

Yucca Technical Advances Applicable to Future Waste Programs

- Transportation-Aging-Disposable (TAD) multi-purpose waste canister
- Application of probabilistic risk techniques to the design of nuclear waste handling facilities
- Combined use of natural and engineered barriers
- Remote Welding of Alloy 22
- Transport and Emplacement Vehicle concept
- Total Systems Performance Assessment (TSPA) model
- Total Systems Model (TSM) –Operations Research software

What Scientific Research or Development Work Should be Undertaken?

- Enhance TSPA model to improve flexibility and ease of use
- Complete TAD design; fabricate and test prototype(s)
- Determine long term disposal capability of legacy SNF canisters
- Design / Test Transportation Cask; National Transportation Planning

Managerial Approaches that Influenced the Yucca Mountain Program

- Transition from a research & science centered program to an engineering/design /licensing project
- Introduction of the Lead Lab concept
- “Projectizing” the License Application preparation effort
- Focused effort on accuracy, completeness, transparency, credibility and defensibility
- Formalized the decision making process
- Licensing Support Network
- Plans for early demonstration of waste handling / emplacement (Initial Waste Handling Facility)