

**Mitman, Jeffrey**

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**From:** Ferrante, Fernando /NRR  
**Sent:** Tuesday, January 12, 2010 2:43 PM  
**To:** Mitman, Jeffrey; James, Lois /NRR  
**Subject:** RE: information needed

Lois,

This last issue on the  $\sim 5E-5$ /yr result is also what is holding up the RES report. The result is actually gone from the current version but residual text still remains alluding to notable/major/significant failures which could be misused to characterize a lower frequency without context or strong basis. It should be noted however that due to the more generic nature of the RES report (i.e., beyond Keowee/Jocassee), the concern RES wants to document is not without merit (i.e., that not all dam failures immediately translate to severe consequences for a facility x miles away from the dam).

Thank you,  
Fernando

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**From:** Mitman, Jeffrey /mlc  
**Sent:** Tuesday, January 12, 2010 2:06 PM  
**To:** James, Lois  
**Cc:** Ferrante, Fernando  
**Subject:** RE: information needed

Lois, no peer review was performed on the  $2E-4$  calculation.

The original calculations were performed by Jim Vale with Mike Franovich's and Jeff Circle's involvement. The calculations were reviewed/refined by RES - I believe either Dale Rasmussen (who has since retired) and/or Selim Sancaktar. This work was done in mid 2008 timeframe.

The paper was written in 1Q 2009 by Fernando with input from Jim and myself. The purpose was not to refine the calculation from 2008. The purpose was to simply document what had been done previously.

As I stated yesterday, based on what we know today, the failure frequency might be different. However, I've yet to hear any quantitative argument within the NRC for a different failure frequency - with one exception. The initial draft of the RES report "Estimation of Failure Frequencies of Large Dams in the U.S." supplied two failure frequencies. The first was a failure rate for all types of failures of  $\sim 4E-4$  per year. The second was a failure rate for "notable" failures of  $\sim 5E-5$  per year. Notable was intended to be synonymous with major or catastrophic failures of a dam. This second failure frequency was determined to be unsupportable and without sufficient basis by DRA (Circle, Franovich, Parry, and others) and this categorization was removed from subsequent report drafts.

Jeff

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**From:** James, Lois  
**Sent:** Tuesday, January 12, 2010 11:51 AM  
**To:** Mitman, Jeffrey; Ferrante, Fernando  
**Subject:** information needed

Jeff - Can you provide me a synopsis of what peer review was done on your pdf file for documenting  $2E-4$  as the dam failure rate?

Fernando - Can you briefly describe the differences b/w what RES did to get the failure rate in the E-5 range and our calculation?