



U.S. Department of Energy
Office of Civilian Radioactive Waste Management

Conclusions

Presented to:

Nuclear Waste Technical Review Board

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**YUCCA
MOUNTAIN
PROJECT**

Wrap Up

- **“SR Pyramid” and the SSPA**
- **The roadmap to the 4 priority areas**
- **Continuing work**

Meaningful Quantification of Uncertainty and Conservatism-Nominal Performance

- **Supplemental model shows significantly wider ranges of doses at a given time and times to reach given doses**
- **After the first 10,000 years, the base case model appears to be conservative: the magnitude of the dose is less for the supplemental model and it occurs later in time**
- **During the period prior to 10,000 years, the supplemental model mean results are less than 0.00006 mrem/yr while the base case model are zero. Even though the difference between the models is very small, the base case model appears to be slightly non-conservative with respect to the supplemental model**

Thermal Operating Mode

- **Significant differences observed at the subsystem level for some models**
- **System level performance essentially the same for the high temperature and low temperature operating modes**

Corrosion Processes

- **Developed framework for conceptual model of long term passive film stability**
- **New information improved confidence in parameters and models**
 - **Stress corrosion cracking**
 - **Aging and phase stability**
- **Included model of temperature dependence of general corrosion**

Multiple Lines of Evidence

- **Multiple Lines of Evidence (MLE) identified for most process and subsystem level models**
- **MLEs are independent of the TSPA**

Follow On Work

- **Exercise Supplemental TSPA Model**
- **Data Collection and Analysis Continues**
- **Guidance on the Treatment of Uncertainty**
- **Corrosion Processes Peer Review**
- **International TSPA Peer Review**
- **Manage, Communicate, Assess, and Analyze Uncertainties**