Update on OCRWM’s Science and Technology Program

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On detail to U.S. Department of Energy,
Office of Civilian Radioactive Waste Management
S&T Program
Philosophy

- The longer view (3 - 5 - 10 years or longer)

- Explicitly distinct from the mainline OCRWM activity (the License Application)

- The scope is very broad: To support all OCRWM activities

- Goal is to institutionalize the Science & Technology Program as a permanent OCRWM activity
Objectives

- Improve existing and develop new technologies to:
  - Achieve savings in the waste management system schedule and life-cycle costs
  - Achieve efficiencies in the waste management system (transportation, waste handling, disposal)

- Increase understanding of repository performance
Approach

- FY 2003: A few initial projects ($1.7 million)

- FY 2004: Launch major S&T Program ($25 million in the President’s budget)

- Planning a broad solicitation (Request For Proposals) to get wider input, including both existing technologies and “out-of-the-box” project ideas
Current Work

A few projects starting up in FY 2003

- Advanced protective coatings (with DARPA)
- Advanced welding method for waste packages
- Analogue study, Pena Blanca, Mexico
- Analogue study, Nevada Test Site
- Decay heat effect on in-drift environment
- Decay heat effect on in-package environment
- Improved seismic modeling of the site
- Novel “getter” for Tc and other radionuclides
- Improved modeling of seepage into the drifts
Looking Ahead

- Next Year (FY 2004), Principal “Program Thrust” Areas
  - Advances in Materials
  - Sensors and Robotics
  - Drift Engineering
  - Source Term
  - Natural System (UZ and SZ flow and transport, analogues)
  - Transportation, Operations, and Systems Engineering

- We are also open to any idea within the scope of the RFP