The NRC Reactor Decommissioning Program

San Onofre Community Engagement Panel Meeting
May 11, 2017

Bruce A. Watson, CHP
Chief, Reactor Decommissioning Branch
Office of Nuclear Material Safety and Safeguards

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

NRC's Mission and Goal

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

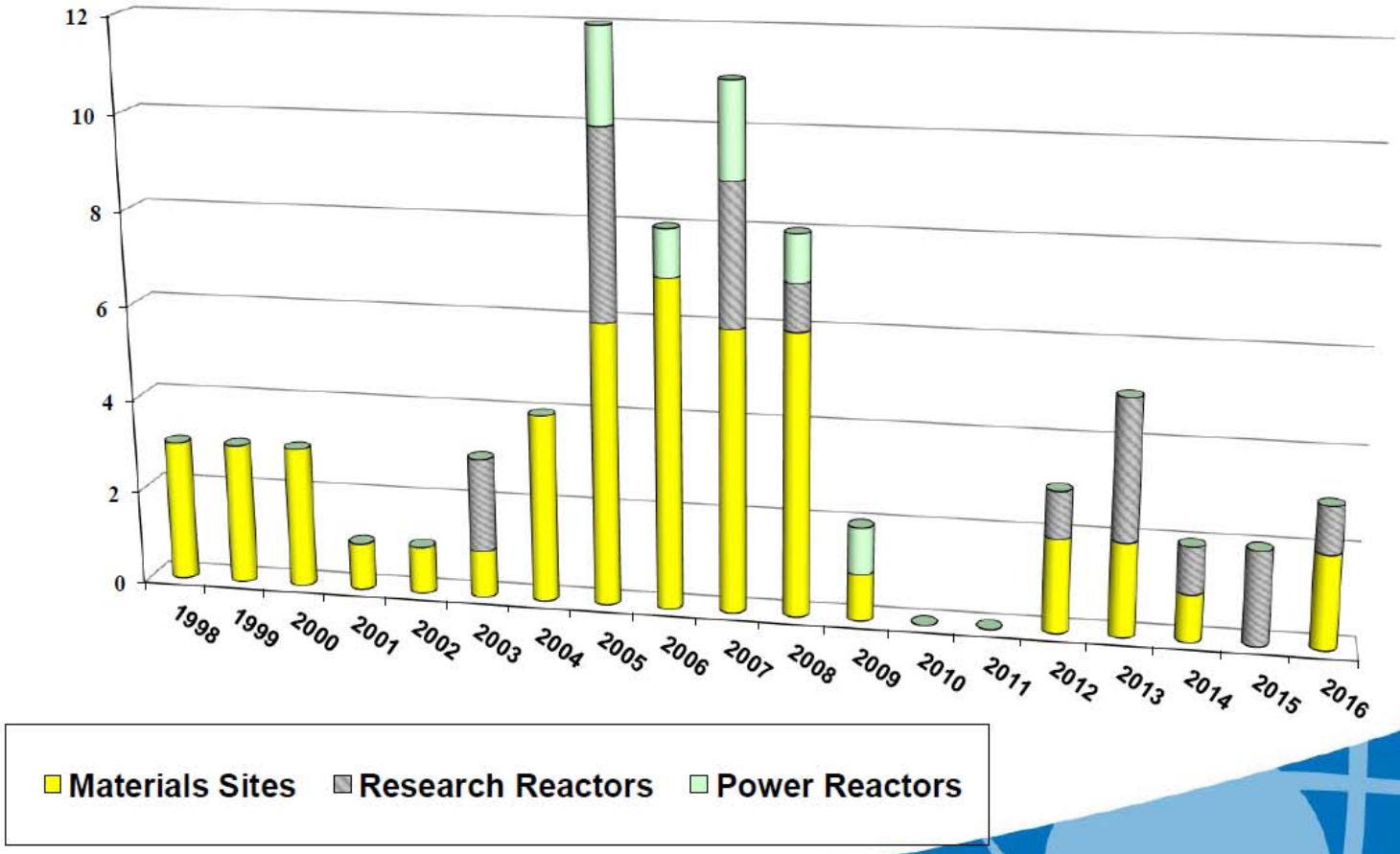
The NRC's mission is to ensure plant safety, including safe plant operations, a safe transition from operations to decommissioning, and the completion of radiological decommissioning.

