

Bauer, Laurel

From: Cook, Christopher - *NRO*
Sent: Monday, March 22, 2010 12:56 PM
To: Bauer, Laurel; Devlin, Stephanie; Seber, Dogan
Subject: FW: C. Mueller Mmax publication
Attachments: Language From Contract and MLSR.doc

FYI...

From: Ake, Jon
Sent: Monday, March 22, 2010 12:00 PM
To: Cook, Christopher; Karas, Rebecca; Li, Yong; Munson, Clifford; Graizer, Vladimir; Kammerer, Annie; Hogan, Rosemary
Subject: C. Mueller Mmax publication

Below is a summary of what I think has transpired with respect to the recent publication by Chuck Mueller on Mmax in the central and eastern U.S. (CEUS). Following that summary is what I would propose as a course of action to minimize the likelihood of this occurring again. I'm afraid I will have to shoulder the responsibility for not being more aggressive in reminding our USGS colleagues that we are required to review publications prior to submittal.

SUMMARY

Interagency Agreement N6506 (Seismic Hazard Related Research) between the NRC and USGS-Golden began in late 2007. Task 1 of that agreement was focused on developing and conducting a workshop to explore alternative methods for estimating Mmax in the CEUS and similar environs. A secondary portion of that task was to assess the hazard impact of alternative Mmax assumptions. The workshop occurred in September of 2008 in Golden, CO and 35 people attended. Several NRC staff members (both RES and NRO) were in attendance as well as USGS staff and other invited technical specialists from the U.S., Canada, and Australia. At that time Chuck Mueller made a presentation on the sensitivity of hazard to Mmax assumptions. In that presentation he looked at regional variations as well as site specific implications. One of the specific locales he considered was the South Texas Project (STP).

Chuck provided NRC/RES a technical report in late 2008 that documented his work on Mmax sensitivity. That report and the Workshop summary report produced by Rus Wheeler comprised the deliverables for Task 1. I reviewed the report and in general found it to be very good. However, Chuck did include a more detailed discussion of the results for several sites that he had knowledge of as a reviewer for NRO (STP, North Anna, Vogtle). In terms of what we (RES) were expecting it was really a discussion of a regional perspective (the hazard ratio maps for example) and that is what I focused on. For the purposes of Task 1 these deliverables represented everything we were expecting and after mid- 2009 the Monthly Letter Status Reports (MLSRs) reflect no further activity on Task 1 (see first part of attached word file).

In April 2009 there was a Special Session at the Annual Meeting of the Seismological Society of America (SSA) that dealt specifically with estimating Mmax in stable continental regions. At that meeting Chuck presented a talk that contained many of the elements that are included in the recently published paper. On recollection I now recall groaning when he made the presentation as he included results for specific sites (STP etc.). A number of other NRC staff members were in the audience and I think the reaction was generally similar to mine. The abstract for his talk contained no mention of specific sites only the regional hazard ratio maps. There were a number of questions to Chuck regarding the low Mmax values in the EPRI-SOG model. I spoke after Chuck and presented a significantly different perspective on Mmax and associated uncertainty.

CONCLUSION: As the PM and someone who is knowledgeable of how the USGS research program operates, I should have realized after the SSA talk that a research paper was surely going to be submitted for publication. I did not receive a draft copy of the paper for review but frankly should have seen this coming.

SUGGESTIONS FOR THE FUTURE: We need to reiterate with the USGS that while we encourage publication of research results, there is a requirement in the contract that the PM review all results that will be published in the open literature (see attached language). In addition we need to specify that in the acknowledgements section, in addition to noting NRC funding that it be specified that NRC-RES is the funding entity and that any conclusions are the author(s) and do not necessarily represent NRC views. PMs need to be diligent about reminding USGS about pre-publication review.

Knowing the USGS staff and management, I think there will be some hesitation with respect to the scope of NRC review of research products. We probably need to stress that this review is intended to focus on sites and/or issues currently in review and not with respect to "general research results and conclusions".

I would appreciate any comments or suggestions.

Regards-
Jon

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