



Idaho Naval Reactors Facility Prototype D&D Plans

Eric Larsen
D&D Program Manager

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EM *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

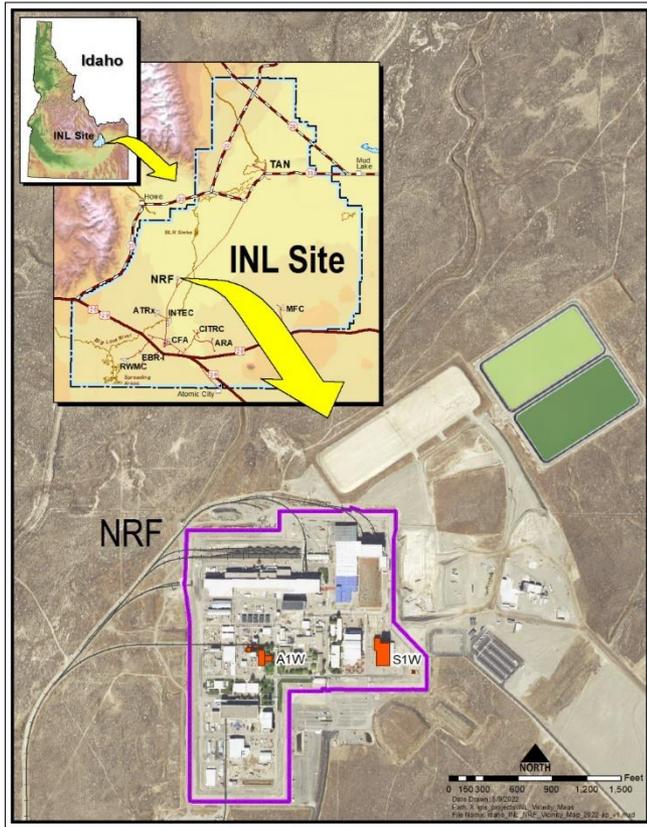
Idaho Cleanup Project

D&D Agreement between EM and NR

- Agreement between DOE Office of Environmental Management (EM) and Naval Reactors (NR) signed May 2019
 - EM to perform deactivation and decommissioning (D&D) of NR facilities
- NR preparation for D&D activities in Idaho
 - Removed all nuclear fuel from reactors
 - Perform historic and cultural preservation activities
- EM responsibilities for D&D of NR facilities in Idaho
 - Meet removal action objectives
 - CERCLA-compliant disposal of radiological and hazardous materials



Naval Reactors Facility (NRF)



Locations of S1W, A1W, and S5G
Prototype Facilities at NRF.

Location of NRF within Idaho
National Laboratory boundaries



NRF S1W and A1W Prototypes History



Submarine 1st Generation Westinghouse (S1W)



Aircraft Carrier 1st Generation Westinghouse (A1W)

- **March 30, 1953** S1W reaches criticality at 11:17 p.m., making the first practical quantities of nuclear power in the world.
- Over 13,000 Navy officer and enlisted operators trained
- **October 1989** DOE permanently shuts down S1W after 36 years of safe operation.
- The last 22 years of operation used the same reactor core, setting a longevity record
- **October 1958** A1W first went critical in October
- Approximately 14,500 students were trained on the A1W prototype
- **January 1994** A1W final shutdown.

