

The NRC Reactor Decommissioning Process – Post Shutdown Decommissioning Activities Report (PSDAR) License Termination Plan (LTP)

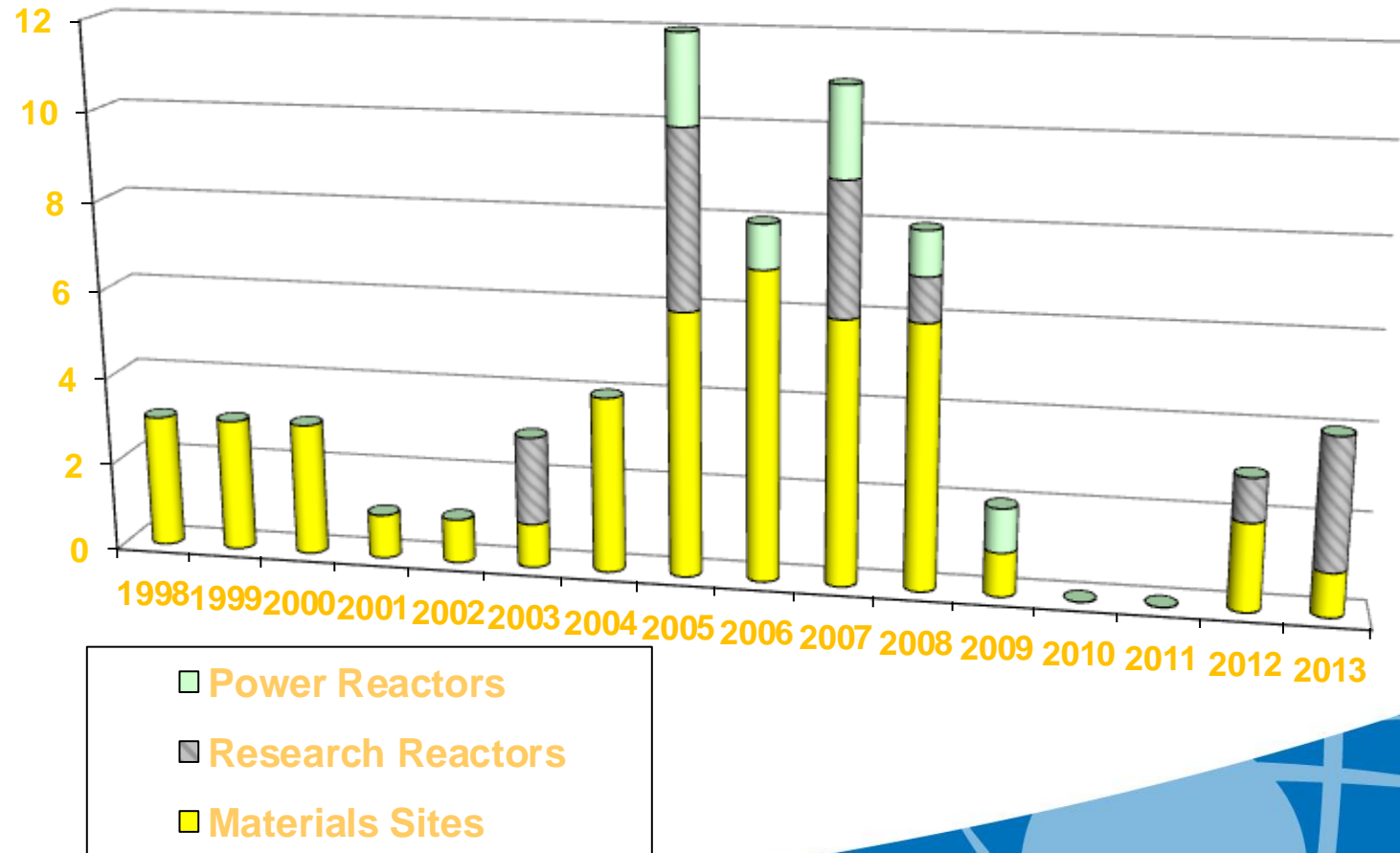
San Onofre Community Engagement Panel Workshop

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NRC Decommissioning Experience



Reactor Decommissioning Program

- 17 Power Reactors in Decommissioning
 - ✓ 3 Active DECON
 - ✓ 12 in SAFSTOR
 - ✓ 2 In Transition and To Be Determined
 - ✓ 1 expected to cease operations by year end
- 8 Research Reactors in Decommissioning
 - ✓ 4 Active DECON
 - ✓ 4 in SAFSTOR
 - ✓ 1 expected to cease operations in 2015

Power Reactor Decommissioning Regulations

Atomic Energy Act of 1954, as Amended

- 10 CFR Part 20 Subpart E “License Termination Rule” was implemented in 1997
- 10 CFR Part 50 – Operating License
- 10 CFR 50.75 Planning for Decommissioning
- 10 CFR 50.82 - Termination of License
 - ✓ Certifies Permanently Shutdown
 - ✓ Certifies Permanent Reactor Defueling
 - ✓ Post Shutdown Decommissioning Activities Report required within 2 years of permanent cessation of operations to NRC and affected States

