

PMBeCOL PEmails

From: Joseph Sebrosky
Sent: Wednesday, April 22, 2009 9:40 AM
To: 'rgrumbir@gmail.com'; 'alsterdis@tva.gov'; 'erg-xl@cox.net'; 'pshastings@duke-energy.com'; 'kslays@duke-energy.com'; 'Bob Hirmanpour'; 'Spink, Thomas E'; Ryan, William T III; Clifford Munson; Rebecca Karas; Yong Li; Dogan Seber; Laurel Bauer
Cc: PMBeCOL PEmails
Subject: draft seismic RAI related to EPRI topical report
Attachments: draft epri tr 1014381 rai.doc

To All,

Attached is a draft Bellefonte RAI related to an EPRI topical report. Please provide a time frame for when you can discuss the draft RAI before it is made final.

Sincerely,

Joe Sebrosky
Senior Project Manager
NRO/DNRL/NWE1
301-415-1132

Hearing Identifier: Bellefonte_COL_Public_EX
Email Number: 1476

Mail Envelope Properties (B4ECC0E252653F48B3F57C3B833465E80F9C9DB377)

Subject: draft seismic RAI related to EPRI topical report
Sent Date: 4/22/2009 9:40:09 AM
Received Date: 4/22/2009 9:40:11 AM
From: Joseph Sebrosky

Created By: Joseph.Sebrosky@nrc.gov

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Files	Size	Date & Time
MESSAGE	289	4/22/2009 9:40:11 AM
draft epri tr 1014381 rai.doc	28154	

Options

Priority: Standard
Return Notification: No
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Sensitivity: Normal
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Recipients Received:

**Bellefonte Units 3 and 4
Tennessee Valley Authority
Docket No. 52-014 and 52-015
SRP Section: 02.05.02 - Vibratory Ground Motion
Application Section: 2.5.2**

QUESTIONS for Geosciences and Geotechnical Engineering Branch 2 (RGS2)

Erai 2652, 02.05.02-***

FSAR Section 2.5.2.4.2.2 discusses aleatory variability in CEUS ground motions and references EPRI Technical Report 1014381, "Truncation of the lognormal distribution and value of the standard deviation for ground motion models in the Central and Eastern United States." Part of the report describes using additional ground motion recordings from Taiwan and other regions around the world to refine the ground motion aleatory variability for the CEUS. Based on EPRI Technical Report 1014381, which was endorsed by NRC staff, the aleatory variability for the EPRI (2004) ground motion prediction equations were changed.

Recently, the author for the EPRI Technical Report 1014381 published a paper in Seismological Research Letters, entitled, "Sigma: Issues, Insights and Challenges." The paper concludes: "Previous attempts at reducing sigma through the use of larger datasets and the inclusion of additional terms in the functional form of predictive equations may have met very little success because the additional uncertainties introduced have not been considered." In view of this conclusion, please justify your use of the EPRI Technical Report 1014381, which modifies the aleatory variability of the EPRI (2004) ground motion prediction equations. Also, describe the impact of the altered aleatory variability on the PSHA results for your site.