry
Date: 8/12/02 5:04PM
Subject: Re: Frequency of exceeding >2500psig at DB

WR
RES

Don,

Well, that's certainly less than 1E-5/year!

1E-5 case

But, I'm not so sure it's a good estimate for LOFW ATWS. Especially for a B&W plant, the ICS may make the conditional probability of LOFW given an ATWS a bigger contributor than the frequency of LOFW combined with the random probability of an ATWS. At least, it's a second path you haven't estimated

Steve

>>> Don Marksberry 08/12/02 03:53PM >>>
Steve,

RES

The updated frequency of total loss of main feedwater with failure of RPS (i.e., ATWS) is as follows:

Frequency of total loss of main feedwater at Davis Besse

$(8.0E-2/\text{critical year})(0.79 \text{ critical year}/\text{calendar year}) = 6.3E-2/\text{calendar year}$

From NUREG/CR-5750, Tables G-10 and H-3

Probability of RPS failure = 1.6E-6/demand

From NUREG/CR-5500, Vol 11, Reliability Study: Babcock & Wilcox Reactor Protection System, 1984-1998, Table 3-4.

The frequency of total loss of main feedwater with failure of RPS

$(6.3E-2/\text{calendar year})(1.6E-6) = 1E-7/\text{calendar year}$

C/1