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Safety Culture in the Reactor Oversight Process (ROP) and License Renewal Status

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What is Safety Culture?

- Definition of Safety Culture
  - "that assembly of characteristics and attitudes in organizations and individuals, which establishes that as an overriding priority, nuclear plant safety issues receive the attention warranted by their significance"
- Organizational Culture
  - shared reactions, habits, values, norms, beliefs, basic assumptions of an organization's members
  - Safety culture is a subset of organizational culture

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Why Safety Culture is Important

- Chernobyl Accident
  - Procedure non-adherence issues
  - Non-conservative decision making
  - Lack of clear authority
  - Poor training and understanding
  - Production (or testing) over safety

- Davis-Bessel Vessel Head Degradation
  - Inadequate nuclear safety focus
  - Inadequate implementation of the corrective action program
  - Inadequate analysis of safety implications
  - Inadequate procedure compliance

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ROP Components of Safety Culture

- Human Performance
  - Decision-making, resources, work control, and work practices
- Problem Identification and Resolution
  - Corrective action program, operating experience, and self/independent assessments
- Safety Conscious Work Environment
  - Environment for raising safety concerns and preventing/detecting/mitigating perceptions of retaliation
- Other
  - Accountability, continuous learning environment, organizational change management, and safety policies

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Feedback from Stakeholders

- Safety Culture is of utmost importance to the NRC
- We continue to use lessons learned to improve our oversight process
- We will consider stakeholder feedback to determine if the ROP needs to be changed to be consistent with the Final Safety Culture Policy Statement

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Power Reactor License Renewal

- Granted Renewals
  - 54 units; 31 sites
- Currently Under Review
  - 18 units; 12 sites
- Expected Applications (next 6 months)
  - Salem 1,2 — September 2009
  - Hope Creek — September 2009
  - STARS Plant — October – December 2009
  - Columbia — January 2010

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Applications Under Review

Pilgrim
Susquehanna
Beaver Valley
Prairie Island
Cooper
Palo Verde
Vermont Yankee
Indian Point
Three Mile Island
Kewaunee
Duane Arnold
Crystal River

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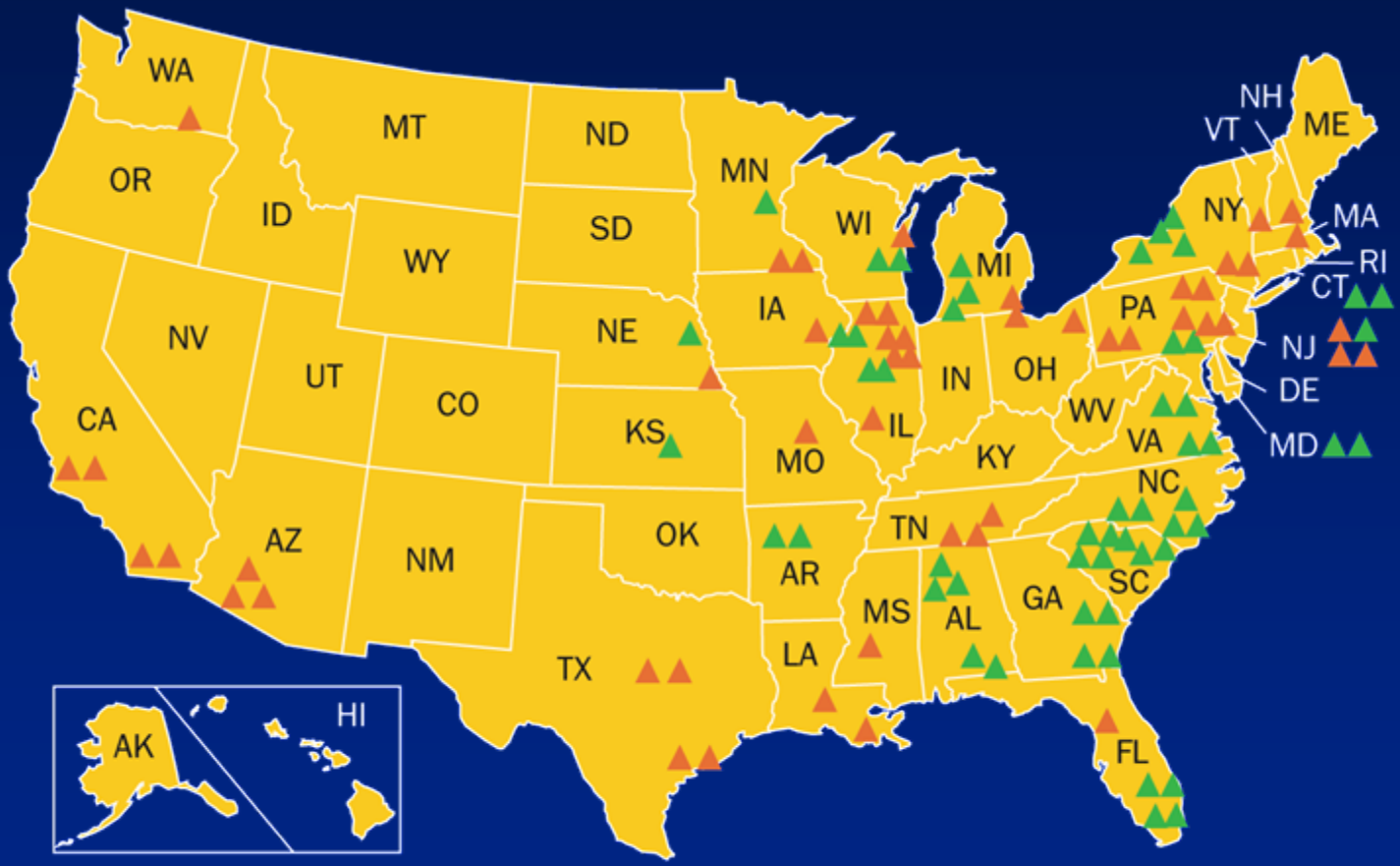
Renewed Power Reactors



