

April 9, 2010

Mark D. Petersen
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Subject: *Central and Eastern United States (CEUS) Seismic Source Characterization(SSC) for Nuclear Facilities: Response to USGS Letter Regarding USGS Comments on CEUS SSC Earthquake Catalog and Datasets, Methods and Models dated April 8, 2010*

Dear Dr. Petersen,

Thank you for your comments regarding the products that were requested of the USGS, as described in our previous correspondence of August 4, 2009:

1. A review of the earthquake catalog developed for the CEUS SSC project, including a review of the manner in which moment magnitudes have been estimated for all events.
2. A review of the datasets, models, and tools used in the development of the CEUS SSC source model to ensure that all applicable data, models, and tools have been considered. The USGS may have different views regarding the applicability or credibility of various data, models, and tools, but it is important that the USGS identifies any that appear to have not been considered by the TI Team and Staff.

As you know, members of the USGS have participated in aspects of the CEUS SSC project, such as workshops, during its course and have provided valuable feedback regarding the data, models, and methods that you are aware. To ensure that USGS input is received in time for consideration by the TI Team prior to finalization of the CEUS SSC Model, we have requested written feedback from the USGS in a timely manner. Your letter provides that written feedback on the CEUS SSC earthquake catalog and the data, models, and methods that are recommended for consideration by the TI Team. We are thankful for this input and this letter summarizes the response of the CEUS SSC Project to each of your recommendations:

1. The TI Team will take the comments of Drs. Mueller and Hopper into account in the finalization of the earthquake catalog and in the course of developing the documentation for the work done to support the catalog.
2. When making the assessments for the final CEUS SSC Model, the TI Team will consider the recommendations made regarding the Nemaha Ridge Zone, Eastern Tennessee Zone, a background source zone (providing a floor to the hazard), an Eastern Arkansas Zone, and a Charlevoix b-value zone.

3. In assessing Mmax, the recommendations regarding potential magnitudes across the CEUS and structural relationships in the Rome Trough and Rough Creek Graben will be considered.
4. The list of suggested references regarding the New Madrid seismic zone will be reviewed and, as applicable to the CEUS SSC Model, they will be considered for inclusion in the Data Summary Tables or added to the report bibliography.
5. No actions are recommended based on the comments from Tony Crone.

Again, we appreciate the comments made by the USGS regarding the CEUS SSC project.

If you have any questions regarding this letter, please feel free to contact us.

Sincerely,

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