



U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

DOE's Integrated Program for the Management and Disposal of Nuclear Waste

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June 13, 2018

Disclaimer

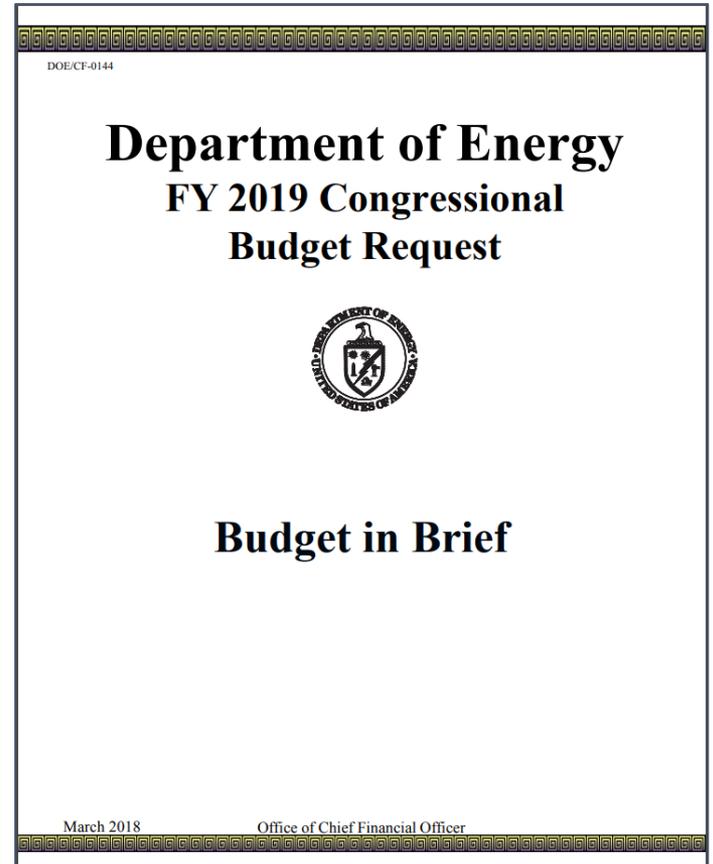
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This is a technical presentation that does not take into account the contractual limitations under the Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste (Standard Contract) (10 CFR Part 961). Under the provisions 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.



Status of the Commercial Nuclear Waste Program

- President's FY18 and FY19 Federal Budget Proposal requested funding for resuming licensing Yucca Mountain and initiating 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



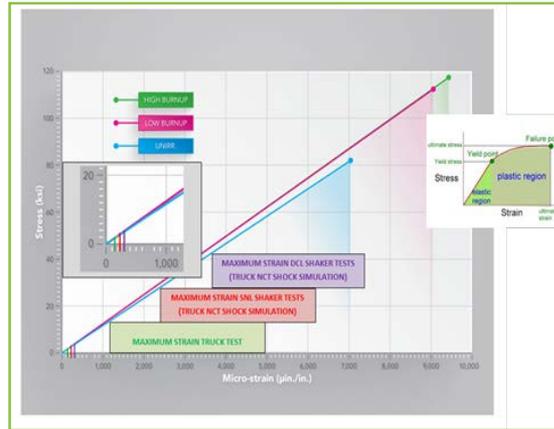


In the Interim

- Office for Spent Fuel & Waste Disposition continues to conduct analysis, research & development to support eventual spent nuclear fuel (SNF) transportation



