

Viability Assessment Overview

Presented to:
Nuclear Waste Technical Review Board

Presented by:
Richard Craun
Department of Energy

January 26-27, 1999



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

VA Overview

Purposes:

- **Provide background information needed to understand the program**
- **Summarize in non-technical language the information in Volumes 1-5**
- **Present programmatic conclusions**

Intended Audiences

- **Congressional Members and Staff**
- **Broader “policy” community**
- **NWTRB, NRC and ACNW**
- **People generally interested in radioactive waste issues**

Format

- **Results summarized at beginning and end**
- **Text is written for a non-technical audience**
- **Sections are in the same order as Vols. 1-5**
- **Each page or pair of opposing pages stands alone and conveys a message**
- **When read in sequence, the sections present a coherent story**

Background

- **The nuclear waste problem**
- **A geologic disposal overview**
- **The laws and regulations**
- **Basic concepts of geologic disposal**
- **Why Yucca Mountain**

Reference Design

- **The design process**
- **The reference design**
 - **Surface facilities and operations**
 - **Underground facilities and operations**
 - **The engineered barrier system**
 - **Confirmation and retrieval**
 - **Repository closing**

Performance Assessment

- **Performance assessment models**
- **The attributes of safe disposal**
- **Possible dose**
- **Other safety issues**
- **What we are learning**

License Application

- **Plan to complete a license application**
- **Operational safety**
- **Long-term safety**
 - **Increasing understanding of key natural processes**
 - **Evaluating ways to improve the design**
 - **Increasing the reliability of performance assessment models**

Estimated Cost

- **Cost of licensing, building, operating, monitoring, and closing**
- **Repository costs**
- **Total system life cycle costs**
- **Who pays?**

Concluding Observations

- **Based on the VA – the results presented in Volumes 1-5 on site characterization, design, performance assessment, safety case prospects, plans, and cost estimates – DOE believes that Yucca Mountain remains a promising site for a geologic repository and that work should proceed to the 2001 site recommendation decision.**