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Presented by:
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Presented to:
Affected Units of Government

Status of the Yucca Mountain Project,
License Application, and Repository
Design Update
OCRWM Mission and Priorities

**Mission:**
- Our mission is to manage and dispose of high-level radioactive waste and spent nuclear fuel in a manner that protects health, safety, and the environment; enhances national and energy security; and merits public confidence

**Priorities:**
- After 20 years and $7 billion of scientific study, Congress passed a joint resolution in 2002 to designate the Yucca Mountain site for repository development and enable the Department of Energy (DOE) to move ahead to submit a license application for repository construction authorization
- Protecting public health, safety, and the environment remain our top priorities

Current locations of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) destined for geologic disposal:
- **125 sites in 39 states**
Multiple Missions
Geologic Disposal Addresses

- Advance nonproliferation goals by providing secure disposal of L.5-origin wastes for disposal of defense site cleanup.
- Protect the environment by providing disposal of its spent nuclear fuel.
- Support effective operations of nuclear facilities.
- Protect against terrorist attacks.
- Consolidate nuclear wastes at one energy production facility.
- Ensure that nuclear power remains an important part of domestic fuel to ensure that nuclear power.
Nuclear Fuel Discharges
Historical and Projected Commercial Spent
Repository Program Steps

- Nuclear Waste Policy Act 1982
- Environmental Assessment
- Visibility Assessment Complete 1985
- Yucca only site to be characterized 1987
- Secretary Recommended Site 2002
- President Recommended Site 2002
- Congress Approved Site 2002
- License Application Complete
- Construction Authorization
- Construction Authorization Hearings
- Updated License Application
- License to Receive & Possess Waste

Action required by: Department of Energy/President, Congress, NRC
Standard Protection Agency (EPA) Radiation Protection

D.C. Court of Appeals Ruling on Environmental

budget

Significant issue concerning stability of long-term

High momentum over past couple of years

Program

Application (LA) and Restart of Transportation

Significant progress in preparation of License

Program Status
Location of Yucca Mountain, Nevada

- 100 miles northwest of Las Vegas
- Located on western boundary of the Nevada Test Site
- Sponsored by the US Department of Energy
### Funding to Affected Units of Government

| Year     | Total to Date | Initial | Actual   | Initiative
|---------|--------------|--------|----------|-------------
| 2004    | $430,000     |        |          | NY County, NV Transportation Grant
| 1996    | $22,873,909  |        |          | Ny County, NV Science & Verification Program
| 2002    | $1,759,750   |        |          | Ny County, CA Death Valley Regional Ground Water Monitoring Program
| 2004    | $2,000,000   |        |          | Clark County, NV Transportation Grant
| 1984    | $993,755,763 |        |          | University & Community College System of Nevada
| 1983    | $1,053,883,496 |      |          | Payments Equal to Taxes
| 1983    | $81,781,109  |        |          | State of Nevada - Oversight
| 1982    | $76,439,826  |        |          | Affected Units of Local Government - Oversight

**Total Funding to the Affected Units of Government and the University:**

Since 1983 to the University of Nevada and the Clark County, NV Transportation Grant.

As of 2/15/2005
Cumulative Shortfall FY 1995-FY 2005: 51.0T

Fiscal Year


Annual

0 5 10 15 20 25 30 35 40 45 50

Annual Appropriations and Administration's Budget Request

Annual Budget 1995-2006
License Application Content and Supporting Documents

- General Information (GI)
  - General Description
  - Proposed Schedules for Construction, Receipt and Emplacement of Waste
  - Physical Protection Plan
  - Material Control and Accounting Program
  - Site Characterization

- Safety Analysis Report (SAR)
  - Repository Safety Before Permanent Closure
  - Repository Safety After Permanent Closure
  - Research and Development Program to Resolve Safety Questions
  - Performance Confirmation Program
  - Administrative and Programmatic Requirements

Increasing Level of Detail

LA
General Information (~400 Pages)
Safety Analysis Report (~500 Pages)
Plants Submitted in Support of License
Physical Protection, Material Control & Accounting, Emergency, etc.

- Detailed Supporting Input
- Analysis & Modeling Reports (~3)
- System Description Document (~2)
- Facility Description Document (~4)
- Proposed Safety Analysis (~1)
- Visual/Modeling Description

- Detailed Supporting Input:
  - Data
  - Calculations
  - Details
  - Reference
  - Code/Software
  - Detailed Design Drawings
  - Specifications
  - Vendor Data

1,000s of Documents
Tons of heavy metal
11 - 13.5 percent for the 70,000 metric
Available contingency of
approximately 41 miles (65 km)
Total emplacement length available is
Panel 4: 30 total
Panel 3: 41 total (19 East & 22 West)
Panel 2: 17 total (excludes contingency)
Panel 1: 8 total (5 remaining drifts)
Complete remaining drifts
(below drift 3)
Develop 3 emplacement drifts
Panel 1: Initial development

Sequence:
Emplacement Sequence
Panel numbers represent the proposed

Subsurface Configuration
Recent Progress

November 2004

- We completed a draft license application in July 2004 and a second draft in
  developing additional QA plans for transportation and other program activities.
- Increased self-identification of issues and improved Corrective Action Program.
- Resolved NRC Regulatory Commission (RRC) comments to Revision 17 of
  Resolving the last of several long-standing Corrective Action Reports.

Significant improvements in Quality Assurance (QA) implementation:
- Results are being analyzed.
- 65% response rate in October.

DOE completed a project-wide Safety Conscious Work Environment Survey:
- Proceeding.
- Any NRC questions or concerns will be addressed as part of the licensing.
- NRC has closed 221 of the agreements and is reviewing the rest.
- All 293 Ks have now been addressed by DOE.

Technical issue agreements (KTs) to the Nuclear Regulatory Commission.

In August 2004, DOE submitted information on the last 17 out of 293 key.
DOE is revising the original goal of delivering the License Application by the end of December 2004; we anticipate completing the License Application by the end of 2005.

Additionally, DOE is proceeding with the Licensing Support Network (LSN) certification by mid-summer.

We are preparing to address potential changes due to the ruling on the EPA standard by the U.S. Court of Appeals.

We are using available time to refine the treatment of uncertainty.

We have thoroughly cross-referenced this work against the requirements in 10 CFR Part 63 and the guidance in the Yucca Mountain Review Plan.

DOE is evaluating the draft License Application.

Science and design work for the LA is technically sound and supports robust safety analyses for the preclosure (operational) period through 10,000 years after permanent closure.

Status of the License Application:
Summary

- We have made significant progress toward completing the License Application
- Radiation protection standard is being revised by EPA
- DOE is addressing work required for Licensing Support Network Certification
- We are committed to the safe disposal of U.S. spent nuclear fuel and high-level radioactive waste