



United States Nuclear Regulatory Commission

*Protecting People and the Environment*

**Crystal River Unit 3  
Post-Shutdown Decommissioning  
Activities Report Public Meeting  
January 16, 2014**

*Bruce Watson, CHP*

*Chief, Reactor Decommissioning Branch  
U.S. Nuclear Regulatory Commission,  
Washington, D.C. 20555*

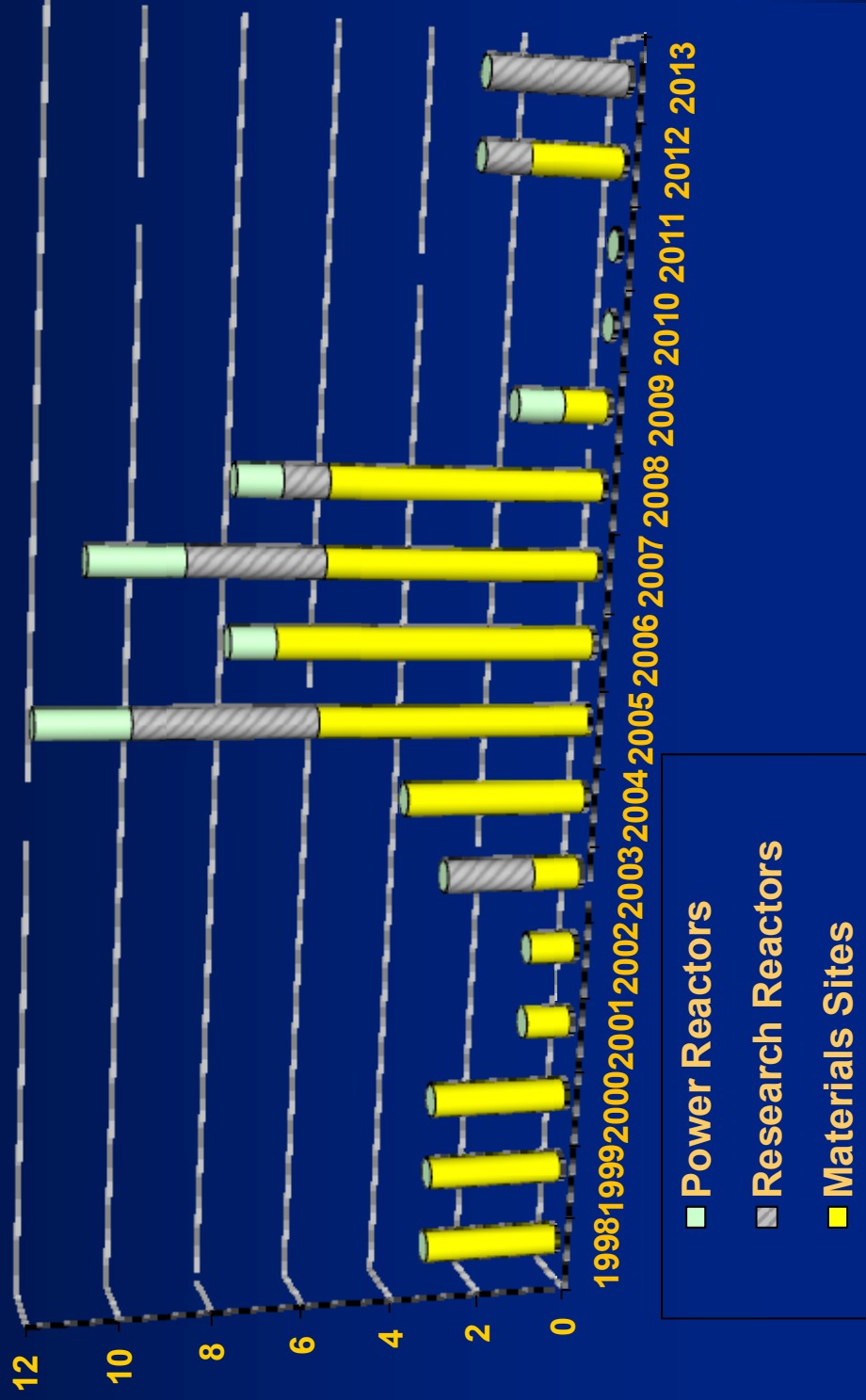
## Agenda

- Introductions
- Current Plant Status
- Discuss the NRC Decommissioning Process
- Discuss the Crystal River - 3 Post Shutdown Decommissioning Activities Report (PSDAR)
- Discuss the NRC Inspection Process
- Hear public comments on PSDAR

## Meeting Information

- Crystal River NP Training Center/EOF
- Emergency Information/Exits
- Meeting 7 - 9 PM
- PSDAR available in ADAMS  
ML13343A183
- CDs available
- We are here to listen to your comments  
and answer questions
- Meeting Feedback Forms available

# US NRC Decommissioned Facilities





United States Nuclear Regulatory Commission

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# Crystal River Unit 3 PSDAR Public Meeting

## Current Plant Status

*Christopher Gratton, NRR  
Licensing Project Manager*

## Current Plant Status

- Reactor last operated in September 2009
- Final removal of fuel from the vessel occurred in May 2011
- Permanent Cessations of Operations and Permanent Removal of the Nuclear Fuel Certification February 2013
- Decommissioning Licensing Actions
- PSDAR submitted December 2, 2013



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# **Crystal River Unit 3 PSDAR Public Meeting Post-Shutdown Decommissioning Activities Report**

