U. S. Nuclear Regulatory Commission Experience with Stakeholder Engagement and Lessons Learned

Nuclear Energy Agency
Paris, France
June 21, 2018

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Recent U.S. Power Reactor News

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6 Recent Unplanned Reactor Shutdowns

- **Kewaunee Power Station** – Kewaunee, Wisconsin (2013)
- **Crystal River Unit 3** - Crystal River, Florida (2013)
- **San Onofre Nuclear Generating Station, Units 2 & 3**
  - San Clemente, California (2013)
- **Vermont Yankee Nuclear Power Station** - Vernon, Vermont (2014)
- **Fort Calhoun** - Omaha, Nebraska (2016)

12 Announced Future Reactor Shutdowns

- **Oyster Creek** in October 2018
- **Pilgrim and Three Mile Island 1** in 2019
- **Davis-Besse** in 2020
- **Beaver Valley 1 & 2 and Perry 1** in 2021
- **Palisades** in 2022
- **Indian Point 2 & 3** in 2020 / 2021
- **Diablo Canyon 1 & 2** in 2025 / 2026

Phase 1

- Reactor is permanently shutdown and nuclear fuel is transferred to wet storage in the spent fuel pool
- Plant is prepared for decommissioning
- Modifications are typically made to facilitate decommissioning

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Phase 1 (Continued)

Post Shutdown Decommissioning Activities Report (PSDAR) (NRC Regulatory Guide 1.185)

- Decommissioning Strategy – DECON or SAFSTOR
- 60 Years to Complete Decommissioning
- Site Decommissioning Funding Status
- Affirmation of the Environmental Review

NRC Holds Public Meeting to Discuss PSDAR

NRC does **not** approve the PSDAR

Reactor Decommissioning Process

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Phase 2 – Decommissioning Phase

- DECON – Immediate Dismantlement
- SAFSTOR – Deferred Dismantlement
- 60 Years to Complete (50 Years for Radioactive Decay + 10 Years to Dismantle the Facility)

Phase 3 – Final 2 Years

- License Termination Plan (License Amendment)
- NRC Holds Public Meeting on LTP

NRC Public Meeting Categories

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Category 1 Meetings

- Typically held with one licensee, vendor, applicant or petitioner to discuss their particular issue(s).
- Public observes the meeting to view interactions between the NRC and the attendee(s) to obtain factual information and may offer constructive comments during the meeting.
- Public can interact with NRC before and after the meeting.

Category 2 Meetings

- Typically held with a group of industry representatives, licensees, vendors or non-government organizations; focuses on specific industry issue(s) that apply to several nuclear facilities.
- Public provides feedback at the end of the meeting.

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Category 3 Meetings

- Typically held with non-government organizations, private citizens, or interested parties, various vendors, or members of industry to fully engage them in discussions.
- Meetings provide an opportunity for NRC and the public to work together to ensure that the issues and concerns are understood and considered by the NRC staff.
- Category 3 Meetings include Post Shutdown Decommissioning Activities Report, License Termination Plan, and Partial Site Release public meetings.

Vermont Yankee Meeting

NRC Public Meeting Categories

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Webinars

- NRC will also use webinars to host public meetings with the public and media. Webinars use the same process to advertise the meeting.
- Webinars are used to convey information via computers and phones on specific topics and obtain public comments.
- There are specific advantages to webinars since there is an opportunity to queue speakers, and an outside operator to control commenters speaking time.

NRC Stakeholder Involvement

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Required NRC Decommissioning Public Meetings

- Partial Site Release Requests
- Post Shutdown Decommissioning Activities Report (may be submitted prior to permanent shutdown)
- License Termination Plan Submittal

NRC Meeting Requirements

- Meetings Held Near the Decommissioning Site
- Noticed in the *Federal Register* and Listed on the NRC Public Website
- Advertised in Local Newspapers and Other Media
- Meeting is Transcribed and Publicly Summarized

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Other Decommissioning Meetings

- Decommissioning Representation at NRC Sponsored Annual Assessment Meetings at the Facility Prior to Permanent Shutdown
- Licensee or State Sponsored Community Engagement and Outreach Meetings
- Congressional Staff Briefings (not public)
- State and Local Government to Government Meetings (not public)
- State Legislature Testimony (open to public)

Typical Stakeholders

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- U. S. Congressional Delegation
- Native American Tribes
- State Government Organizations
  - Public Service Commission
  - State Regulators / Dept. of Environment Quality
  - Emergency Responders / Dept. of Health
  - State and Local Elected Officials
- Non Government Organizations
  - "Environmentalists" and Affiliates
  - Local business interest community groups
- Interested Individual Citizens
  - Plant Employees
  - Utility Representatives
  - Labor Unions
  - Consumers / Rate Payers

Public participation and interest in the decommissioning process is highly dependent on the region of the country and views on nuclear power in general.

