

YUCCA
MOUNTAIN
PROJECT

Studies

Viability Assessment: Products and Schedule

Presented to:
Nuclear Waste Technical Review Board

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Outline

- **Overview of Viability Assessment (VA)**
- **Description of Products/Schedule**
- **Challenges**

Viability Assessment

“The completion of the constituent elements of the viability assessment constitute a logical convergence at which the Program can make a measurably improved appraisal of the prospects for geological disposal at the Yucca Mountain site. The assessment is an interim step in the process leading to a site recommendation to the President...” **

**** From the FY98 Budget of the United States Government, Appendix, p. 475**

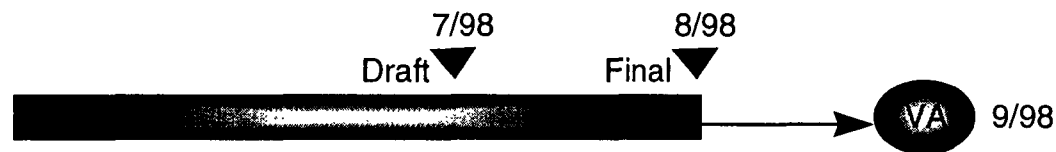
Viability Assessment

(Continued)

- **The VA consists of**
 - **Preliminary design concept for critical elements of repository/waste package**
 - **Total system performance assessment describing the probable behavior of the repository based on data available**
 - **Plan and cost estimate for completing the license application (LA)**
 - **Cost estimate to construct and operate the repository**

Preliminary Design Concept

- Design bases
- Description of key site features
- Description of the design
 - Repository
 - Engineered Barrier System
- Design alternatives
- Design evolution



Total System Performance Assessment

- TSPA methodology
- Assumptions used
- System/subsystem descriptions
 - Site
 - Design
 - Process models
- Evaluation of undisturbed performance
- Evaluation of disturbed performance



Plan and Cost Estimate to LA

- Overall strategy for LA development
- Work to be conducted between VA and LA
 - Site testing
 - Design
 - Total System Performance Assessment
 - Regulatory activities
 - Other
- Cost and schedule for that work
- Description of Performance Confirmation Program



Cost Estimate to Construct and Operate

- Assumptions used
- Repository life-cycle schedule
 - From LA to closure
- Estimating techniques
- Repository life-cycle cost summary
- Additional cost details



Challenges

- **Differentiating the VA from a formal decision**
 - VA is not equivalent to the site recommendation
- **Ensuring integration among VA products**
- **Moving ahead in the absence of an EPA standard**
- **Incorporating current understanding of site conditions**
- **Appropriately assessing EBS design options under consideration**

Schematic of Presentations to Follow

Conceptual TSPA Logic

