



United States Department of the Interior

U.S. GEOLOGICAL SURVEY

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Denver, Colorado 80225

IN REPLY REFER TO:

February 28, 1995

Dr. Malcolm Knapp, Director
Division of Waste Management
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Data Needs Workshops, April 17-21, 1995 - Yucca Mountain Seismic Hazard Evaluation and Development of Seismic Design Parameters Project

Dear Dr. Knapp:

We are please to invite you or your designee to act as an observer at the upcoming Data Needs Workshops for a project sponsored by the U. S. Department of Energy (DOE) to evaluate seismic hazards and develop seismic design parameters for a potential geologic repository at Yucca Mountain, Nevada. The Data Needs Workshops are scheduled to be held at the Doubletree Hotel in Salt Lake City, Utah during the week of April 17, 1995.

In accordance with the Nuclear Waste Policy Amendments Act of 1987, the DOE is responsible for evaluating Yucca Mountain as a potential site for the nation's first permanent geologic repository for spent nuclear fuel and high-level radioactive waste. As part of the evaluation, DOE has assigned the responsibility of assessing the seismic hazards at Yucca Mountain and developing seismic design basis parameters to the U. S. Geological Survey (USGS). The USGS has selected the Civilian Radioactive Waste Management Systems (CRWMS) Management and Operating (M&O) contractor (Woodward-Clyde Federal Services) to assist them in performing this work.

The project consists of four integrated activities: (1) the evaluation and characterization of seismic sources and fault displacement; (2) the evaluation of ground motion attenuation; (3) the probabilistic assessment of fault displacement and ground motion hazards; and (4) the development of seismic design inputs appropriate for the proposed repository. The results of these activities will lead to a seismic design basis for the structures, systems, and components of a Yucca Mountain repository and to the full documentation of the technical bases for these determinations.

The probabilistic seismic hazard analysis for ground motions and fault displacement will be performed using input interpretations from multiple experts. The interpretations will be based on seismological, geological, geophysical, and geotechnical data specific to the Yucca Mountain site and the surrounding area. For seismic source and fault displacement inputs, six teams of three experts each will develop interpretations. For ground motion inputs, seven individual experts will carry out evaluations. The use of multiple experts is motivated by a need to

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document the variability of interpretations that is allowed by the data. This variability results from uncertainties in the underlying data themselves and from competing hypotheses and models that are consistent with the data. Each expert will evaluate and document the uncertainties in their interpretations.

To facilitate the interpretation process, two series of five workshops each will be held. One series of workshops will expedite interpretations for seismic source and fault displacement characterization; the other series will support ground motion interpretations. The first Seismic Source and Fault Displacement Workshop will begin at 1:00 p.m. on Monday, April 17 and will run until 5:00 p.m. on Wednesday, April 19. The first Ground Motion Workshop will take place between 8:00 a.m. on Thursday, April 20 and 4:00 p.m. on Friday, April 21. Subsequent workshops are tentatively scheduled for August, October, and November, 1995 and March and August, 1996.

These workshops are internal meetings of the study to assess seismic hazards at Yucca Mountain. Their focus will be on interactions among the participant experts and scheduled presenters. The workshops will be highly technical in nature. In an effort to maintain an informal environment that will maximize the exchange among the experts and the technical presenters, we ask that the number of participants from your organization be limited to not more than two individuals. If time allows during the course of the workshop, we will provide limited time for observers to make statements.

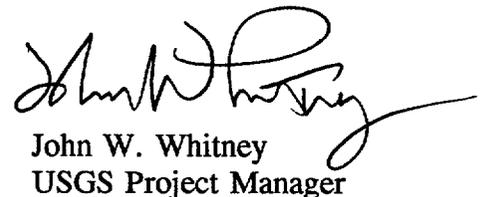
If you are interested in attending the first workshops, please contact Sue Penn of Woodward-Clyde Federal Services at (510) 874-3122 to make hotel reservations. The Doubletree Hotel is located at 215 West South Temple and provides complimentary shuttle service from the airport. We have reserved a block of rooms at the government rate of \$61.41, including tax.

We are pleased to invite you as an observer of this very important work in progress and look forward to hearing from you at your earliest convenience to confirm your attendance. If you have any questions regarding the workshop, please contact Sue Penn.

Sincerely,



J. Carl Stepp
Project Director
CRWMS M&O/WCFS



John W. Whitney
USGS Project Manager

cc: Mike Bell, NRC
Keith McConnell, NRC
Buck Ibrahim, NRC
Tim Sullivan, DOE
April Gil, DOE