



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



Project Plans for Fiscal Year 2002-2003 Repository Design Project

Presented to:

Nuclear Waste Technical Review Board

Presented by:

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Work Scope for FY 2002-2003 Repository Design Project

- **Scope of Project**

- **Waste Package Design**
- **Subsurface Facilities**
- **Surface Facilities**

Work Scope - Goals

- **Sufficient work for a docketable License Application (LA) (Draft Yucca Mountain Review Plan -[YMRP])**
- **Graded approach developing level of detail for LA submittal**
 - **Guided by latest Q-list (list of safety significant systems structures and components)**
 - ◆ **10CFR63, Draft YMRP, current Preclosure Safety Analysis**
- **Address key technical issue agreement items**
- **Support the project acquisition process**

Design Priorities

- **Support Performance Assessment (PA) - enhance confidence**
- **Close integration with science**
- **Provide flexibility in the design**
- **Reduce cost**
 - **Level of detail driven by risk-informed process**
 - **Value engineering studies**

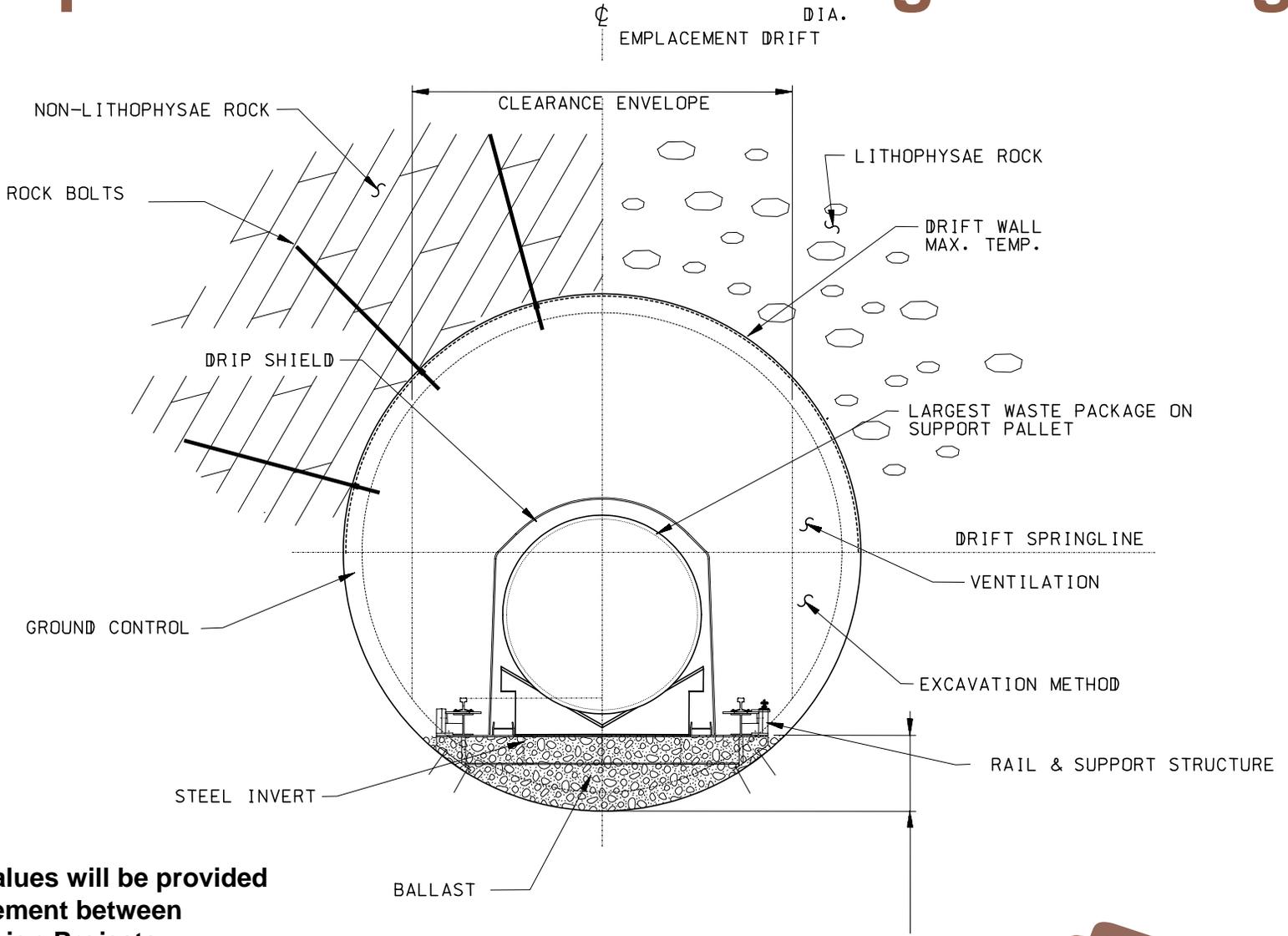
Work Scope - Integration

- **Reorganization of the design project**
- **Schedule status reviewed weekly**
- **Detailed inter-project reviews (Surface, Subsurface, Waste Package, Total System Performance Assessment [TSPA] and LA)**
- **Weekly interface meetings (management and production teams)**
 - **Interface logic entered into detail schedule (Approximately 200 logic ties)**
 - **Information exchange drawings**

Information Exchange between Repository Design and Science

Item Description	To/From
Subsurface:	
Underground layout (preliminary)	To PA
Thermal conductivity data	To Design
Committed materials	To PA
Seismic design inputs: time histories	To Design
Geotech. rock parameters data	To Design
Underground layout (final)	To PA
Waste Package:	
Seismic design inputs: time histories for 10^{-6} earthquakes (final)	To Design
Rock fall impact on waste package and drip shield	To PA
Provide samples for waste package materials testing	To PA
Provide PWR & BWR source terms	To TSPA
Performance of waste package due to igneous intrusion	To TSPA
Surface:	
Seismic design inputs: soils layer engineering properties	To Design
Soils report with bearing properties	To Design
Seismic design inputs: WHB time histories	To Design
Wind loads data	To Design
Seismic design inputs: data for staging pad areas	To Design

Sample Information Exchange Drawing



**Interface values will be provided
as an agreement between
PA and Design Projects**

Backup



LA Products List

- **Fifteen primary LA product types have been identified**

- 1) **Project Design Criteria**
- 2) **System Description Documents**
- 3) **Material Specifications**
- 4) **Site Plan/site Layout**
- 5) **General Arrangement Drawings**
- 6) **Equipment/component Drawings**
- 7) **Air Flow Diagrams**
- 8) **Piping And Instrumentation Diagrams**
- 9) **Mechanical Flow Diagrams**
- 10) **Electrical One-line Diagrams**
- 11) **Logic Diagrams**
- 12) **WP Special Process Equipment Drawings**
- 13) **WP Fabrication Specifications**
- 14) **WP Technical Reports**
- 15) **WP Design Analyses**

Design Critical Path