Our goal is to ensure the decommissioning is conducted safely and compliantly:

- Within the Licensing Safety Bases
- Inspection and oversight programs

2017 Is the 20th Anniversary of the NRC Decommissioning Regulations

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment



Reactor Decommissioning Program

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

- 20 Power Reactors in Decommissioning
  - ✓ 6 Active DECON
  - ✓ 14 in SAFSTOR
  - ✓ 7 expected to cease operations by 2024
- 4 Research Reactors in Decommissioning
  - ✓ 4 Active DECON

Decommissioning

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

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.

Reactor Decommissioning Branch

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

- Licensing amendments
- Exemptions
- Rule Making
- Guidance Development
- Inspection Program
- Technical Support for Inspections
- Knowledge Management
- International Support

NRC's Regulatory Oversight Continues

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

- License Amendments
  - Federal Register Notice/Website
  - Public Comment
  - Opportunity for Hearing
- Exemptions
- Orders

NRC's Regulatory Oversight Continues

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Decommissioning Inspection Program

- Inspection Manual Chapter 2561
- Core Inspection Procedures annually
- Special and Discretionary Inspection Procedures
- Inspection Program is adjusted to site activities

Inspection Program Goals

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

The goals of the oversight program for decommissioning safety are through **Onsite Inspection**:

- Direct observation and verification;
- Ensure the licensees controls comply with regulatory requirements; and
- Identify any declining performance trends and verify that the licensee has taken actions to reverse any trend.

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

NRC Inspection Program for Decommissioning Reactors and Spent Fuel Storage

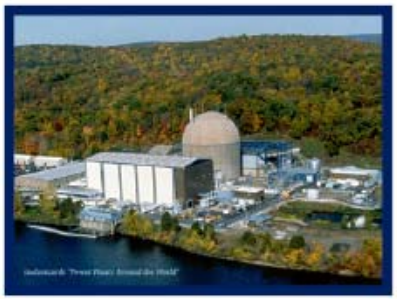
May 11, 2017

Laguna Hills, CA

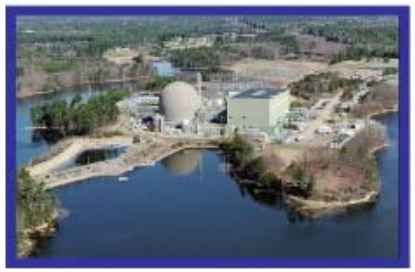
Ray L. Kellar, P.E., Chief
Fuel Cycle and Decommissioning Branch
Region IV, Division of Nuclear Materials Safety

How to safely get from this to this

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment



Connecticut Yankee, CT



Maine Yankee, ME

Trojan, OR

How NRC Ensures Safety

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

- Establish and ensure compliance with requirements contained in:
  - Regulations
  - License Base Documents (License Conditions, Technical Specifications)
  - Guidance Documents
- Perform licensing reviews and safety evaluations
- Inspection and enforcement

Inspection Activities

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

- Inspections of Spent Fuel Pool Safety and Independent Spent Fuel Storage Installation (ISFSI)
- Inspections of Decommissioning Activities
  - Generally scheduled during periods of higher risk activities
  - During and after remediation activities, NRC conducts independent radiological measurements to confirm licensee survey methodologies
  - Security and Emergency Preparedness

Objectives of the NRC Inspection Program

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

- Objectively verify safe conduct of licensee activities and oversight
- Verify adequacy of licensee controls
- Ensure safety problems and violations are promptly identified and corrected and effective actions are taken to prevent recurrence
- Examine trends in licensee safety performance

Inspection Planning and Reports

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

- Routine inspection schedule
  - Planned about a year in advance
  - Coordinated with the program office in NMSS
- Inspection planning and execution
  - Inspection Plans
  - Inspection Procedures
  - Exit Meetings
- Enforcement

  NRC enforcement policy

  http://pbadupws.nrc.gov/docs/ML0934/ML093480037.pdf

Inspection Planning and Reports

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

- Decommissioning Inspections governed by Manual Chapter 2561- Decommissioning Power Reactor Inspection Program
- Core Inspection Procedures
  - Includes over a dozen procedures
- Discretionary Procedures
  - Includes over 30 procedures
- ISFSI Inspection procedures (MC1246)
  - Includes over 5 procedures for different phases of construction and loading operations

Post Inspection Activities

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

- **Prompt inspection debrief with NRC management**
- **Determination of any significant findings and enforcement related issues**
- **Issue inspection report**

  Most NRC inspection reports are publicly available. To locate reports, go to ADAMS web page (http://www.nrc.gov/reading-rm/adams.html), use advanced search feature with docket numbers 05000361, 05000362, and 07200041 for SONGS

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Comments/Questions