

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**

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October 9, 1991

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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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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 costs David 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