Reactor Decommissioning Overview

Division of Spent Fuel Management
REG CON 2016
December 8, 2016

Bruce A. Watson, CHP
Chief, Reactor Decommissioning Branch
Division of Decommissioning, Uranium Recovery and Waste Programs

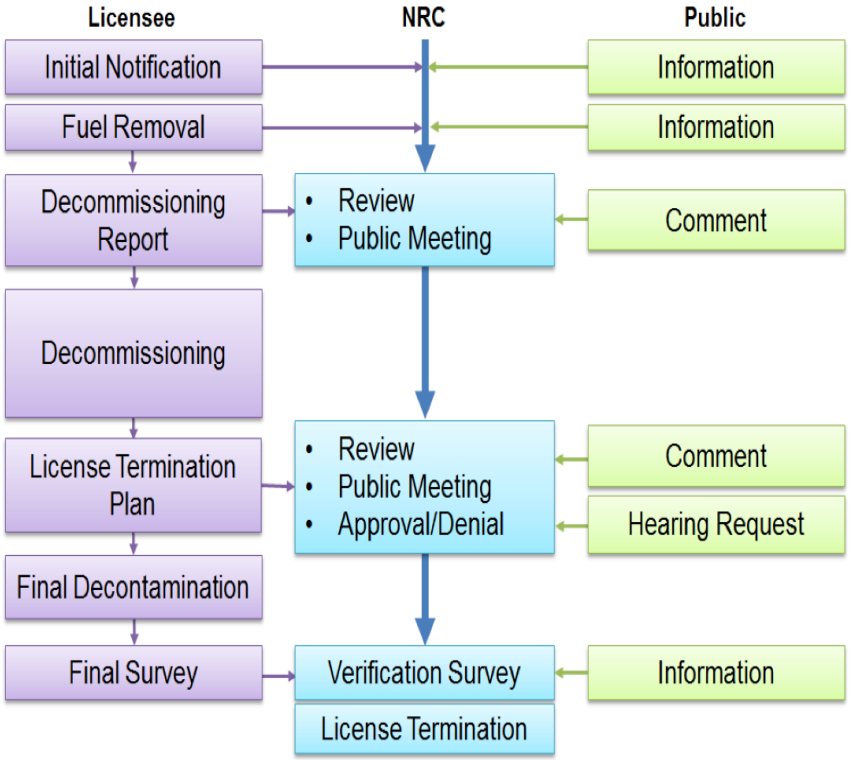
U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Decommissioning Program Regulatory Framework

Decommissioning Program

- Statutory authority
  - Integrated Decommissioning Program
- Comprehensive regulations:
  - Public involvement
  - Environmental review
  - Financial assurance
  - Site characterization
  - Site remediation/Radiological clean-up
  - Final site surveys
- Regulatory guidance
- Oversight and inspection

Decommissioning Process



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

Recent Premature Power Reactor Shutdowns

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

Zion 1 & 2 - Progress and Expected End Point

Reactor Decommissioning Program Status

- 10 power reactors have terminated their licenses and have been released for unrestricted use
- 20 power reactors in decommissioning
  - 6 power reactors in active DECON or active dismantling:
    - Zion 1 & 2, Humboldt Bay 3, LaCrosse, and San Onofre 2 & 3
  - 13 power reactors in SAFSTOR or deferred dismantlement
  - Fort Calhoun ceased operations October 24, 2016 and is expected to select SAFSTOR
- 6 power reactors have announced they will permanently cease operations by 2019.
  - FitzPatrick[1], Pilgrim, Oyster Creek, Clinton, and Quad Cities 1 & 2
- Additional near term shutdowns are possible

[1] Current negotiations on the potential sale of FitzPatrick, pending approvals from State and Federal agencies, may prevent shutdown

Connecticut Yankee

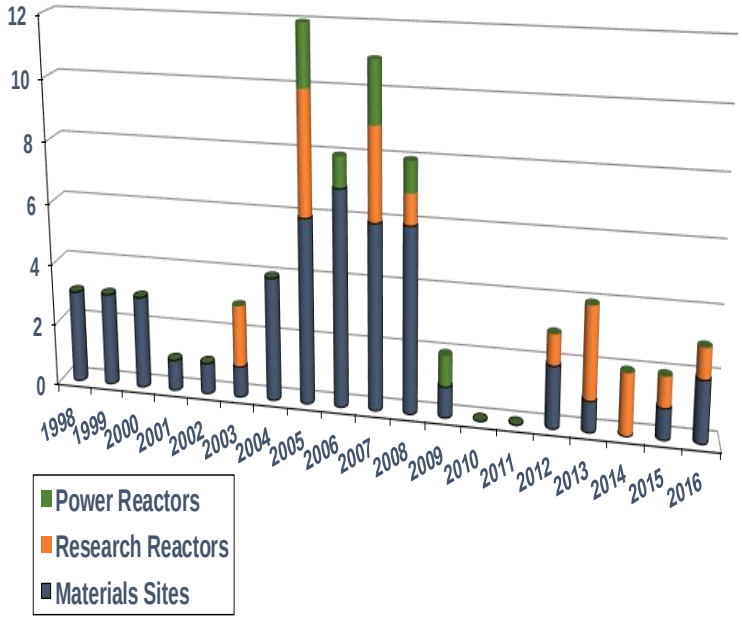
U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Summary & Conclusion

Decommissioning Program

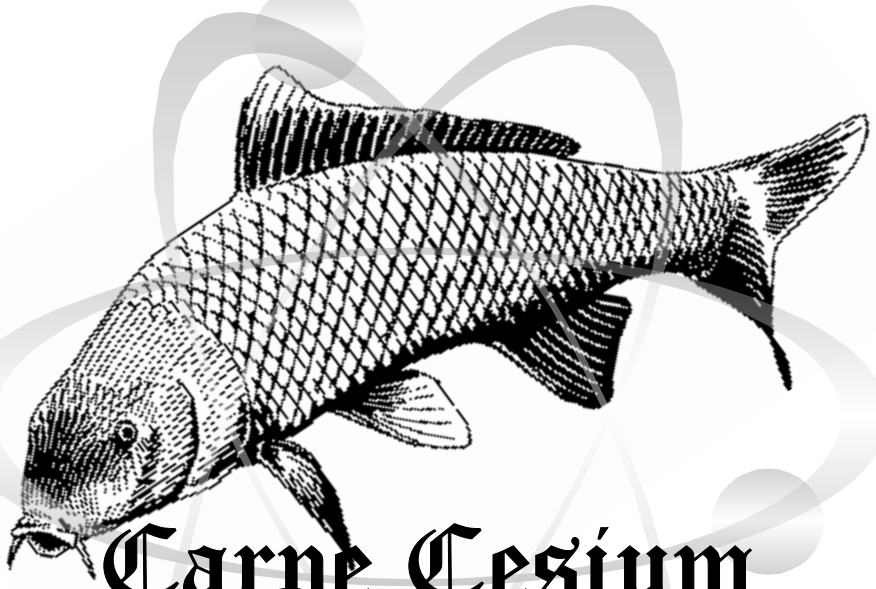
- NRCs decommissioning program is a successful and internationally recognized program
- NRC power reactor decommissioning is expanding as more shutdowns are anticipated
- Several regulatory issues to improve the efficiency of reactor transitioning from operation to decommissioning are being addressed in rulemaking
- Lessons learned continue to inform the regulatory guidance

License Terminations Since 1997



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

Reactor Decommissioning Branch



Carpe Cesium

AKA,

The Dead Reactor Society

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