



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

Yucca Mountain Project Overview

Presented to:

Nuclear Waste Technical Review Board (NWTRB)

Presented by:

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Yucca Mountain Site Characterization Office

**Las Vegas, Nevada
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YUCCA
MOUNTAIN
PROJECT

Topics for Discussion

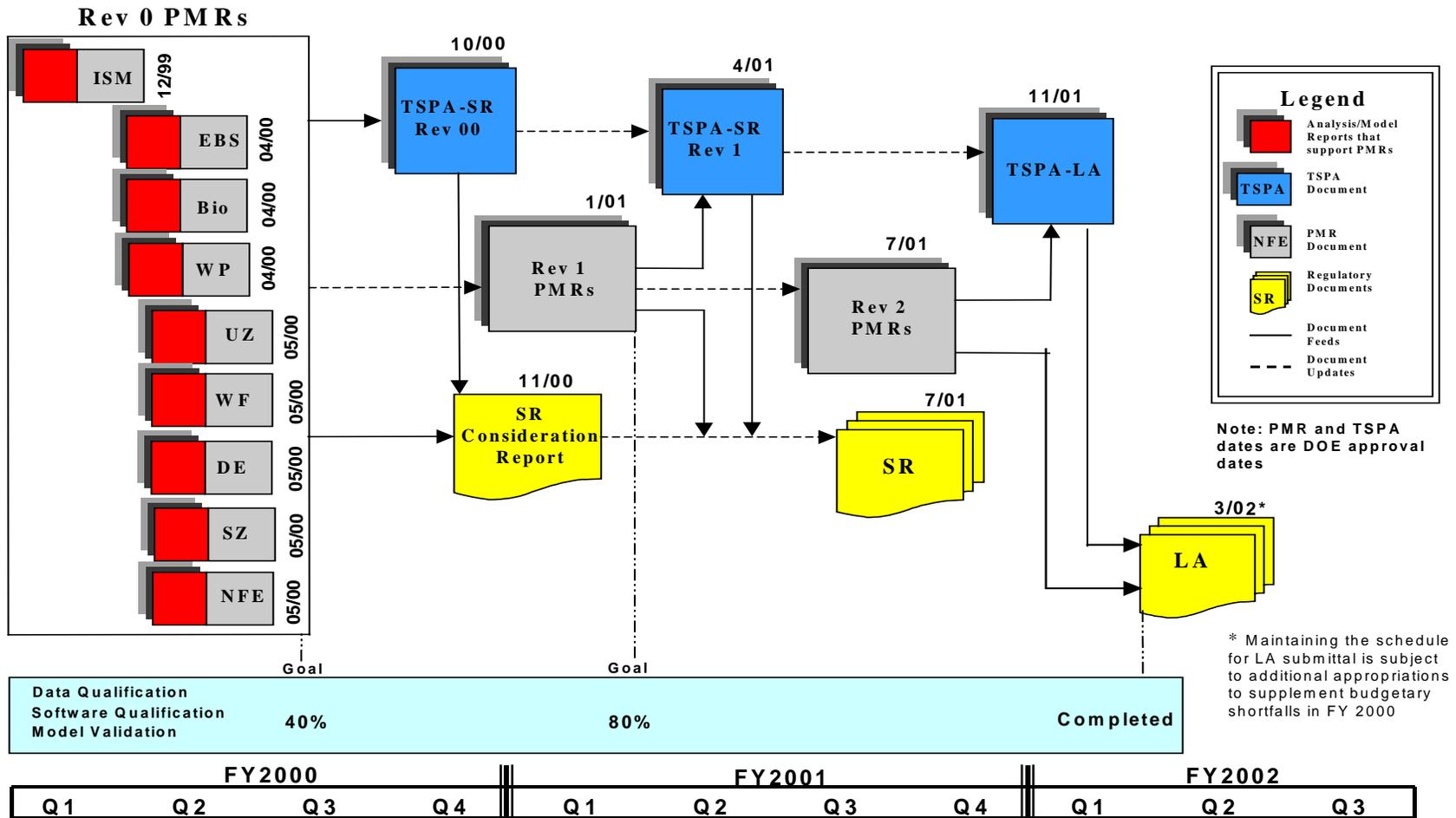
- **Fiscal Year 2000 Priorities**
- **Addressing uncertainty**
- **Repository Safety Strategy**
- **Status of the EIS process**
- **Status of DOE rule making**
- **Path forward**

