Used Fuel Disposition Campaign
Working Group Meeting
Disposal R&D

Timothy C. Gunter
Federal Program Manager, Disposal R&D
Office of Used Nuclear Fuel Disposition R&D

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Provide a sound technical basis for the assertion that the U.S. has multiple viable disposal options

Increase confidence in the robustness of generic disposal concepts

Initiate a field test for the deep borehole disposal concept

Complete evaluation of the technical feasibility of the direct disposal of existing storage and transportation canisters
Anticipated FY17 Program Priorities in Disposal R&D

- Deep Borehole Disposal Field Test (DBFT)
- Technical aspects of a Repository for DOE-managed waste
- Continue R&D in disposal systems in three main rock types
  - Continue support of International collaboration
- Feasibility of direct disposal of Dual-Purpose Canisters

FY17 priorities and funding levels will be finalized over the summer

- DBFT large portion of UFD Disposal R&D budget

All priorities subject to change – Secretary of Energy, NE Management, Congressional Appropriations
Keys to success with limited funding

- Must be selective on what work gets funded
- Prioritize work based on importance (Disposal Roadmap, Safety Case)
  - What are the important questions to answer
  - What are the benefits to the program
- Defined objectives, benefits, and schedules
- Tangible outcomes: products and completions vice progress reports
Several factors suggest the disposal concept is viable and safe:

- Crystalline basement rocks are common in many stable continental regions.
- Existing drilling technology permits dependable construction at acceptable cost.
- Low permeability and long residence time of high-salinity groundwater in deep continental crystalline basement at many locations suggests very limited interaction with shallow fresh groundwater resources.
DOE’s proposed Deep Borehole field test is the next logical step in evaluating the DBH concept and is part of the Department’s cross cut in subsurface research.

- No radioactive waste will be used during the field test

The DBH Field Test will:

- Demonstrate the feasibility of characterizing and engineering deep boreholes
- Demonstrate safe processes and operations for safe waste emplacement downhole
## DOE Disposal R&D Team

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