*Bruce Watson, CHP*

*Chief, Reactor Decommissioning Branch*

## **NRC Decommissioning Process**

- Permanently cease operations
- Certify permanent cessation of operations
- Certify fuel removed from reactor
- Submit PSDAR (within 2 years)
- SAFSTOR and/or plant decommissioning (60 years to complete radiological decommissioning)
- Application for license termination (LTP)
- License termination



## **NRC Decommissioning Process**

- 60 years to complete decommissioning
- Assumes 50 year SAFSTOR and 10 years to complete Decommissioning
- Radiation dose rates will be 1-2 %
- Radioactive waste volumes will be 10%
- Allows the decommissioning fund to increase

## **Decision Factors for Licensees in Determining the Decommissioning Strategy**

- Multi-Unit Site Safety
- Financial – Decommissioning Funds Availability
- Access to Radioactive Waste Disposal Capacity
- Future use of the Site
- Stakeholders
- New Business Model
- Special Circumstances

## **PSDAR Requirements**

- **10 CFR 50.82(a)(4)**
- **PSDAR describes:**
  - **planned decommissioning activities**
  - **decommissioning schedule**
  - **cost estimate for the decommissioning**
  - **environmental impacts of decommissioning**

## PSDAR Review Process

- NRC notices receipt of PSDAR & requests public comments
- NRC schedules PSDAR public meeting
- NRC considers public comments
- Review PSDAR in accordance with Regulatory Guide 1.185
- PSDAR does not require NRC approval

## PSDAR Review Criteria

- Decom can be completed as described
- Decom can be completed within 60 years
- Decom can be completed for the estimated cost
- Decom activities do not endanger public health and safety or the environment

## PSDAR Highlights

- CR-3 entered Decommissioning status on February 20, 2013
- CR-3 will be maintained in current SAFSTOR mode until decommissioning begins
- CR-3 decommissioning must be complete and license termination will occur in February 2073 (60 years after cessation of operations)
- Decommissioning costs are estimated to be \$861,902,000, (based on 2013 dollars)
- Environmental impacts of planned decommissioning activities are bounded by impacts associated with post-accident cleanup activities and GEIS

## Conclusion

- NRC received a PSDAR for CR-3 on December 2, 2013
- Although NRC is not required to approve the PSDAR by regulation, NRC will review the PSDAR
- NRC will consider the public comments in its review of the CR-3 PSDAR



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## **Crystal River Unit 3 PSDAR Public Meeting**

# **Decommissioning Power Reactor Oversight Program**

*Marc Ferdas*

*Chief, Decommissioning & Technical Support Branch  
Region I - Division of Nuclear Materials Safety*



## Oversight Program

- Oversight program verifies that:
  - (1) spent fuel is safely being stored;
  - (2) decommissioning activities are being conducted safely; and
  - (3) site operations and license termination activities are performed in accordance with federal regulations and licensee commitments.
- Decommissioning power reactor oversight program is described in Inspection Manual Chapter 2561.

## Oversight Program

- Decommissioning inspection program includes both core and discretionary inspections.
- Implementation depends on activities being planned or performed.
  - Post-Operation Transition Phase
  - Actively Decommissioning – Fuel in Spent Fuel Pool
  - Actively Decommissioning – No Fuel in Spent Fuel Pool
  - SAFSTOR – Fuel in Spent Fuel Pool
  - SAFSTOR – No Fuel in Spent Fuel Pool
  - Final Surveys Underway

## Core Inspection Program

| Procedure (IP) | Title   |
|----------------|---|
| 36801          | Organization, Management, & Cost Controls at PSRs                                     |
| 37801          | Safety Reviews, Design Changes, and Mods at PSRs                                      |
| 40801          | Self-Assessment, Auditing, and Corrective Actions                                     |
| 71801          | Decommissioning Performance and Status Review at PSRs                                 |
| 62801          | Maintenance and Surveillance at PSRs  |
| 71714          | Adverse Weather Preparations (DRAFT)<br><i>Previously - Cold Weather Preparations</i> |
| 81XXX          | Physical Security Assessment at PSRs  |
| 60801          | Spent Fuel Pool Safety at PSRs  |
| 83750          | Occupational Radiation Exposure   |
| 83801          | Inspection of Final Surveys at PSR  |
| 84750          | Radwaste Treatment, and Effluent & Environ Monitoring                                 |
| 86750          | Solid Radwaste Management & Transportation  |

## Oversight Status

- Crystal River–3 is in the Post-Operation Transition Phase.
- No decommissioning activities are being performed.
- First NRC inspection in accordance with IMC 2561 was performed in October 2013.
  - Site operations were in conformance with federal requirements, licensee commitments, and management controls.
- Continued oversight and monitoring are planned by Region I.

## NRC Contacts

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- Marc Ferdas, Branch Chief  
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## Where to Comment

- **Comment at this public meeting**
- **Federal Rulemaking Website:** [www.regulations.gov](http://www.regulations.gov), search Docket ID **NRC-2013-0283**. Address question to Carol Gallagher at 301-287-3422, e-mail: [Carol.Gallagher@nrc.gov](mailto:Carol.Gallagher@nrc.gov).
- **Mail comments to:** Cindy Bladley, Chief, Rules, Announcements, and Directives Branch, Office of Administration, Mail Stop: 3WFN-06-A44M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001

## CR-3 PSDAR

NRC Public Website: [www.nrc.gov](http://www.nrc.gov)

PSDAR ADAMS No. ML13343A183

Public Meeting Feedback Forms