Update on OCRWM's Science and Technology Program

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Dr. Robert J. Budnitz
Lawrence Livermore National Laboratory
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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