Transportation Tests



Stresses on Fuel in Transit

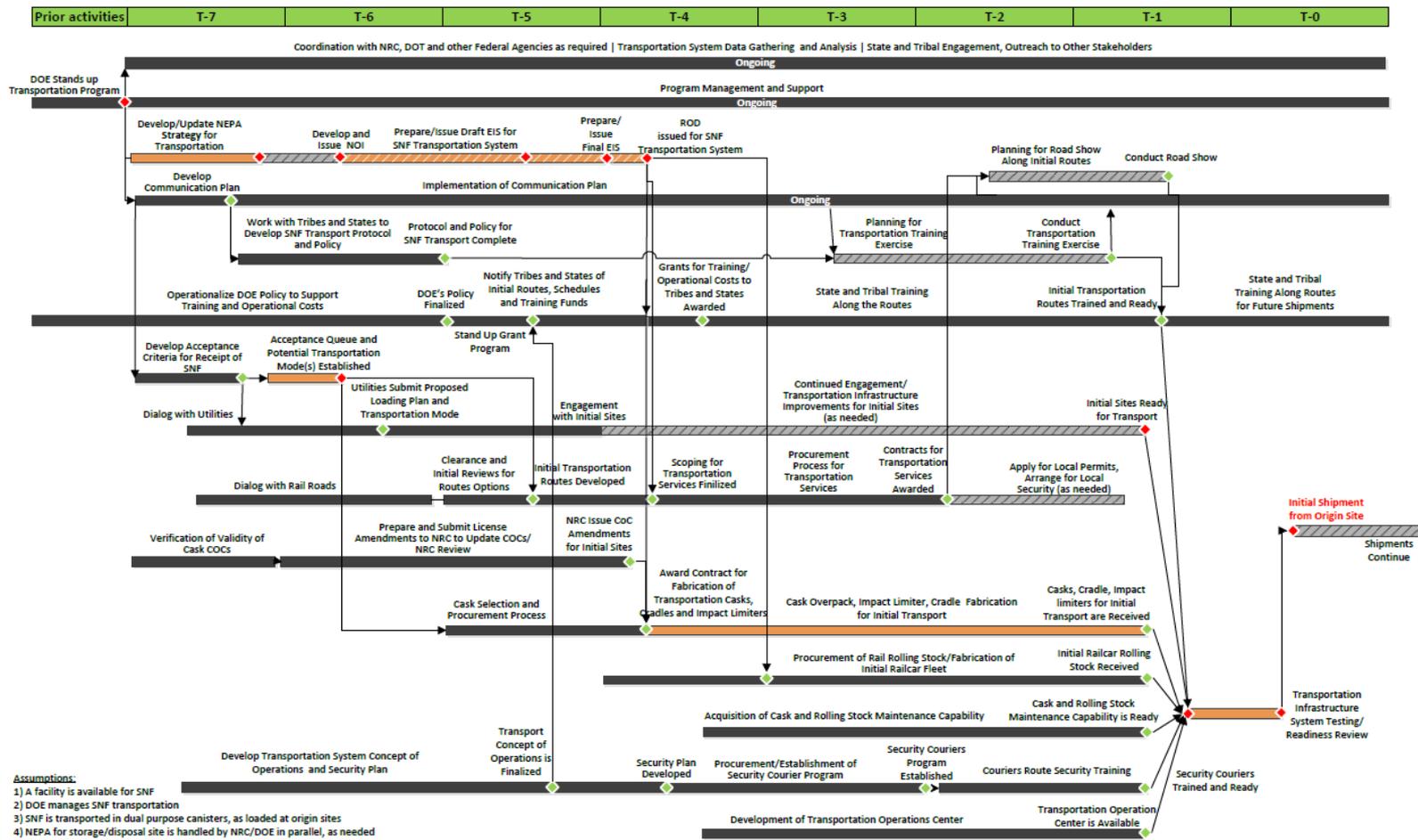


Fort Calhoun ISFSI



Analysis Indicates 7 Year Lead Time

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Assumptions:

- 1) A facility is available for SNF
- 2) DOE manages SNF transportation
- 3) SNF is transported in dual purpose canisters, as loaded at origin sites
- 4) NEPA for storage/disposal site is handled by NRC/DOE in parallel, as needed
- 5) Designs for S-2043 railcars are complete on or before T-4 Years
- 6) Shipments start slowly, ramp up over several years

Notes:

- 1) This diagram provides a summary-level depiction of Execution Strategy Analysis (ESA) logic for key program activities and milestones.
- 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.

