

**U.S. DEPARTMENT OF ENERGY
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT**

**PRESENTATION TO
THE NUCLEAR WASTE TECHNICAL REVIEW BOARD**

**SUBJECT: UNCERTAINTIES ASSOCIATED
 WITH HIGH AND LOW
 THERMAL LOADING**

PRESENTER: MICHAEL O. CLONINGER

**PRESENTER'S TITLE
AND ORGANIZATION: CHIEF, FIELD ENGINEERING BRANCH
 YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT
 LAS VEGAS, NEVADA**

**PRESENTER'S
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Uncertainties Associated with High and Low Thermal Loading

- **Establishing and understanding these uncertainties is crucial to the success of the program**
- **Program will focus on reducing the overall uncertainty to an acceptable level**
- **For Yucca Mountain, reducing thermal loads may not necessarily result in reducing the overall uncertainty**
- **DOE considers the following presentations and subsequent discussions as the primary focus of this meeting**

Uncertainties Associated With High and Low Thermal Loading

- **Geomechanical Uncertainties** L. Costin, SNL
- **Hydrogeologic Uncertainties** T. Buscheck, LLNL
- **Geochemical Uncertainties** B. Viani, LLNL
- **Mineralogical Uncertainties** D. Bish, LANL
- **Waste Form Degradation and Materials Uncertainties** G. Gdowski, LLNL
- **Biological Resource Concerns** K. Ostler, EG&G

Uncertainties Associated With High and Low Thermal Loading

- **Presentations will address the following NWTRB questions for high versus low thermal loadings**
 - 1. What are the benefits and potential problems?**
 - 2. What is the significance of the benefits, problems?**
 - 3. What are the uncertainties associated with the potential problems?**
 - 4. Can these uncertainties be resolved?**
 - 5. How much time and money will be needed for this resolution?**

Uncertainties Associated With High and Low Thermal Loading

- **Resolution of uncertainties is included in the Project's current long range plan**
 - **The approach to resolving these uncertainties is included in SCP Study Plans and other plans**
 - **The currently planned budget and schedule can accommodate some variation in thermal loading**
 - **Major shifts to a much lower thermal loading concept may require possible revisions to the current plan**