Community Involvement

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- No NRC requirement exists for a licensee to sponsor a citizen or community engagement group for termination of a license for unrestricted release of the site.

- The NRC is an independent safety regulator and strongly recommends that decommissioning licensees sponsor a community advisory board or citizen engagement panel to share plans and educate local citizens, elected officials, community leaders, and state officials.

- The Electric Power Research Institute Decommissioning Lessons Learned Report encourages licensees to sponsor citizen participation as a “good practice.”

Community Involvement

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- The NRC recently reexamined the role of stakeholders in the decommissioning process as part of the ongoing effort to update the NRC's decommissioning regulations.

- The NRC staff determined that, while community involvement is a good practice for decommissioning, there was no substantial increase in safety or security associated with mandating stakeholder participation.

- In addition, because of the way the NRC is structured, we do not have the jurisdiction or the authority to mandate participation in the decommissioning process by anyone other than NRC licensees.

Kewaunee, Wisconsin

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- No Community Advisory Board or Engagement Panel
- Dominion Energy Provides Support for Local Economic Development Plans
- Well Maintained Plant with Recent Systems Upgrades

PSDAR Public Meeting Concerns Focused on Economic Losses to the Community

Crystal River, Florida

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PSDAR Public Meeting Concerns Focused on Major Costs to Rate Payers with No Opportunity to Benefit from Their Investment in the Plant

NRC / Public Meetings

- Annual Assessment Meeting
- PSDAR Public Meeting
- No Citizens Advisory Board or Panel
- Duke Energy Public Affairs Office Holds Open Houses Periodically

San Onofre (SONGS), California

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SONGS Community Panel

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- Licensee / Operator Sponsored
- Chaired by a University Professor
- Variety of Expert Speakers
- Members Include Representatives from the Local Community and Interest Groups
- NRC Support and Periodic Participation
  - Environmental Review
  - Emergency Response
  - Decommissioning Funds
  - Spent Fuel Management

San Onofre, California

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SONGS NRC / Stakeholder Meetings

- California Senate Committees
- California Energy Commission
- Special Decommissioning Public Meeting
- PSDAR Meeting
- Community Engagement Panel Meetings

Vermont Yankee

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Vermont Yankee Nuclear Decommissioning Citizens Advisory Panel (VYNDCAP)

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- Created by Order of State Legislation
- Reports to the State Government
- Membership Includes State and Local Officials, Local Private Citizens, and Licensee Staff
- PSDAR Public Meeting Concerns: Major concerns include the adequacy of the decommissioning funds, the time to complete decommissioning, the role of the state in the decommissioning process and PSDAR approval
- VYNDCAP Meetings
  - Decommissioning Process
  - License Transfers

License Termination Plan and Partial Site Release Meetings

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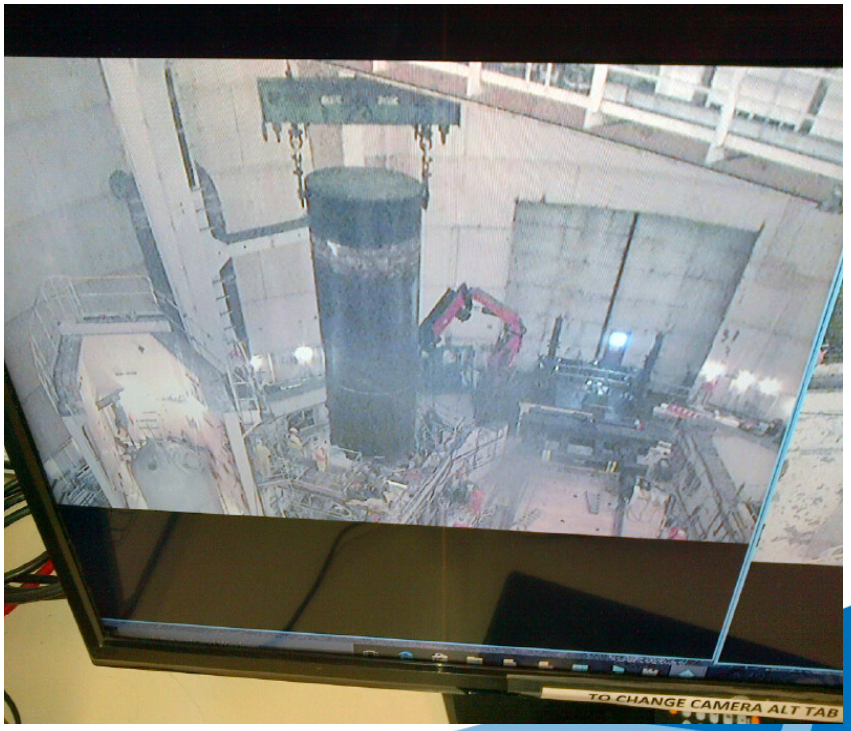
Humboldt Bay