Activity, that will be performed if needed
 Activity, milestone on the most likely critical path to ISF initial receipt (without considering risks).
 Activity, milestone not on the most likely critical path to ISF initial receipt (but might be on critical path when risks are considered).

Summary Schedule for Transportation
 May 2, 2018



Key Activities on Critical Path

Prior activities	T - 7	T - 6	T - 5	T - 4	T - 3	T - 2	T - 1	T - 0
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Coordination with NRC, DOT and other Federal Agencies as required – Transportation System Data Gathering and Analysis – State and Tribal Engagement, Outreach to Other Stakeholders

Ongoing

DOE Stands Up Transportation Program

Program Management and Support

Ongoing

Develop/Update NEPA Strategy for Transportation

Initial Shipment from Origin Site

Acceptance Queue/Transportation Modes Established

Obtain Casks and Hardware

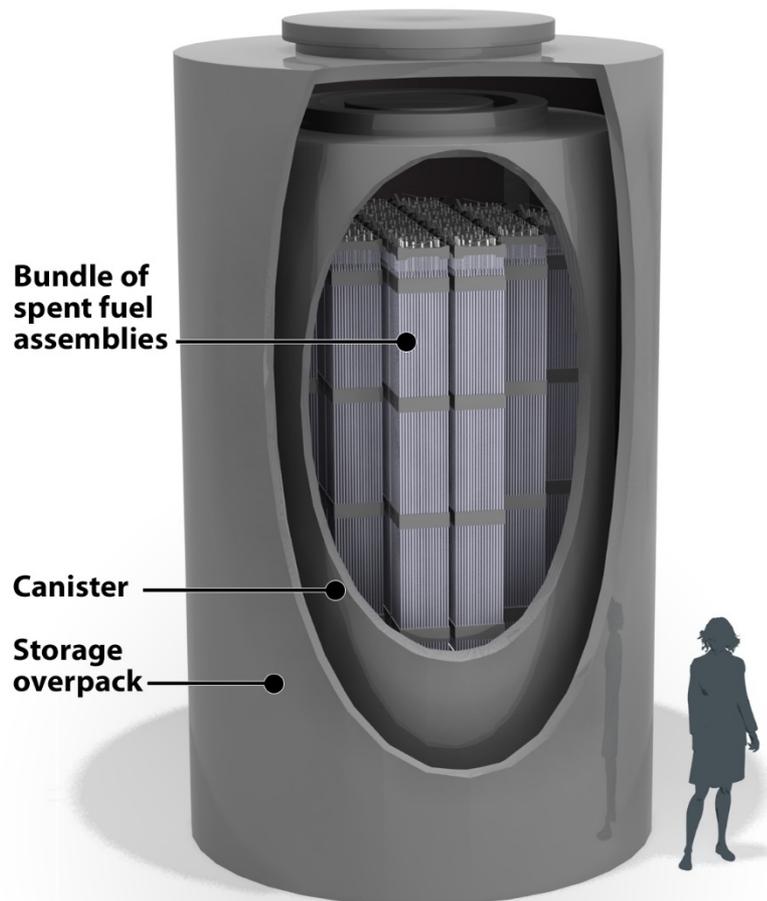
System Testing/Readiness Review

Long-Lead Time Items

- Railcar rolling stock designs that meet Association of American Railroad's S-2043 Standard, and fabricated railcar fleet
 - Cask and buffer cars
 - Escort car
- Casks, impact limiters, and associated transportation equipment
- Maintenance capability for casks, and for railcars



Technical Issues for Transporting SNF



- Updated certificates of compliance (COCs) for transportation casks
- “Odds and ends” packages (e.g. Big Rock Point, Davis Besse)
- Transportation infrastructure at/near origin sites
- 14 Shutdown sites visited: No showstoppers to moving the fuel off-site

FY18 Technical Transportation Activities

- Railcar prototype fabrication
- Analysis of data from rail cask transport test
 - Thermal model validation
- Prepare for shutdown site visit
 - Oyster Creek
- Initial site-specific de-inventory analyses
- System tools development and maintenance





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Questions ?



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