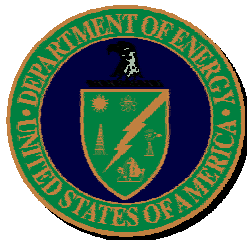


Update on OCRWM's Science and Technology Program



***Presentation to
Nuclear Waste Technical Review Board
May 14, 2003***

***Dr. Robert J. Budnitz
Lawrence Livermore National Laboratory
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