

Sweeney, Beverly

From: Flanders, Scott — NRC
Sent: Tuesday, March 23, 2010 1:16 PM
To: Akstulewicz, Frank; Matthews, David; Madden, Patrick; Tonacci, Mark
Cc: Chokshi, Niles; Hsia, Anthony; Cook, Christopher; Karas, Rebecca
Subject: FW: North Anna + Vogtle: BSSA paper on CEUS seismic hazard comparison

Apparently a USGS employee who is a contractor for us took the liberty to prepare a journal paper (for the Bulletin of the Seismological Society of America) that compares USGS and NRC approaches to seismic hazard analysis. Specifically his paper looks at STP COL (which is still under review by my staff) and the ESPs for North Anna and Vogtle. What makes this particularly bad is that the individual did not include any disclaimer and presents the information as if the staff supports his view. The paper was prepared without our awareness or consent. Becky and Chris are going to contact STP to alert them about the article, to inform that this does not represent NRC's position, and that the issue is still under review. We are also going to prepare a comment or rebuttal to correct the facts (this journal typically takes comments on its reports). We will also work with Fretz to engage USGS to address this from a contracting stand point. As I understand it, we have had similar challenges with USGS and we intend to have a management meeting with them to discuss.

Scott

From: Cook, Christopher
Sent: Tuesday, March 23, 2010 12:45 PM
To: Chokshi, Niles; Flanders, Scott
Cc: Karas, Rebecca
Subject: North Anna + Vogtle: BSSA paper on CEUS seismic hazard comparison

The previous email focused on STP. Here are some of the relevant quotes for North Anna and Vogtle:
Pg 701: Data are taken from the North Anna (Dominion Nuclear North Anna, 2006) and South Texas Project (South Texas Project Nuclear Operating Company, 2008) NRC applications. In each case, the shapes and sizes of the source zones are different for the six teams, the common factor being that each zone hosts the plant site (e.g., Table 1 lists the zones with distance ≥ 0 in tables 2.5–5 to 2.5–10 of the North Anna application).

PG 701: On average, the teams specify greater m_{max} for the more active North Anna sources (best seen by comparing the tables team by team). For the North Anna sources, EPRI/SOG m_{max} ranges from m_b 4.9 to 7.2, averaging about m_b 6.1. For the South Texas sources, EPRI/SOG m_{max} ranges from m_b 4.6 to 7.2, averaging about m_b 5.5.

Pg 700:
Table 1
EPRI/SOG m_{max} (mb) for North Anna Site Host Source Zones

From: Cook, Christopher
Sent: Tuesday, March 23, 2010 12:29 PM
To: Chokshi, Niles; Flanders, Scott; Govan, Tekia
Cc: Karas, Rebecca
Subject: FW: BSSA paper on CEUS seismic hazard comparison

Please see the attached. A few of the relevant quotes are:
Pg 701: Since 2003, the USGS has collaborated with the United States Nuclear Regulatory Commission (NRC) to review seismic hazard assessments that are submitted with all applications to build new nuclear power plants in the United States.

PG 701: NRC required updates to the South Texas m_{max} distributions, based on two large earthquakes in the Gulf of Mexico in 2006.

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PG 711: In updating the PSHA (South Texas Project Nuclear Operating Company, 2008), the NRC required the applicant to adjust the m_{max} distributions for five of the six EPRI/SOG teams upward to accommodate these earthquakes. Even with the updates, at 0.0001 annual exceedance probability, the USGS 10-Hz ground motions exceed the applicant ground motions by factors of two or more.

Acknowledgements: This work was supported by the U. S. Nuclear Regulatory Commission.

From: Li, Yong

Sent: Tuesday, March 16, 2010 12:29 PM

To: Devlin, Stephanie; Graizer, Vladimir; Seber, Dogan; Tabatabai, Sarah

Cc: Munson, Clifford; Karas, Rebecca; Cook, Christopher

Subject: BSSA paper on CEUS seismic hazard comparison

Chuck Mueller's paper compared calculated seismic hazards between USGS and original EPRI/SOG at several COLA sites.