

Mitman, Jeffrey

From: Ferrante, Fernando *NRK*
Sent: Wednesday, January 06, 2010 1:40 PM
To: Laur, Steven; Galloway, Melanie
Cc: James, Lois; Vail, James; Mitman, Jeffrey
Subject: RE: RES Dam Failure Report *NRK*

Steven,

The issue with the updated CEUS hazard curves is something that we had also mentioned as in need of either a fix or a comment on the fact that some updating via GI-199 has taken place. However, I don't have access to the more recent USGS curves, could you send me the spreadsheet from Marty S.?

I also recommended a literature search as part of my own review on the report (and based on references I have myself collected) and, as a result, there is an added simple paragraph, that is new to this version, with this intent. It does not list results from these sources so there isn't an intent to use these them as support for the results obtained, but this could be added. Large dams by other research efforts are usually in the E-4 order of magnitude for the annual failure rate from what I have seen. Some have lower estimates by further parsing of the data, which is not what the report suggests to do. We could certainly modify this paragraph to add these values or add more references. However, I am not familiar with the internet search that was mentioned to Jim Vail.

An important note is that the report has changed substantially in certain parts (and especially in structure) from the last version, so there may be additional changes that may come from a more detailed review.

Thanks,
Fernando

From: Laur, Steven *NRK*
Sent: Wednesday, January 06, 2010 12:23 PM
To: Galloway, Melanie
Cc: James, Lois; Ferrante, Fernando
Subject: RES Dam Failure Report

Melanie:

I successfully "scrolled through" all 100+ pages in the report. I even read some of it (!)

Here are my "gut feeling" comments, in no particular order:

- Section 4 appears to be an attempt to salvage the original (and incorrect) definition of dam failure as ones that had consequences to people or property. Appendix C is the supporting data. I agree they should be removed.
- However, a "literature search" would be useful: I was expecting a paragraph or two that said "the literature provides failure frequencies that tend to support our results from the data approach." My attached "peer review" of Jim Vail's original study includes an Internet search that has the type of supporting statements I was expecting.
- Section 3.7 looks at the seismic failure of dams. It uses the Lawrence-Livermore curves. In light of GI-199, I believe the latest USGS curves would be more appropriate.

For example, using the dam fragility in the paper and Oconee site seismic hazard curves (and thanks to a spreadsheet from Marty S.), I got the following seismic dam failure frequencies:

USGS curves - 1.6E-5 per year

Lawrence-Livermore - 6.2E-6 per year (the report shows 6E-6 ...)

1989 EPRI curves - 4.2E-6 per year

- The list of dams and information for each may be SUNSI.

- Overall, the report would add value and should be issued. I believe it needs technical editing. If it needs additional technical review (by me), I would require a couple of days to go over the report in detail.

Steven A. Laur

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From: Galloway, Melanie *ML*
Sent: Wednesday, January 06, 2010 8:35 AM
To: Laur, Steven
Cc: James, Lois; Ferrante, Fernando
Subject: FW: Today's meeting

Here are the earlier comments I referred to.

Here are my issues with the current draft version of the report:

My concerns are that section 4 and Appendix C are without context and should come out (they list the "significant" dam failures based on consequences without defining significant and indicating the point of this). I also think that sections 5 and 6.1 should come out as they give guidance--this strikes me as out of line for this report. In addition, the use of terminology is very loose--attributes, categories, parameters, types--used in multiple ways without definition.

Let me know if you have any question.

Thanks. We can follow up this afternoon.

From: Ferrante, Fernando
Sent: Tuesday, January 05, 2010 3:54 PM
To: Galloway, Melanie
Cc: James, Lois
Subject: FW: Today's meeting

Melanie,

I believe these are the earlier comments on the RES Large Dam Failure Rate Estimates Report.

Thank you,
Fernando

From: Galloway, Melanie
Sent: Tuesday, October 06, 2009 9:52 AM
To: Ferrante, Fernando
Cc: James, Lois
Subject: FW: Today's meeting

As requested, here is what I was able to find as the latest specific comments on the report that we provided to RES.

In my view this does not set any precedent that needs to be followed in terms of how to provide comments.

From: Parry, Gareth
Sent: Tuesday, July 28, 2009 5:31 PM
To: Coyne, Kevin
Cc: Franovich, Mike; Galloway, Melanie; Coe, Doug
Subject: Today's meeting

Kevin:

Attached is a document that summarizes Mike and my recommendations on the dam report as discussed today. Mike, feel free to correct or add as you see fit,

Gareth

Gareth Parry
NRC
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