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Effects of Thermal Loading on Repository Design Topic of Three-Day Board Meeting

The Nuclear Waste Technical Review Board (the Board) has invited representatives from the Department of Energy (DOE), the national laboratories, the Electric Power Research Institute (EPRI), and from high-level radioactive waste management programs in Canada, Germany, and Sweden to its full Board meeting to be held October 8 to 10, 1991, in Las Vegas, Nevada. The three-day meeting will focus on the effects of alternative thermal loading on high-level waste repository design concepts. It will be held at the St. Tropez Hotel, Monte Carlo Ballroom II & III, 455 E. Harmon Avenue, Las Vegas, Nevada 89109; (702) 369-5400. The sessions, which are open to the public, will run from 8:30 A.M. to 5:00 P.M., each day.

On Tuesday, October 8, the Board will hear an overview of repository design concepts proposed for use in several nations. Klaus Kühn with the Company for Radiation and Environmental Research/Institute for Underground Storage, Nils Rydell of the Swedish National Board for Spent Nuclear Fuel (SKN), and Gary Simmons, Atomic Energy of Canada, Ltd., will review the thermalloading and repository design concepts planned for Germany, Sweden, and Canada, respectively. Peter Stevens-Guille of Ontario Hydro, Canada, will review the thermal issues associated with monitored retrievable storage concepts. Carl Gertz of the DOE's Office of Civilian Radioactive Waste Management will present an historical perspective and overview of the U.S. program.

On Wednesday, representatives from the national laboratories will address thermal loading and other issues, such as far-field geochemical uncertainties, near-field geochemical uncertainties, waste form degradation and materials uncertainties, near-field hydrologic uncertainties, and mineralogical near- and far-field uncertainties. These presentations will center on six questions: (1) What are the potential problems associated with each issue? (2) What is the significance of each of the potential problems? (3) What are the uncertainties associated with each of the potential problems? (4) Can these uncertainties be resolved? (5) How much time and money will be needed to resolve these uncertainties? (6) Will there be residual uncertainties? Enhancements associated with various alternative thermal-loading concepts, such as engineered barriers, also will be discussed.

On Thursday, October 10, the Board will hear presentations on the implications of alternative thermal loading, specifically those associated with licensing, system costs, regulatory and legislative considerations, and total system performance. Performance assessment considerations also will be reviewed. That afternoon, the participants and Board members will join in a round-table discussion of

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issues raised during previous sessions in regard to thermal loading at the Yucca Mountain site, the testing and evaluations that will be needed, and the importance of establishing a clear thermal design concept for the proposed repository.

The public is welcome to attend the meeting as observers. Transcripts will be available on a library-loan basis from Victoria Reich, Board librarian, beginning November 18, 1991.