Reactor Decommissioning

Performance Based Risk-Informed Regulations

- Reactor Decommissioning is required to be completed in 60 years.
- Bases: 50 y in SAFSTOR + 10 y DECON
- Radiation Dose Rates reduced to 1-2 %
- Radioactive Waste Volumes reduced to 10%
- Allows Decommissioning Fund to increase
- Coincidentally, 60 years corresponds well with 20 year life extension for multi-unit sites
- Regulatory Guide 1.184 “Decommissioning of Nuclear Power Reactors”

Decommissioning

As defined in 10 CFR 50.2 “Decommission” means **to remove a facility or site safely from service and reduce residual radioactivity** to levels that permits either:

- Release of the property for unrestricted use and termination of the license;

or

- Release of the property for restricted conditions and termination of the license.

Post Shutdown Decommissioning

Activities Report - Why 2 Years?

- Decommissioning Planning Strategy – DECON Prompt Dismantlement, SAFSTOR Deferred Dismantlement or Entomb?
- Many factors to consider in the decision-making process



Reactor Decommissioning Decision-Making Factors

- Multi-Unit Site Safety
- Financial – Decommissioning Funds Availability
- Access to Radioactive Waste Disposal Capacity
- Future use of the Site
- Stakeholders
 - State Public Utility Commissions
 - Local Communities
 - Members of the Public/Rate Payers
- New Business Model
- Special Circumstances

Post Shutdown Decommissioning Activities Report

PSDAR Content:

- A description and schedule for the planned decommissioning activities
- An estimate of the expected decommissioning costs
- A discussion that provides the means for concluding that the environmental impacts associated with the decommissioning activities will be bounded by appropriately issued Environmental Impact Statements.

Post Shutdown Decommissioning Activities Report

NRC Actions:

- Notices receipt of the PSDAR in the *Federal Register*
- Makes the PSDAR publically available at <http://www.nrc.gov> and Public Document Room
- NRC holds a Public Meeting in the vicinity of the licensee's facility to discuss the PSDAR and solicit public comments

Post Shutdown Decommissioning Activities Report

NRC Public Meeting Actions:

- Host a public meeting at least 30 days before the 90-days of receipt of the PSDAR
- Publish Meeting Notice in the Federal Register and local newspapers/media
- During the informational meeting, invite Licensee, State and Local Officials, and general public to comment on the PSDAR
- A written transcript will be made publically available

NRC's PSDAR Review Process

- Content Requirements in 10 CFR 50.82(a)(4)(i)
- Staff uses Regulatory Guide 1.185 to ensure the document meets requirements
- Project Manager coordinates technical reviews the PSDAR
- Requests for Additional Information may be developed



NRC's PSDAR Review Process – Decommissioning Activities



- Planned Decommissioning Activities and Schedule
 - Activities Unique to the Facility
 - NRC Safety Review
 - Determine NRC Oversight/Inspection
 - Determine NRC Licensing Activities

NRC's PSDAR Review Process- Decommissioning Cost Estimate



- Site Specific Decommissioning Cost Estimate
 - Ensure reasonable funds are there to perform the radiological cleanup
 - If decommissioning is delayed, ensure the licensee has a means of adjusting the cost estimate and funding over the storage period
 - Annually Update!



NRC's PSDAR Review Process - NEPA

- Reasons for concluding that Environmental Impacts associated with the decommissioning activities are bounded by the previously issued EISs.
 - NUREG 0586, “Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities”
 - Inspection Program



NRC's PSDAR Review Process

- After no additional information is required, NRC will notify the Licensee.
- NRC does not approve the PSDAR
- Licensee may begin decommissioning 90 days after NRC receives the PSDAR



License Termination Plans (LTP)

- Licensee conducts decommissioning and NRC continues on-site inspections
- Licensee submits the LTP at least 2 years prior to requesting license termination
- NRC notices the LTP in the Federal Register
- NRC holds a Public Meeting to discuss the LTP



License Termination Plan

Key Contents

- Site Characterization information
- Identify remaining dismantling activities and Plans for site remediation
- Detailed plans for final radiation surveys
- Update site-specific cost estimate
- A supplement to the Environmental Report (10 CFR 51.53) describing any new information or significant environmental change associated with the licensee's proposed termination activities

License Termination Plan

- NRC will perform an acceptance and technical review
- Request additional information, if necessary
- Public Meeting and Opportunity for Hearing
- NRC approves the LTP by license amendment
 - Safety Evaluation Report
 - Environmental Assessment



NRC's Regulatory Oversight Continues

- License Amendment Process
 - Federal Register Notice/Website
 - Public Comment
 - NUREG 1748, “Environmental Review Guidance for Licensing Actions Associated with NMSS Programs”

NRC's Regulatory Oversight Continues

Decommissioning Inspection Program

- Inspection Manual Chapter 2561
- ~ 50 Inspection Procedures
- 12 Core Inspection Procedures
- 38 Discretionary Inspection Procedures
- Inspection Program is adjusted to site activities



Thank You!!!

Questions?

