

# The Nuclear Regulatory Commission's Approach to Safety Culture

US NRC -- Vendor Conference

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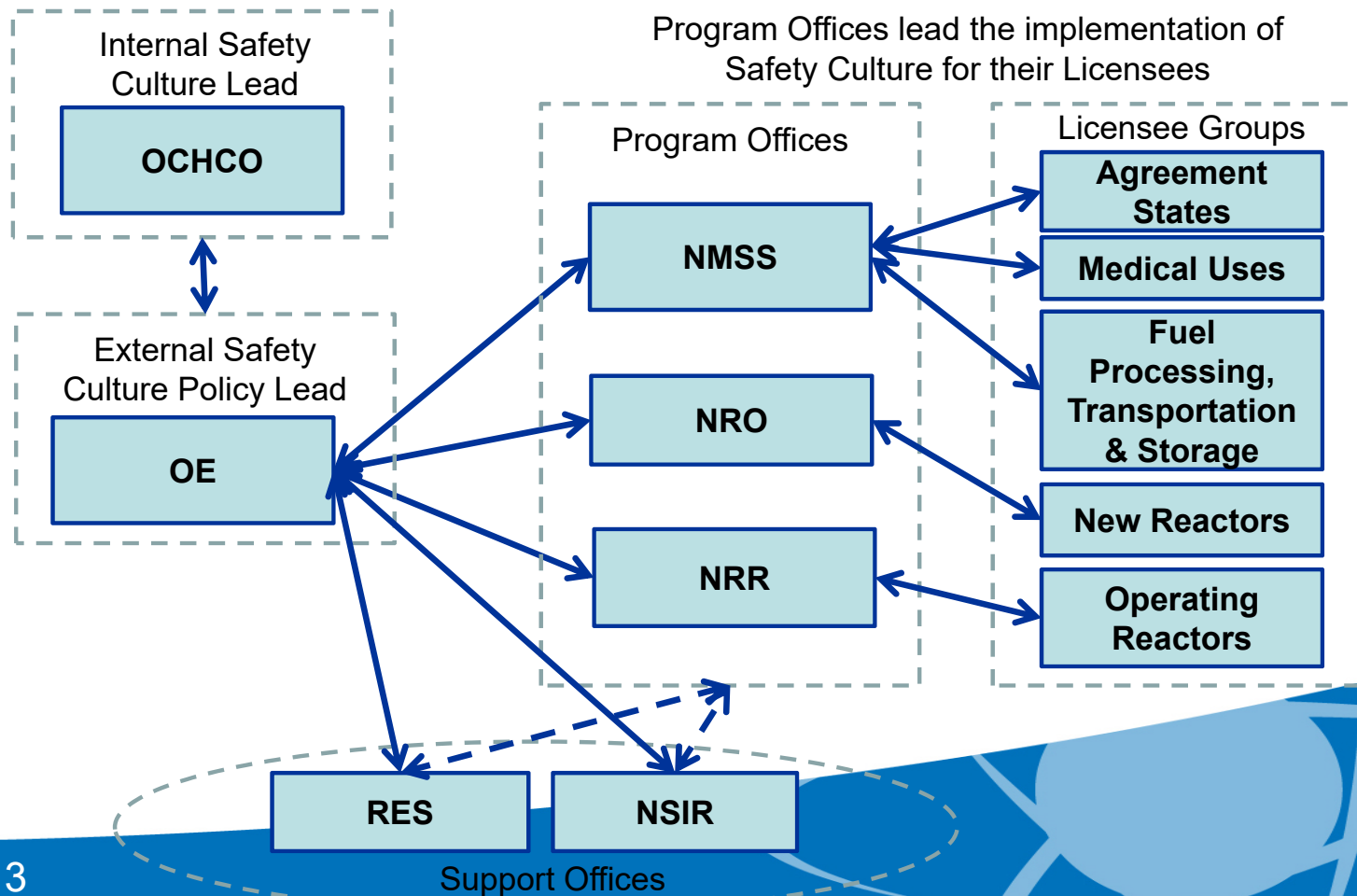


# Outline



- NRC Safety Culture Roles and Responsibilities
- NRC's Safety Culture History
- NRC's Role in Safety Culture
- Safety Culture Policy Statement
- Safety Culture in the Reactor Oversight Process, Fuel Cycles, Alternative Dispute Resolution
- International and other U.S. Regulators
- Summary

# NRC Safety Culture Roles and Responsibilities



# NRC Safety Culture History



**1989**

- Operators inattentive and unprofessional while on duty at nuclear power plant
- Commission Policy Statement: Conduct of Nuclear Power Plant Operations

**1996**

- Workers retaliated against for whistleblowing
- Commission Policy Statement: Freedom to Raise Safety Concerns Without Fear of Retaliation

