Disclaimer

This is a technical presentation that does not take into account the contractual limitations under the Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste (Standard Contract) (10 CFR Part 961). Under the provisions of the Standard Contract, DOE does not consider spent nuclear fuel in multi-assembly canisters to be an acceptable waste form, absent a mutually agreed to contract amendment. To the extent discussions or recommendations in this presentation conflict with the provisions of the Standard Contract, the Standard Contract provisions prevail.
Contents

• Transportation System Planning and Timeline
• Critical Path Elements
• Uncertainty
• Current Program Status
What needs to happen to be ready to transport SNF?

- Program direction and adequate appropriations from Congress
- Procure railcar fleet
- Procure transportation casks
- Conduct transportation infrastructure upgrades
- Develop concept of operations
- Establish safety & security
- Stakeholder engagement
Overview of Estimated Transportation Activity Schedule

Coordination with MRC, DOT and other Federal Agencies as required | Transportation System Data Gathering and Analysis | State and Tribal Engagement, Outreach to Other Stakeholders

Assumptions:
1. A facility is available for SMP
2. DOE manages SMP transportation
3. SMP is transported in dual purpose containers, as loaded at origin sites
4. NEPA for storage/disposal site is handled by MRC/DOD in parallel, as needed
5. Designs for 5-200ft rails are complete on or before T-4 years
6. Shipments start slowly, ramp up over several years

Notes:
1. This diagram provides a summary view of the Execution Strategy Analysis (ESA) logic for key program activities and risk points.
2. The timeline and activity durations depicted represent most likely values that do not account for risk.
3. Some non-critical program activities are not shown on the summary diagram.

Summary Table for Transportation

May 2, 2018
Assumptions for this Timeline Analysis

- A facility is available for SNF
- DOE conducts SNF transportation
- SNF is transported in dual purpose canisters, as loaded at origin sites
- Shipments start slowly, ramp up over several years
- Completed design for S-2043 railcar
Critical Path Elements

• Program direction and adequate appropriations from Congress

• NEPA process and Record of Decision
  • Award contracts for cask and rolling stock equipment
  • Award contracts for transportation services
    • Determine rail routes

• Acceptance Queue
  • Select casks to procure
  • Determine initial routes to prepare
  • Identify transportation infrastructure upgrades
Uncertainty

• 7-year timeline to be ready to transport SNF is highly dependent on how the waste management program is established and what resources are available

• 7-year timeline does not account for significant technical, supply chain, or litigation challenges
President’s FY18 and FY19 Federal Budget Proposal requested funding for resuming licensing Yucca Mountain and pursuing robust interim storage.

DOE is prepared to support resumption of Yucca Mountain Licensing.

DOE supports development of interim storage capabilities for spent nuclear fuel.

Awaiting Congressional FY19 appropriations.
In the Interim

- Office for Spent Fuel & Waste Disposition continues to conduct analysis, research & development to support eventual spent nuclear fuel transportation.
DOE FY18 Activities

• Railcar prototype fabrication
• Analysis of data from rail cask transport test
  • Model validation
• Prepare for shutdown site visit
  • Oyster Creek
• Initial site-specific de-inventory analyses
• System tools development and maintenance
For More Information:

• “Preliminary Evaluation of Removing Used Nuclear Fuel From Shutdown Sites”
  • https://www.energy.gov/ne/downloads/preliminary-evaluation-removing-used-nuclear-fuel-shutdown-sites
  • Chapter 2.13 Vermont Yankee Shutdown Site Visit

• DOE’s National Transportation Stakeholders Forum (NTSF) Webinars on Initial Site-Specific De-Inventory Reports
  • http://ntsf.wikidot.com/webinars (registration required)
  • Maine Yankee & Trojan; Big Rock Point & Connecticut Yankee; Humboldt Bay & Kewaunee
Questions?