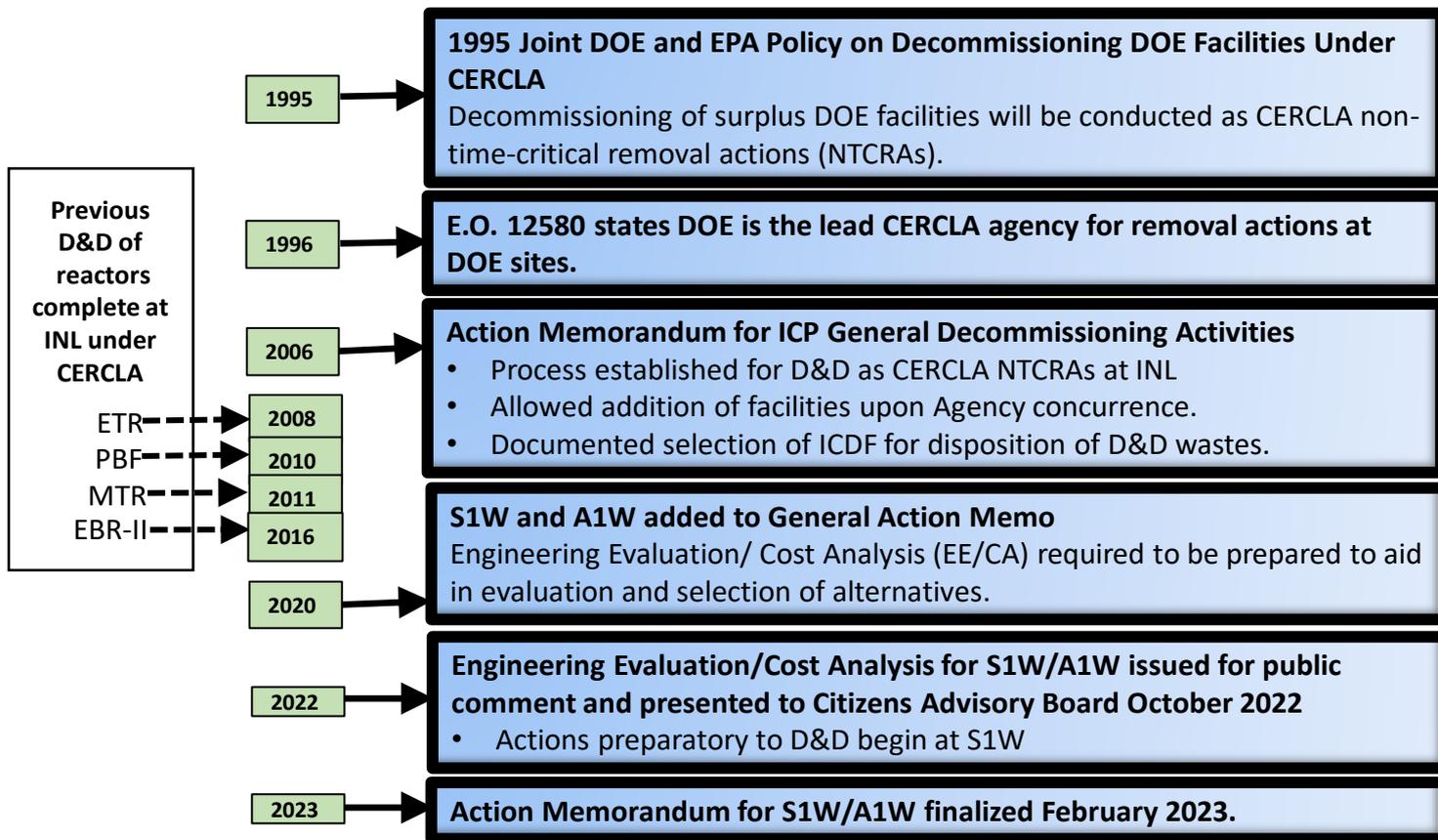


Cultural & Historic Preservation Activities

- National Historic Preservation Act
 - NRF solicited input from interested parties in October 2021
- Agreement between Naval Reactors and the Idaho State Historic Preservation Office to mitigate the loss of the NRF prototypes
 - Photographic documentation of the prototypes
 - Collection and donation of historic artifacts
 - Idaho Public Television documentary of the NRF prototype training mission
 - Collection of oral histories
 - Installation on informational roadside displays
- No archeological sites identified



D&D Approach under CERCLA



Naval Reactors D&D Progress

FY 2022 Highlights

- Completed Engineering Evaluation and Cost Analysis (EE/CA) for S1W & A1W D&D
- Completed consultation with Shoshone-Bannock Tribes for EE/CA
- Initiated characterization and D&D prep activities for S1W prototype building



Completed D&D of NRF-608 and -625 (before and after)

Scope for FY 2023

- Finalize end-state decision for S1W removal action
- Continue D&D activities for S1W main prototype building, working toward demolition in FY24
- Begin deactivation of A1W support structures
- Initiate evaluation of end-state alternatives for S5G



Support area deactivation

S1W = Submarine 1st generation Westinghouse
A1W = Aircraft Carrier 1st generation Westinghouse
S5G = Submarine 5th generation General Electric



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NRF-608 and -625 D&D Video



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