

August 25, 2004

MEMORANDUM TO: Ledyard B. Marsh, Director
Division of Licensing and Project Management
Office of Nuclear Reactor Regulation

FROM: Michael E. Mayfield, Director /RA/
Division of Engineering Technology
Office of Nuclear Regulatory Research

SUBJECT: TRANSMITTAL OF "U.S. GEOLOGICAL SURVEY FINAL REPORT TO
THE NUCLEAR REGULATORY COMMISSION FOR THE FY2003
USGS/NRC PROGRAM"

This memorandum transmits for your information and use the subject report, "U.S. Geological Survey Final Report to the Nuclear Regulatory Commission for the FY2003 USGS/NRC Program." This report documents the results of the FY2003 part of the ongoing USGS/NRC cooperative geoscience research.

Seismic activity is always an important concern for the NRC in terms of safety of nuclear facilities. In order to quantify the risks from strong earthquakes, the NRC encourages that probabilistic seismic hazard analysis (PSHA) be performed in the evaluation of seismic safety for nuclear facilities. PSHA requires better defined earthquake sources, site characterizations and more accurate attenuation relationships. The USGS/NRC agreement supports research activities toward better understanding of seismic risks. The seven tasks described in this report are part of this research and will contribute to improvements in the PSHA for nuclear facilities.

All seven research tasks are aimed at generating more accurate input parameters for PSHAs, thus reducing uncertainties. The focus of this research is the evaluation and quantification of seismic hazard in the central and eastern United States. Specifically, three of the tasks are directly targeted at reducing uncertainties on magnitudes and locations of historic seismic events, soil amplification factors, and recurrence interval of paleoseismic events. Results and methods documented in this report will enhance our understanding of seismic sources, site amplification, and ground motion attenuations. This enhanced knowledge will be helpful in improving seismic hazard estimates at present and future nuclear plant sites.

Attachments: As Stated

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