Fiscal Year 2000 Priorities

- **Prepare technical basis for Site Recommendation Consideration Report**
 - **Yucca Mountain Site Description**
 - **Analysis and Model Reports (AMRs)**
 - **Process Model Reports (PMRs)**
 - **System Description Documents (SDDs)**
 - **Preliminary preclosure safety evaluation**
 - **Total System Performance Assessment (TSPA)**

TSPA Schedule

Linkage of Major TSPA Products for SR and LA



Fiscal Year 2000 Priorities (Cont'd.)

- **Conduct testing to address uncertainties identified in the Repository Safety Strategy for postclosure safety case**
- **Continue evaluation and evolution of design and operational concept to enhance site recommendation design**
- **Complete implementation of quality initiatives**

Fiscal Year 2000 Priorities (Cont'd.)

- **Complete public hearings and comment period for Draft EIS and supporting activities to finalize the EIS**
- **Complete public hearing process on proposed site suitability guidelines, 10 CFR 963, and work toward finalizing these guidelines**
- **Prepare the Site Recommendation Consideration Report for internal review**

Addressing Uncertainty

- **Uncertainty will remain at site recommendation and throughout the licensing process**
- **Decisions must be made with due consideration of this uncertainty**
- **Identifying and clearly articulating the nature and significance of uncertainties is a key element for evaluating site suitability and presenting a defensible basis for site recommendation**

Addressing Uncertainty (Cont'd.)

- **We are identifying key uncertainties through the Repository Safety Strategy and postclosure safety case**
- **We are addressing these uncertainties through current and planned testing and performance assessment sensitivity and importance analyses**

Addressing Uncertainty (Cont'd.)

- **We are considering how uncertainties can be communicated to the scientific community, the public, and decision makers, including:**
 - **Development of a simplified TSPA simulation to help communicate and explain the significance of uncertainties to a variety of audiences**
 - **Development of a range of documentation to better communicate our understanding of system performance**

Repository Safety Strategy (RSS)

- **The RSS documents DOE's evolving plans to address uncertainty important to postclosure safety**
- **Rev. 2 documents the basis for the plans presented in the VA to address key uncertainties associated with the postclosure safety case**
 - **Based on the VA design**
 - **Provided a basis for defining factors to be considered in evaluating performance of this design**

Repository Safety Strategy (Cont'd.)

- **Rev. 3 updates the safety case and the plans to address the key uncertainties regarding the initial postclosure safety case for site recommendation**
 - **Considers the EDA II design concept**
 - **Includes preliminary TSPA and barrier importance analyses for enhanced design**
 - **Refines the list of factors for the safety case and identifies a subset of principle factors for repository performance**

Repository Safety Strategy (Cont'd.)

- **The RSS focuses our testing in areas important to the safety case:**
 - **Seepage**
 - **UZ flow and transport**
 - **Thermal-hydrologic coupled processes**
 - **SZ flow and transport**
 - **Near field environment and waste package and drip shield performance**
 - **Natural analogues**

