The US NRC's Power Reactor Decommissioning Process

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NRC Regulations

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- 10 CFR Part 20 Subpart E “License Termination Rule was implemented in 1997
- 10 CFR Part 50 – Operating License
- 10 CFR Part 72 - Independent Spent Fuel Storage Installation License (ISFSI)

Reactor Decommissioning Options

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- DECON: Equipment, structures, etc. removed or decontaminated to a level that permits release

- SAFSTOR: Plant placed in a safe, stable condition and maintained in that state until it is subsequently decontaminated to levels that permits release

- ENTOMB: Plant is encased in a structurally long-lived substance to allow decay until levels permit unrestricted release (not currently available)

US NRC Decommissioning

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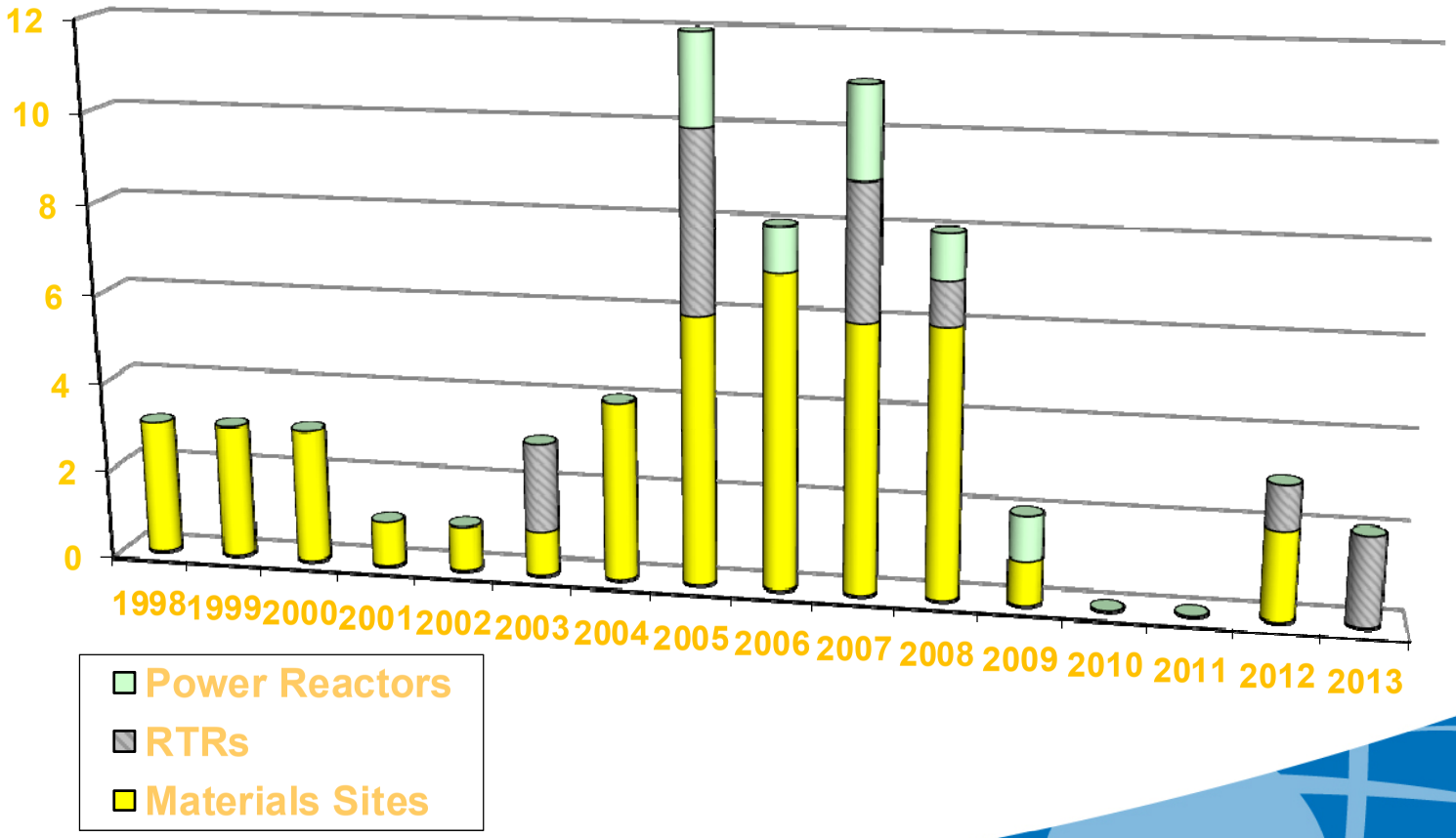

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- Licensee notifies (certifies) NRC within 30 days of permanently ceasing operations
- Certification also required once the fuel has been permanently removed from the reactor vessel
- Licensee submits Post Shutdown Decommissioning Activities Report (PSDAR) prior to or within 2 years of cessation of operations

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- Licensee performs site decommissioning
- NRC continues to conduct on-site inspections
- Licensee submits License Termination Plan (LTP) at least 2 years prior to requesting license termination
- NRC notices LTP in the Federal Register
- NRC holds a Public Meeting to discuss LTP

License Termination Plan Contents

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- Site characterization information
- Identification of remaining dismantlement activities
- Plans for site remediation
- Detailed plans for the final radiation survey
- Updated site-specific cost estimate
- Supplemental environmental report, if any changes

