

Sources of Materials: Past NRC Harvesting and U.S. Decommissioning Plants

NRC Staff

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Metals

- Examples of harvested materials used in NRC research programs:
 - Boral from Zion
 - SS plate and welds from Zorita
 - 304SS ranging from <1 to 50 dpa; SS weld up to 1 dpa
 - PWSCC
 - Alloy 600 J-groove weld from Davis-Besse
 - Alloy 600 CRD nozzle from North Anna
 - Alloy 182/82 from VC Summer
 - RPV
 - Shoreham, Midland

Electrical

- Zion
 - 4.16kV non-segregated bus duct
 - Used in NRC / OECD High Energy Arc Fault Testing
- Bellefonte
 - 8 Electrical enclosures
 - Used in NRC very early warning fire detection testing (NUREG-2180)
 - Used in NRC heat release rate testing (NUREG/CR-7197)

Recently Shutdown U.S. Plants

Plant	Design	Size (MWt)	Years in Operation	Shutdown Date
Kewaunee	W 2-loop	1772	39	2013
SONGS 2/3	CE 2-loop	3438	31/30	2013
Crystal River 3	B&W	2609	36	2013
Vermont Yankee	BWR-4/Mark-1	1912	42	2015
Fort Calhoun	CE 2-loop	1500	43	2016

Planned Shutdown U.S. Plants

Plant	Design	Size (MWt)	Years in Operation	Planned Shutdown
Palisades	CE	2565	47	2018
Pilgrim	BWR-3/Mark-1	2028	47	2019
Oyster Creek	BWR-2/Mark-1	1930	50	2019
Indian Point 2/3	W 4-loop	3216	48/46	2021
Diablo Canyon 1/2	W 4-loop	3411	40	2024-5

Additional Information from Plants

- Point of Contact
- Drawings and plant design information
 - To understand location of components within plant
 - Size and dimensions of components
- Operating history
 - Environmental information (e.g., temperature, fluence, humidity, pressure, etc.) for components of interest
- Material information
 - Fabrication records, CMTRs
- Inspection records
 - Components with known flaws