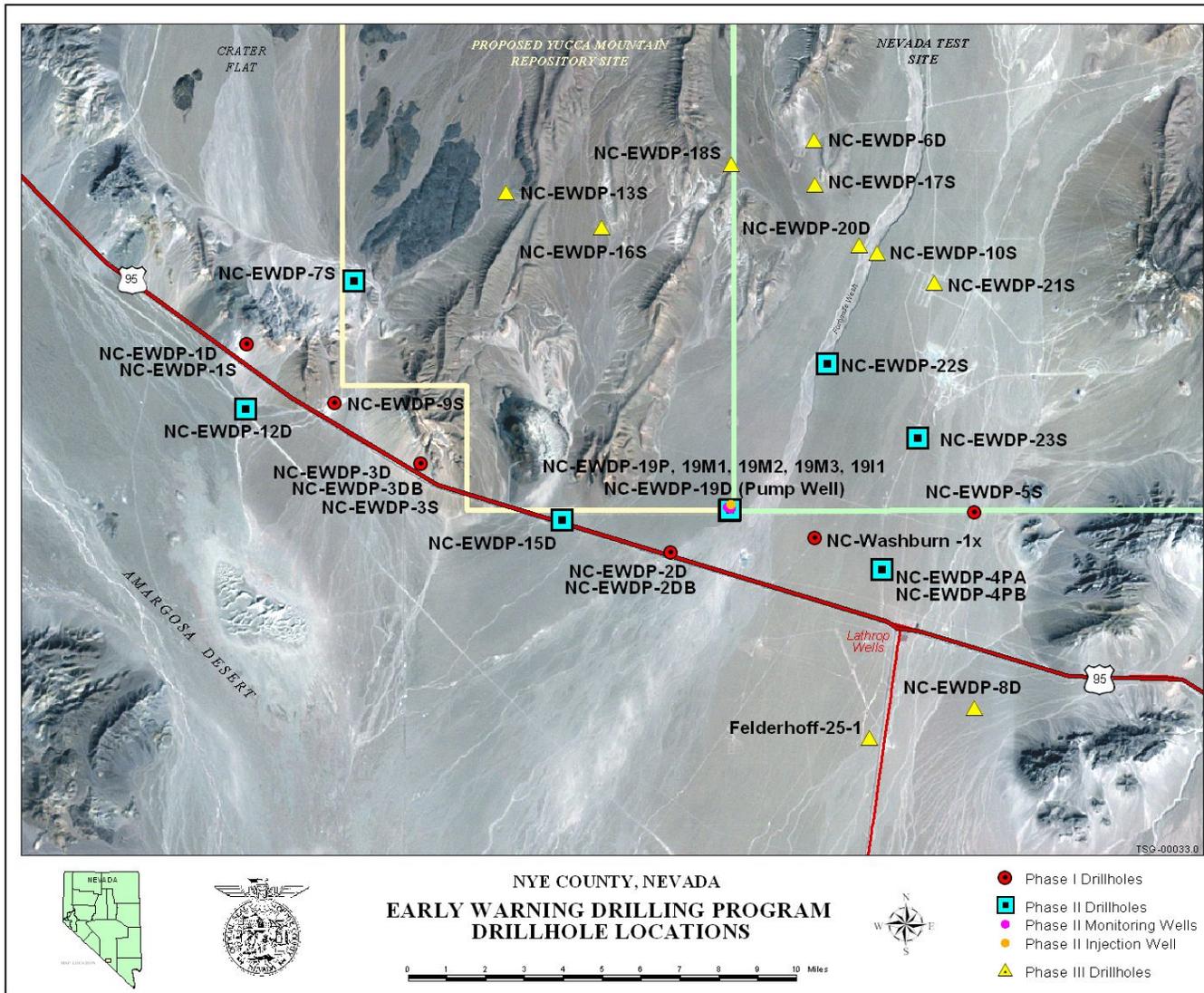
Cross Drift Bulkhead Test



YM-19431 View of bulkhead construction in the ECRB @ 25+03 meters.

Nye County Drilling Program

Completed Drillholes



Busted Butte UZ Transport Test Phase I Test Face



YM18966 View of 1M. excavation in UZTT Phase 1, Busted Butte

Status of the EIS Process

- **Eighteen of 20 scheduled public hearings have been held**
- **1469 comments have been identified from the 697 comment documents received as of January 20, 2000**
- **Public comment period scheduled to conclude February 9, 2000**
- **Comment Response Document will be prepared and included as part of the Final EIS**

Status of the EIS Process (Cont'd.)

