

20 years of Yucca Mountain research now available for scientific review

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The scientific community can now take a long-awaited look at the research behind the selection of Yucca Mountain, Nevada, as the nation's high-level radioactive waste repository.

The Geology and Climatology of Yucca Mountain and Vicinity, Southern Nevada and California, published by the Geological Society of America, presents important results of a significant part of the U.S. Department of Energy (DOE) Yucca Mountain site characterization study. The study was conducted by the U.S. Geological Survey (USGS) and the DOE National Laboratories. The book includes discussion of the mountain's tectonic setting and detailed structural geology and stratigraphy, evaluation of tectonic models that have been proposed, and a study of the climate history and possible climate change that could affect the mountain's ability to isolate radioactive waste.

According to co-editor John Stuckless, U.S. Geological Survey, Denver, CO, more than \$6 billion has been spent thus far to study geologic, engineering, and transportation issues associated with Yucca Mountain. The site characterization study contained results of more than 20 years of scientific research and analysis by hundreds of scientists.

"A major challenge of producing the book was coping with the sheer volume of research," said Stuckless. "We needed to boil it down and make it usable, retaining key findings as well as important nuances."

Stuckless expects the book to draw significant interest from beyond the

scientific community. "This research will be the prime support for DOE's application for licensing, which will be submitted to the U.S. Nuclear Regulatory Commission in 2008," he said. "The research reported in this Memoir will be studied and used by the legal community, Congressional staffs, and virtually everyone involved with or having a stake in Yucca Mountain."

Stuckless and co-editor Robert Levich, U.S. Department of Energy (retired), are now at work on a second volume. It will summarize current understanding of the hydrology and geochemistry of the Yucca Mountain area. They hope to have it ready to submit to GSA by the end of 2007.

Source: Geological Society of America

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