



Idaho Naval Reactors Facility Prototype D&D Plans

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EM *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

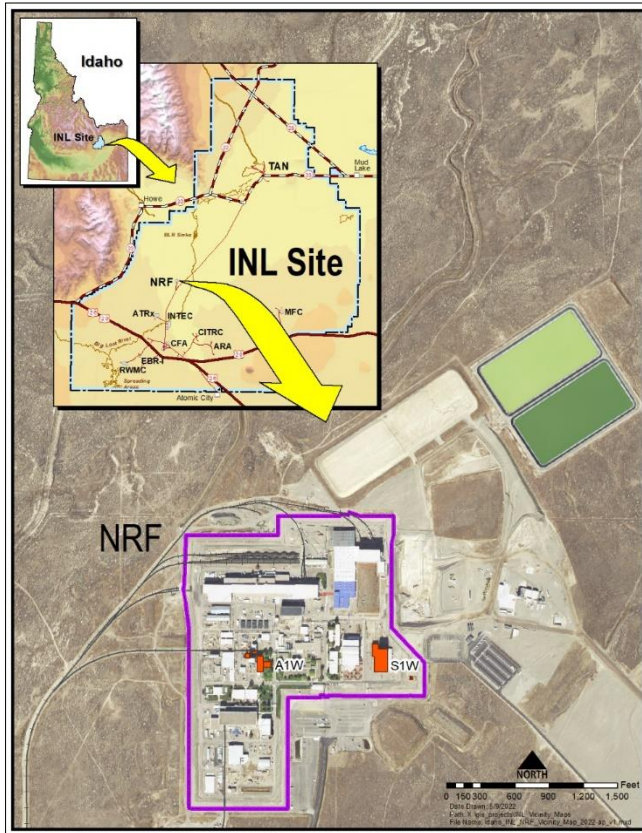
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D&D Agreement between EM and NR

- 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



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NRF S1W and A1W Prototypes History



Submarine 1st Generation Westinghouse (S1W)

- **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



Aircraft Carrier 1st Generation Westinghouse (A1W)

- **October 1958** A1W first went critical in October
- Approximately 14,500 students were trained on the A1W prototype
- **January 1994** A1W final shutdown.

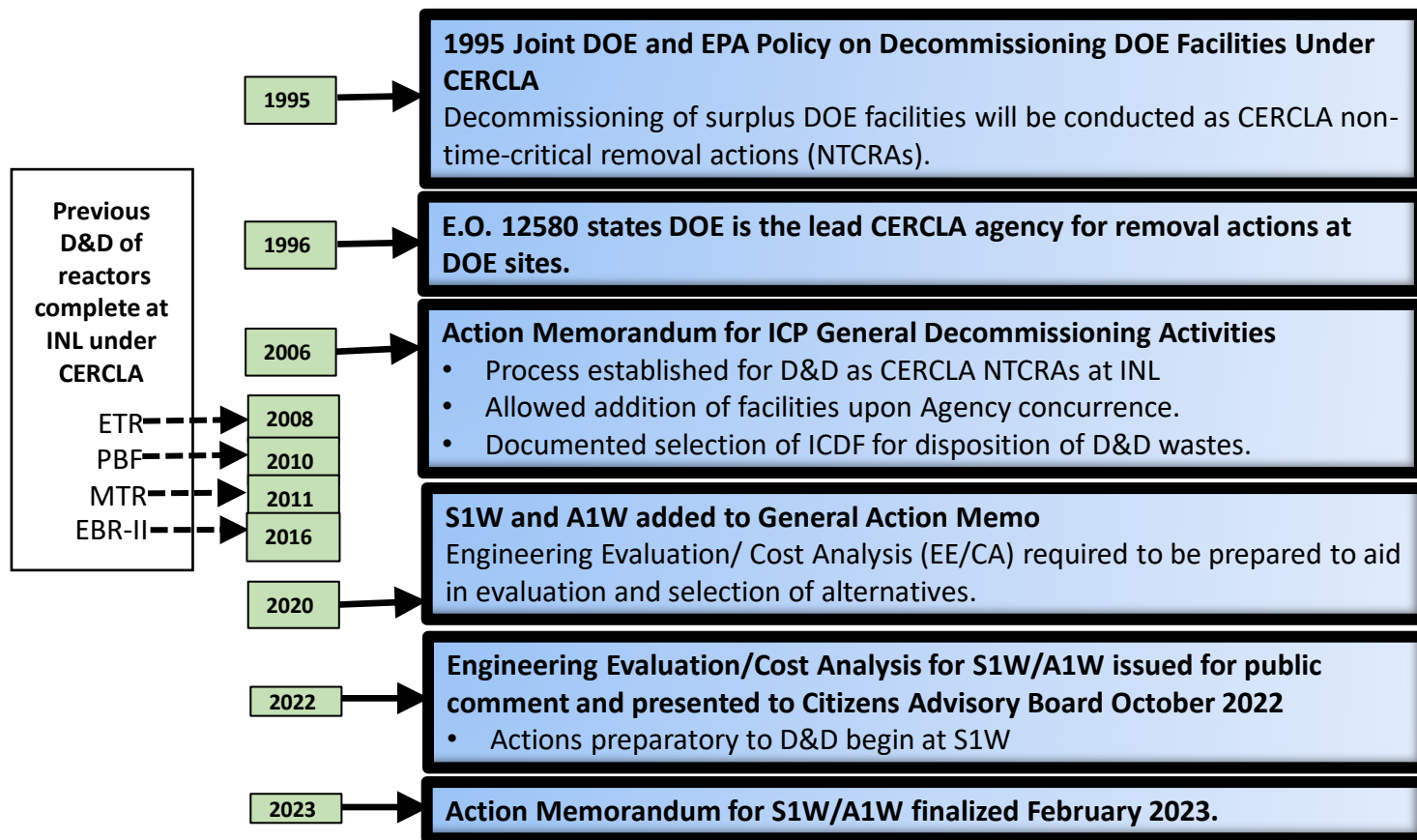


Cultural & Historic Preservation Activities

- 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

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



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



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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