



NUCLEAR ENERGY INSTITUTE

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September 8, 2006

Mr. Eugene V. Imbro  
Chief  
Mechanical and Civil Engineering Branch  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**SUBJECT:** Response Spectra for 28 Central and Eastern US Sites

**PROJECT NUMBER: 689**

Dear Mr. Imbro:

Enclosed are the seismic site response spectra for 28 Central and Eastern US sites that have been calculated using the ASCE 43-05 procedure; as requested in the NEI-NRC meeting on August 29, 2006. These are the same sites that are evaluated in Regulatory Guide 1.165, *Identification and Characterization of Seismic Sources and Determination of Safe Shutdown Earthquake Ground Motion*. The plots contain site spectra calculated following the ASCE 43-05 procedure for three cases:

1. A "base case" with EPRI-2004 standard deviations (sigmas) and no CAV filter.
2. Spectra based on hazard calculated using the Abrahamson-Bommer (2005) revised sigmas in place of the EPRI-2004 sigmas.
3. Spectra based on hazard calculated using the Abrahamson-Bommer (2005) revised sigmas and the Abrahamson-Watson-Lamprey (2005) CAV filter.

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If you have any questions, please contact Rick Hill at (831) 420-7607; [rahill@erineng.com](mailto:rahill@erineng.com), Robert Kassawara at (650) 855-2775; [rkassawa@epri.com](mailto:rkassawa@epri.com) or me.

Sincerely,



Adrian P. Heymer

Enclosure

c: Dr. William D. Beckner, NRC  
Dr. Anthony H. Hsia, NRC  
Dr. Andrew J. Murphy, NRC  
Document Control Desk

**Individual site spectra for 28 Central and Eastern US sites**

Notes: The following plots contain site spectra calculated following the ASCE 43-05 procedure for three cases:

1. A “base case” with EPRI-2004 standard deviations (sigmas) and no CAV filter.
2. Spectra based on hazard calculated using the Abrahamson-Bommer (2005) revised sigmas in place of the EPRI-2004 sigmas.
3. Spectra based on hazard calculated using the Abrahamson-Bommer (2005) revised sigmas and the Abrahamson-Watson-Lamprey (2005) CAV filter.

Site numbers are assigned at random.





















