



UNITED STATES  
NUCLEAR WASTE TECHNICAL REVIEW BOARD  
1100 Wilson Boulevard, Suite 910  
Arlington, VA 22209

## Tentative Agenda Fall 1997 Board Meeting

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**October 22-23, 1997**

### Wednesday, October 22

- 9:30 a.m. Call to order and welcome**  
Jared Cohon, Chair  
Nuclear Waste Technical Review Board (NWTRB)
- 9:35 a.m. Session on program updates**  
Priscilla Nelson, NWTRB
- 9:40 a.m. Nuclear waste disposal program update**  
[Lake Barrett](#), Acting Director  
Office of Civilian Radioactive Waste Management (OCRWM)
- 9:55 a.m. Questions/discussion**
- 10:10 a.m. Yucca Mountain project update**  
[Susan Jones](#), Executive Assistant to the Project Manager  
Yucca Mountain Site Characterization Project Office (YMSCO)
- 10:25 a.m. Questions/discussion**
- 10:35 a.m. Session on mined geologic disposal system (underground repository)**  
Priscilla Nelson, NWTRB
- 10:40 a.m. Repository layout, design, construction sequence/waste placement**  
[Richard Snell](#), Manager, Engineering and Integration Operations  
Management and operating contractor (M&O) - Fluor-Daniel, Inc.
- Controlling design assumptions/decision process/analyses
  - Layout, tunnel orientation
  - Excavation/waste emplacement sequence
  - Impact of enhanced characterization of the repository block on long-term performance and interaction between drifts
- 11:15 a.m. Questions/discussion**

**12:00 p.m. LUNCH (1 hour and 15 minutes)**

**1:15 p.m. Repository thermal management**

[James Blink](#), M&O - Lawrence Livermore National Laboratory

- Governing assumptions: degree and duration of ventilation, humidity, pore water mobilization, refluxion, percolation flux, etc.
- Areal thermal loading: waste package spacing vs. tunnel spacing
- Maximum temperatures
- Temperature/time history
- Ventilation

***1:30 p.m. Questions/discussion***

**1:45 p.m. Engineered barrier system**

[Jack Bailey](#), Deputy Manager, Engineering and Integration Operations  
M&O - TRW Environmental Safety Systems, Inc.

- Options: backfill, drip shields, etc.
- Performance assumptions, uncertainties
- Analysis of alternatives
- Decision process

***2:05 p.m. Questions/discussion***

**2:25 p.m. Alternative repository concepts**

[Jack Bailey](#), M&O - TRW

- Low thermal loading
- Small waste packages (with or without complete radiation shielding)
- Continuous ventilation (passive or active)
- Small diameter waste emplacement tunnels (with or without backfill)
- Other alternative concepts?

***2:55 p.m. Questions/discussion***

**3:25 p.m. BREAK (10 minutes)**

**3:35 p.m. Session on repository concept of operations**

John Arendt, NWTRB

**3:40 p.m. Overview of repository operations**

[Paul Harrington](#), YMSCO

- Repository operations area
- North portal surface facility
- All other surface facilities

***3:50 p.m. Questions/discussion***

- 4:00 p.m. Subsurface operational area**  
Paul Harrington, YMSCO
- Underground transport
  - Waste emplacement
  - Caretaker/Post-emplacement monitoring
  - Operational constraints, failure mode analysis

*4:15 p.m. Questions/discussion*

- 4:30 p.m. Remote operations**  
Paul Harrington, YMSCO
- Assumptions
  - Precedents: aerospace, mining, etc.

*4:40 p.m. Questions/discussion*

- 4:50 p.m. Performance confirmation facility design**  
William Boyle, YMSCO
- Purpose, data to be obtained
  - Alternatives considered
  - Preferred alternative/decision process

*5:05 p.m. Questions/discussion*

- 5:20 p.m. Questions/comments from the public**

- 6:00 p.m. Recess until Thursday, October 23**

**Thursday, October 23**

- 8:30 a.m. Session on waste package design**  
Dan Bullen, NWTRB

- 8:35 a.m. Waste package design**  
Thomas Doering, M&O - Framatome Cogema
- Current design
  - History of design
  - What has been tried and what remains to be tried
  - Waste package cost
  - Thermal and mechanical analyses

*9:05 a.m. Questions/discussion*

- 9:20 a.m. Approach to repository criticality analysis**  
[Hugh Benton](#), M&O - Framatome Cogema
- Criticality: definition and issues (internal and external criticality)
  - Criticality control design and evaluation; burnup credit
- 9:35 a.m. Questions/discussion**
- 9:50 a.m. Waste package fabrication, closure, and examination**  
[Jerry Cogar](#), M&O - Framatome Cogema
- Work to date; ongoing work; planned work
  - Closure and non-destructive examination
- 10:05 a.m. Questions/discussion**
- 10:20 a.m. BREAK (15 minutes)**
- 10:35 a.m. Session on Waste Package Degradation Expert Elicitation Project**  
Alberto Sagüés, NWTRB
- 10:40 a.m. The waste package expert elicitation**  
[Kevin Coppersmith](#), Geomatrix
- Description of the process
  - Summary of the results
- 10:55 a.m. Questions/discussion**
- 11:05 a.m. One expert's opinion**  
[John Scully](#), University of Virginia
- 11:20 a.m. Questions/discussion**
- 11:30 a.m. One expert's opinion**  
[David Shoesmith](#), Atomic Energy of Canada, Limited
- 11:45 a.m. Questions/discussion**
- 11:55 a.m. Waste package degradation modeling in the total system performance assessment for the viability assessment (TSPA-VA)**  
[Joon Lee](#), M&O - Intera
- How TSPA-VA will differ from TSPA-95
  - How expert elicitation results will be used
- 12:15 p.m. Questions/discussion**

**12:30 p.m. Materials research program: status and changes**

[David Stahl](#), M&O – Framatome Cogema

- Program update
- How the program is changing due to the waste package expert elicitation project and other influences

***12:45 Questions/discussion***

**12:55 p.m. Questions/comments from the public**

**1:25 p.m. Closing remarks**

Jared Cohon, Chair, NWTRB