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NRC review of the LTP

- Acceptance review
- Technical review
- Additional information, if necessary
- Public Meetings/Opportunity for Hearing

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- NRC approves LTP by amending the license
- Licensee performs remaining decommissioning activities
- NRC performs in-process inspections
- Decommissioning must be completed within 60 years

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- Licensee submits Final Status Survey Report (FSSR)
- NRC Reviews/approves FSSR
- NRC performs confirmatory surveys, if needed
- NRC terminates license

Power Reactor Current Status

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- 10 licenses Terminated, 7 under the License Termination Rule
- 4 Units in active DECON (decommissioning) without an approved License Termination Plan
- 8 Units in SAFSTOR, principally at multi-unit operating sites

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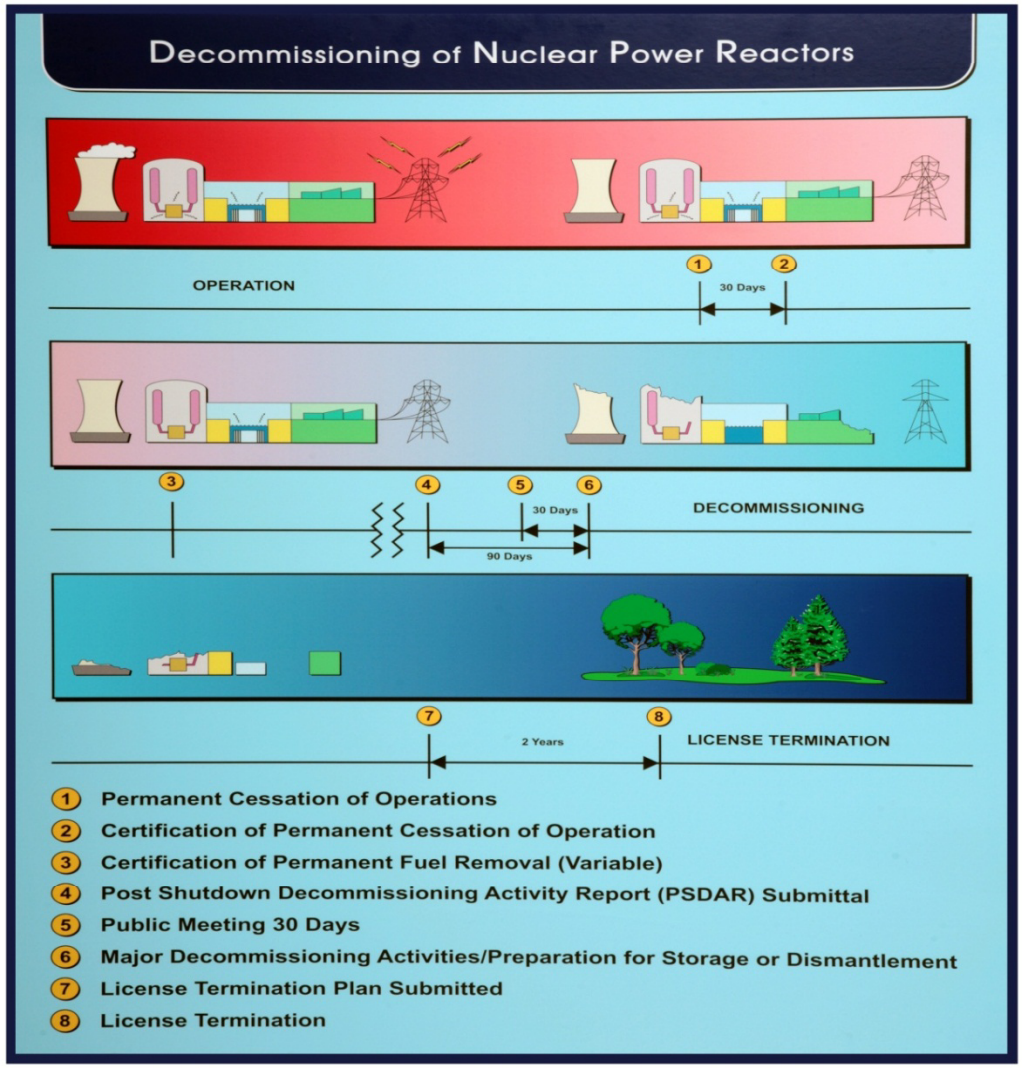

Power Reactors in SAFSTOR

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- Dresden 1
- Fermi 1
- Indian Point 1
- Millstone 1
- Peach Bottom 1
- San Onofre 1
- GE Vallecitios
- NS Savannah
- Three Mile Island Unit 2*

Fermi 1
Back in SAFSTOR 2013

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San Onofre 1 – Partial Site Release "SAFSTOR"

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Power Reactors Decommissioned 2005-2010

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- Trojan – 2005
- Maine Yankee – 2005
- Big Rock Point – 2007
- Pathfinder - 2007
- Yankee Rowe – 2007
- Connecticut Yankee – 2007
- Rancho Seco - 2009

Maine Yankee - 2005

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Yankee Rowe - 2007

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Big Rock Point - 2007

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Thank You!

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Please visit our public website for additional information:

http://www.nrc.gov/

Click on "About NRC"

Click on "How We Regulate"

Click on "Decommissioning" in the text