Zion



License Termination Plan and Partial Site Release Meetings

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La Crosse

GE Vallecitos

Decommissioning Issues of High Public Interest

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- Decommissioning Funding and Adequacy
- Reactor Decommissioning Strategies: DECON vs. SAFSTOR and Timeliness (60 Years to Complete)
- Economic Losses to the Local Community
- Safety of Spent Fuel Pools vs. Interim Spent Fuel Storage Installations (ISFSI)
- Long Term High-Level Waste Storage and Transportation
- Emergency Response Reductions
- Some States Want Authority to Regulate Decommissioning
- Unrestricted Release Criteria (25 mrem/y, 0.25 mSv/y)
- Future Use of the Site

Public Engagement Summary

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Required Public Engagement

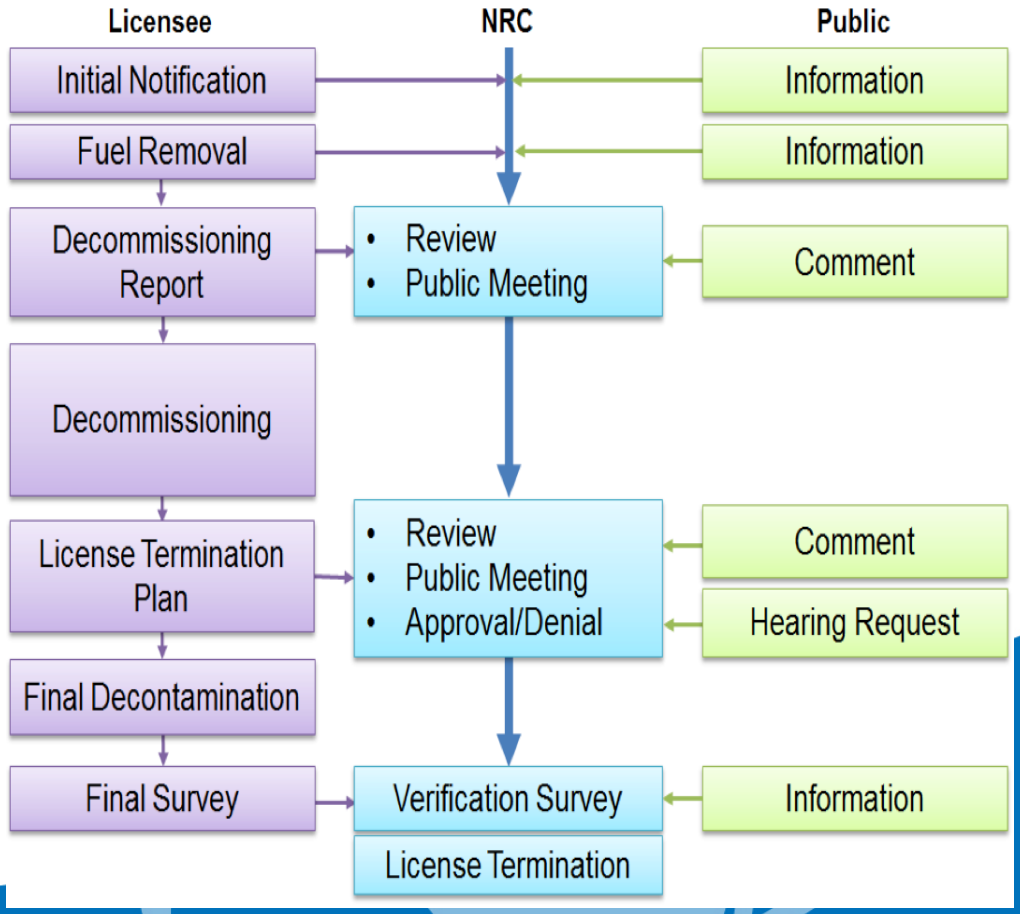
NRC required Public Meetings

- Regulations require the NRC to hold a Public Meeting to obtain comments on the Post Shutdown Activities Report.
- Regulations require NRC to hold a public meeting on the License Termination Plan

Licensee requirements:

- NRC requires the licensee to engage public participation for termination of a license with restricted release conditions.

Decommissioning Process



Summary

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- NRC Recommends Decommissioning Licensees Sponsor a Citizens Advisory Board, Community Engagement Panel, or Similar Outreach Group
- In the U.S., Public Participation is Highly Dependent on the Acceptance of Nuclear Power and is Generally Regional / State Specific
- Try to Keep a Balance Between People with Differing Opinions; Don’t Let One Group Dominate
- Do Your Best to Keep the Meeting Civil, Under Control, and Have Ground Rules; Use a Facilitator
- Expect the Unexpected