- **Final EIS will incorporate changes as appropriate to reflect**
 - **Resolution of public comments**
 - **Best available information from science, repository design, and performance assessment**

Status of DOE Rulemaking

- **Proposed Yucca Mountain site suitability guidelines, 10 CFR 963, issued for comment on November 30, 1999**
- **Under the proposal, DOE may determine that the site is suitable if the required evaluations show that the potential repository is likely to meet applicable radiation protection standards for the preclosure and postclosure periods**

Status of DOE Rulemaking (Cont'd.)

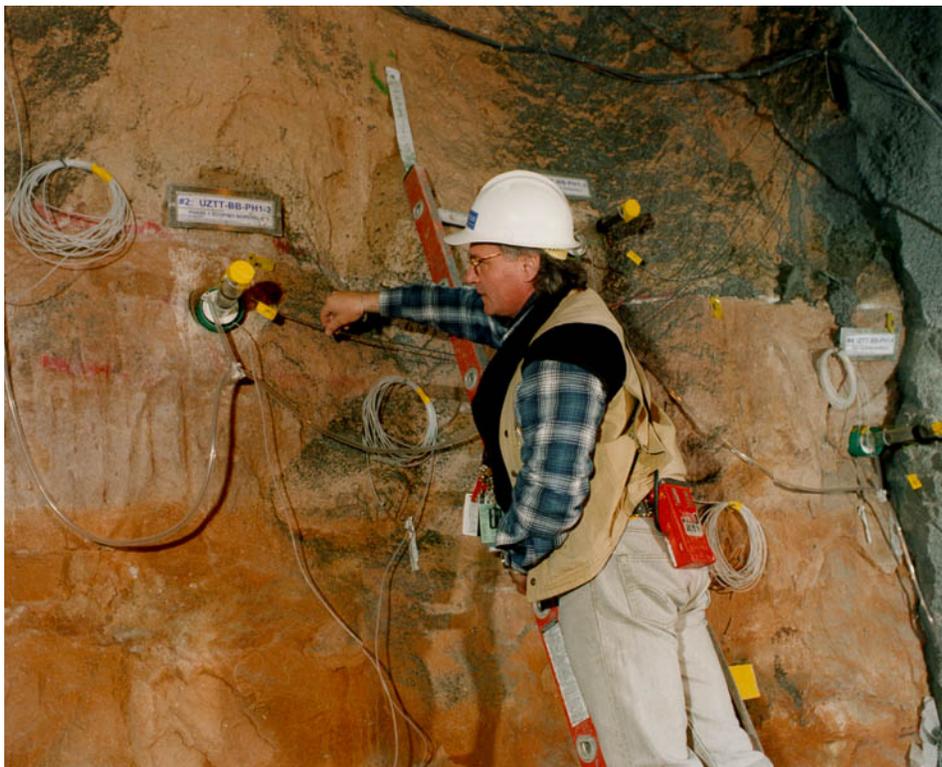
- **On January 14, 2000, DOE announced**
 - **Extension of public comment period on 10 CFR 963 from February 14 to February 28**
 - **Rescheduled hearings on February 2 in Pahrump, NV, and February 3 in Las Vegas**
- **DOE will**
 - **Consult with the Council on Environmental Quality, EPA, U.S. Geological Survey, and State of Nevada during the comment period**
 - **Obtain NRC concurrence prior to issuing the final guidelines**

Path Forward

- **We are moving toward a decision on site recommendation in 2001**
 - **Documenting the technical basis for that decision**
 - **Evaluating the suitability of the Yucca Mountain Site**
 - **Completing the final EIS**

Backup Slides





YM-17703 View of UZTT Phase 1 test bed at Busted Butte