Agenda

Full Board Meeting

Evaluation of Ranges of Thermal Loading for High-level Waste Disposal in Geologic Repositories

October 8, 1991

St. Tropez Hotel
Monte Carlo Ballroom II & III
455 E. Harmon Avenue
Las Vegas, Nevada 89109
702/369-5400

8:30 A.M. Welcome
Don U. Deere, Chairman, Nuclear Waste Technical Review Board

Opening remarks
Carl Gertz, Department of Energy (DOE)/Yucca Mountain Site Characterization Project Office (YMPO)

8:45 A.M. Strategic implications of heat in a high-level radioactive waste repository
Larry Ramspott, Lawrence Livermore National Laboratory (LLNL)

International views on the Thermal Loading Rationale for the Design of a HLW Repository

9:15 A.M. The Swedish geologic repository
Nils Rydell, National Board for Spent Nuclear Fuel (SKN)

10:00 A.M. BREAK

over
10:15 A.M. The German geologic repository
Klaus Kühn, Company for Radiation and Environmental Research/Institute for Underground Storage (GFS/IFT)

11:00 A.M. The Canadian geologic repository
Gary Simmons, Atomic Energy of Canada, Ltd. (AECL)

11:45 P.M. LUNCH

The Repository and Thermal Loading Concept for Yucca Mountain

1:00 P.M. Historical perspective of the U.S. program
Carl Gertz, DOE/YMPO

1:30 P.M. Evolution of the repository concept for a potential repository at Yucca Mountain
Michael Voegele, Science Applications International Corporation (SAIC)

3:00 P.M. BREAK

Added presentations: Gene Roseboom, USGS; Max Blanchard, DOE; Mysore Nataraja, NRC; N. Barrie McLeod; E.R. Johnson Associates, Inc.; Terji Brandshaug; Intera Consult. Group Inc.

3:15 P.M. Repository design considerations
Tom Blejwas, Sandia National Laboratories (SNL)

3:45 P.M. Technical considerations involved in determining thermal loading—Thermal Design Considerations
— Temperature changes over time
Eric Ryder, SNL

5:15 P.M. ADJOURN
Uncertainties Associated with High and Low Thermal Loading
(During this session, the following questions will be addressed for both high and low thermal loading concepts, in the areas listed below.

What are the potential problems?
What is the significance of each of the potential problems?
What uncertainties are associated with each potential problem?
Can these uncertainties be resolved?
How much time and what costs are associated with resolving these uncertainties?
Will there be residual uncertainties?

8:30 A.M. Opening Remarks and introduction
Warner North, NWTRB

8:40 A.M. Introduction of the following presenters
Mike Cloninger, DOE

8:45 A.M. Geomechanical uncertainties
Larry Costin, SNL

over
9:15 A.M.  Hydrogeologic uncertainties
Thomas Buscheck, Lawrence Livermore National Laboratory (LLNL)

10:40 A.M.  BREAK

11:00 A.M.  Geomechanical uncertainties
Brian Viani, LLNL

11:20 A.M.  Mineralogical uncertainties
David Bish, LANL

12:00 noon  Waste form degradation and materials uncertainties
Gregory Gdowski, LLNL

12:30 P.M.  LUNCH

1:30 P.M.  Biological resource concerns
Kent Ostler, EG&G Energy Measurements, Inc.

Enhancements and Other Considerations Associated with Higher and Lower Thermal Loading

2:10 P.M.  Introductory remarks
Dennis Price, NWTRB

2:15 P.M.  Introduction of the following presenters
Mike Cloninger, DOE

2:20 P.M.  Repository/waste package design enhancements
Tom Blejwas, SNL

2:35 P.M.  Repository testing considerations
Tom Blejwas, SNL

2:55 P.M.  Near-field environment testing considerations
Wunan Lin, LLNL
3:00 P.M.  Waste form and materials testing considerations
          Gregory Gdowski, LLNL

3:10 P.M.  BREAK

3:35 P.M.  Introduction of speakers
          Dennis Price, NWTRB

3:55 P.M.  Candidate Engineered Barrier Concept
          Peter Stevens-Guille, Ontario Hydro, Canada.

4:00 P.M.  Preclosure thermal enhancements
          George Danko, University of Nevada

4:45 P.M.  Geologic heat pipes — State-of-the-art review
          Russ McFarland, NWTRB

4:50 P.M.  An overview of preclosure ventilation options
          Antony Ivan Smith, Tunneling Technical Corporation

5:15 P.M.  ADJOURN
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October 10, 1991

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702/369-5400

Implications of Higher and Lower Thermal Loading

8:30 A.M.  Opening remarks
John Cantlon, NWTRB

8:45 A.M.  Performance assessment considerations
—— Time-temperature profiles
—— Waste package integrity
—— Near-field effects
—— Overall performance
Bob Shaw, Robin McGuire, Ben Ross, Mick Apted, Dan Bullen
Speaking on behalf of the Electric Power Research Institute (EPRI)
Added presentation: Dale Wilder, Los Alamos National Lab (LLNL)

10:15 A.M.  BREAK

10:30 A.M.  Introduction
Mike Cloninger, DOE

over
10:35 A.M.  **High-level waste system comparative costs**  
— Repository costs  
— Transportation costs  
— Storage costsDavid Jones, Roy F. Weston Inc.

10:55 A.M.  **Regulatory and legislative considerations**  
— Human health and safety (i.e., preclosure)  
— Licensing considerations  
— Legislative implications  
  Michael Lugo, SAIC  
**Added presentation:** Larry Ramspott, LLNL;  
Jay Smith, EEI/UWASTE

11:15 A.M.  **Conceptual considerations for total system performance**  
Michael Voegele, SAIC  
**Added presentation:** Leslie Jardine, LLNL; Gene Roseboom, USGS

12:05 P.M.  **Summary**  
Mike Cloninger, DOE

12:20 P.M.  **LUNCH**

**The Thermal Loading Issue, Round-Table Discussion, Conclusions and Comments**  
(This session will provide an opportunity for participants to reach conclusions on the risks and uncertainties associated with high vs. low thermal loading and other factors that should be considered in determining the thermal loading for a repository.)

1:30 P.M.  **Opening remarks and round-table discussion**  
Clarence Allen, NWTRB, Moderator

1:35 P.M.  **Round-table discussion**  
**Presenters:** Max Blanchard, DOE; Steven Frishman, Nevada; Jean Younker, SAIC; Richard Codell, NRC; Dale Wilder, LLNL  
**ADJOURN**