



Idaho Integrated Spent Nuclear Fuel Management Plan

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EM *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

Idaho Cleanup Project

The Plan

- Provides framework/roadmap for spent nuclear fuel (SNF) management at the Idaho National Laboratory (INL) Site
- Integrates expertise of federal and contractor personnel
- Assumes efficient and effective use of existing resources and facilities
- Outlines regulatory compliance and other statutory considerations
- Outlines recommended path forward actions



Idaho Site Projected SNF Inventory Summary in 2055

	1 Normal	2 Sodium- bonded	3 Epoxied	4 Rubble- ized	5 Intact Commercial	6 Not Intact Commercial	Other	Total
MTHM	159.2 ¹	54.9	0.4	4.2	44.1	23.9	0.7	287.4

¹ Amount excludes Naval Reactors owned fuel, which is currently ~31 metric tons in road ready dry storage and ~9 metric tons in process at the Naval Reactors Facility (NRF)



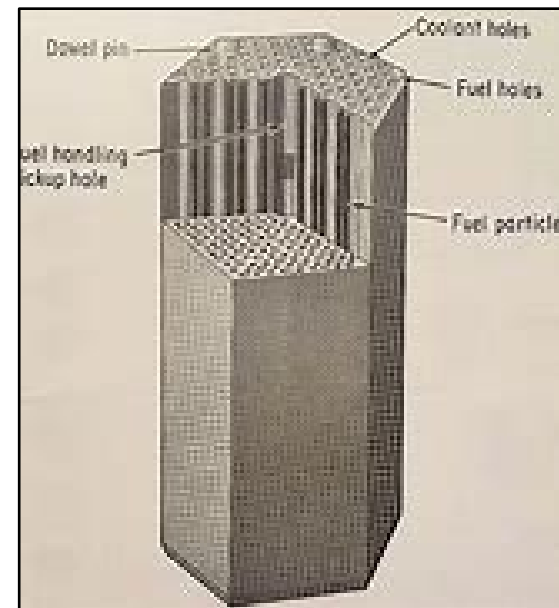
Examples of Different SNF



Left: ATR Fuel
Middle: FSV
Right: Triga



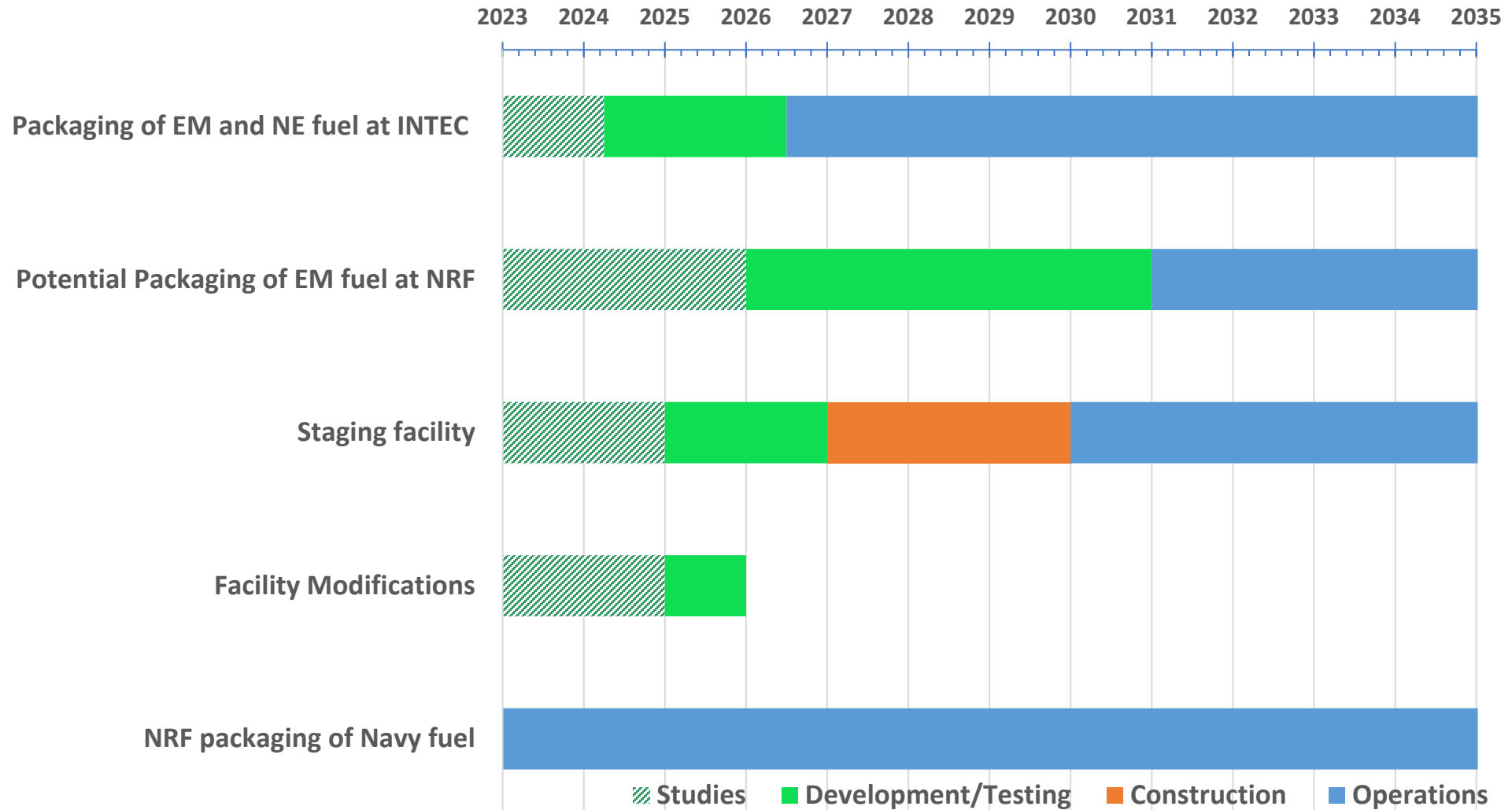
Triga Fuel Element



FSV Fuel Element



Integrated Idaho SNF Management Notional Schedule



Path Forward

- Identify funding needs and sources
- Identify facility and infrastructure upgrades/modifications
- Continue SNF packaging demonstration effort
- Define “road ready”
- Analyze Shippingport fuel for packaging at Naval Reactor Facility
- Develop regulatory compliance framework
- Create disposition strategies for non-SNF material
- Evaluate staging facility to progress toward CD-1 for DOE owned fuel
- NRF will continue to operate current packaging line for Naval Reactors owned fuel



Challenges

- Incremental resources will be needed
 - Analysis of Shippingport fuel
 - DOE Standard Canisters, cask and canister overpack handling equipment
 - Facility upgrades
- Collaboration within integrated project group on approaches/strategies
 - Fuel loading, fuel baskets, and equipment
 - Remote welding development for canisters
 - Fuel conditioning to support interim storage



Questions?

