

YUCCA
MOUNTAIN
PROJECT

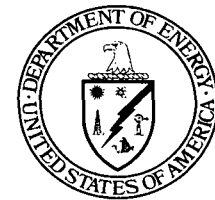
Studies

Overview of Saturated Zone Program and Objectives

Presented to:
Nuclear Waste Technical Review Board

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Department of Energy
Yucca Mountain Site Characterization Project Office

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SZ Program Objectives

- **Understand the SZ flow system in the vicinity of Yucca Mountain**
- **Provide ground-water flow fields for radionuclide transport predictions**
- **Supply the data and analyses needed to evaluate the capability of the SZ to retard and dilute dissolved and suspended radionuclides**

SZ Program Overview

- **Collect, analyze, and interpret field and laboratory SZ data and develop flow and transport models to support:**
 - **Viability Assessment**
 - **Repository System Design**
 - **Performance Assessment**
 - **License Application (Site Description)**
 - **Performance Confirmation**

SZ Program Activities

- **Data Collection**
 - **Water-level monitoring**
 - **Aquifer testing**
 - **Hydrochemical sampling**
- **Modeling**
 - **Regional ground-water flow model**
 - **Site-scale ground-water flow model**

Topics To Be Discussed

- **Regional scale ground water flow model**
- **Geochemical evidence for flow domains**
- **Inferences from SZ water chemistry**
- **C-Wells testing: Update and future plans**
- **Site-scale ground water flow model**
- **SZ flow and transport modeling in TSPA**
- **Results from SZ expert elicitation**