As of July 2009

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License Renewal Issues – Aging of Components

- Examples
  - Metal Fatigue Analysis
  - Inaccessible Medium Voltage Cables
  - Containment Liner Degradation
  - Neutron Absorber Degradation

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Back Up Slides

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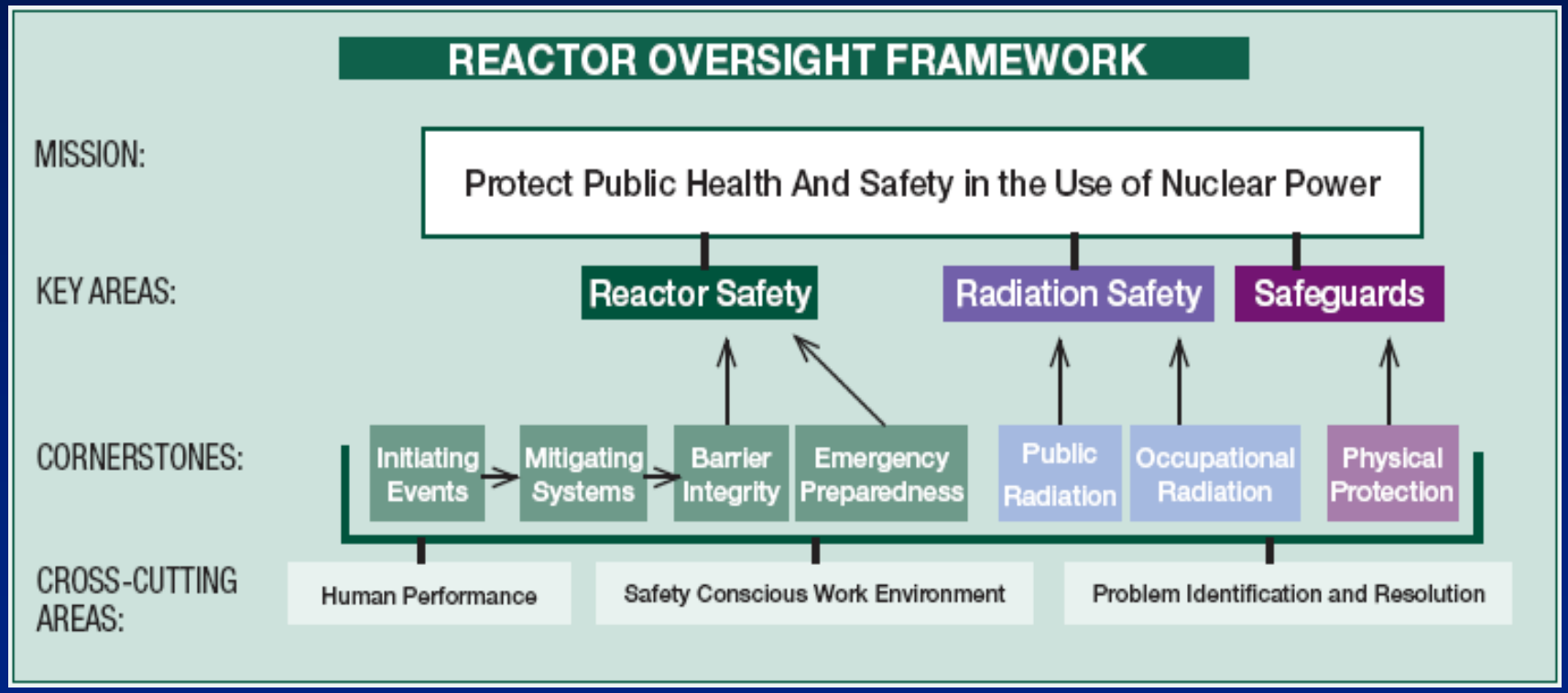
The Reactor Oversight Process (ROP)



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Safety Culture in the ROP

- NRC Inspection
  - Inspection findings involve performance deficiencies
  - Performance deficiencies have a root cause
  - Root causes often involve an aspect of organizational culture
  - Multiple performance deficiencies involving the same aspect of organizational culture can result in increased NRC inspection
- Safety Culture Assessments
  - Comprehensive evaluation
  - Interviews, surveys, field observations
  - Performed by NRC and licensees, and independent contractors
  - Levels of independence vary with performance

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Applications Under Review

• Pilgrim	In hearing process
• Vermont Yankee	In hearing process
• Susquehanna	Final SER in August 2009
• Indian Point	In hearing process; Final SER in August 2009
• Beaver Valley	Renewed license in September 2009
• Three Mile Island	Renewed license in November 2009
• Prairie Island	In hearing; Final SER in October 2009
• Kewaunee	Preliminary SER in March 2010
• Cooper	Preliminary SER in March 2010
• Duane Arnold	Preliminary SER in March 2010
• Palo Verde	Preliminary SER in July 2010
• Crystal River	Preliminary SER in April 2010