**2002**

- Davis-Besse reactor head degradation event
- NRC revised Reactor Oversight Process (ROP) to more fully address safety culture

**2008**

- Commission direction to develop policy statement on safety culture that applies to all licensees

**2011**

- Final Safety Culture Policy Statement (SCPS) published in the Federal Register

# Safety Culture Policy Statement



*Sets forth the Commission's **expectation** that individuals and organizations performing regulated activities establish and maintain a positive safety culture commensurate with the safety and security significance of their actions and the nature and complexity of their organizations and functions*

## Timeline



## Safety Culture Definition



Nuclear Safety Culture is the  
**core values and behaviors**  
resulting from a  
**collective commitment**  
by leaders and individuals to  
**emphasize safety over competing goals**  
to ensure protection of people and the  
environment

## Preamble to the Safety Culture Traits

*A trait, in this case, is a pattern of thinking, feeling, and behaving that emphasizes safety, particularly in goal conflict situations, e.g., production vs. safety, schedule vs. safety, and cost of the effort vs. safety. It is the Commission's expectation that all organizations and individuals overseeing or performing regulated activities involving nuclear materials should take the necessary steps to promote a positive safety culture by fostering these traits. Additionally, it should be noted that although the term "security" is not expressly included in the traits, safety and security are the primary pillars of the NRC's regulatory program. Consequently, consideration of both safety and security issues commensurate with their significance, is an underlying principle of the Statement of Policy.*

# Safety Culture Traits

<b>Leadership Safety Values and Actions</b>	<b>Problem Identification and Resolution</b>	<b>Personal Accountability</b>
Leaders demonstrate a commitment to safety in their decisions and behaviors	Issues potentially impacting safety are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance	All individuals take personal responsibility for safety
<b>Work Processes</b>	<b>Continuous Learning</b>	<b>Environment for Raising Concerns</b>
The process of planning and controlling work activities is implemented so that safety is maintained	Opportunities to learn about ways to ensure safety are sought out and implemented	A safety conscious work environment is maintained where personnel feel free to raise safety concerns without fear of retaliation, intimidation, harassment or discrimination
<b>Effective Safety Communications</b>	<b>Respectful Work Environment</b>	<b>Questioning Attitude</b>
Communications maintain a focus on safety	Trust and respect permeate the organization	Individuals avoid complacency and continually challenge existing conditions and activities in order to identify discrepancies that might result in error or inappropriate action

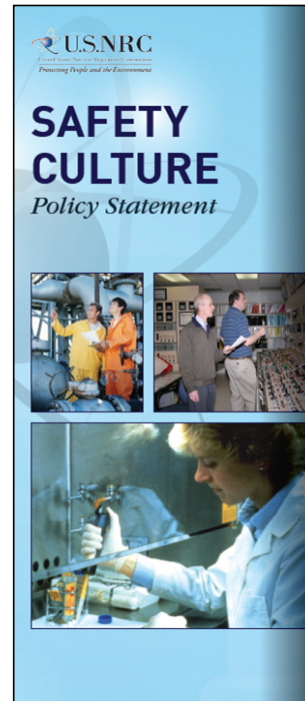


# Outreach and Education Efforts



- Interactions with Licensees and External Stakeholders
- International Involvement
- Conferences and Training
- Educational Tools
  - Brochures
  - Case Studies
  - Trait Talk
  - Posters and support materials
- Safety Culture Website

<http://www.nrc.gov/about-nrc/safety-culture.html>



# Outreach and Education Efforts



- SC Educational Resource Workbook
  - Trait Talks
  - Metro Case Study
  - Journeys
  - SCPS
- Safety Culture in Decommissioning
- Safety Culture Website

<http://www.nrc.gov/about-nrc/safety-culture.html>

A poster titled "SAFETY CULTURE" from the U.S. NRC. The poster has a dark blue header with the U.S. NRC logo and the title "SAFETY CULTURE" in large white letters. Below the header, there are three small images: a nuclear power plant, a close-up of hands holding a tool, and a person in a lab coat working with equipment. The main text on the poster reads: "An Educational Resource About The NRC's Safety Culture Policy Statement". Below this, there are two sections: "NRC Licensees, Applicants and Vendors" and "Agreement States and Their Licensees", each with a paragraph of text. At the bottom, there are three more small images: a person at a computer, a person using a yellow device, and a person in a lab coat working with equipment.

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

## SAFETY CULTURE

**An Educational Resource  
About The NRC's  
Safety Culture Policy Statement**

**NRC Licensees, Applicants and Vendors**  
*The Commission expects that individuals and organizations establish and maintain a positive safety culture. This includes all licensees, certificate holders, permit holders, authorization holders, holders of quality assurance program approvals, vendors and suppliers of safety-related components, and applicants for a license, certificate, permit, authorization, or quality assurance program approval, subject to NRC authority.*

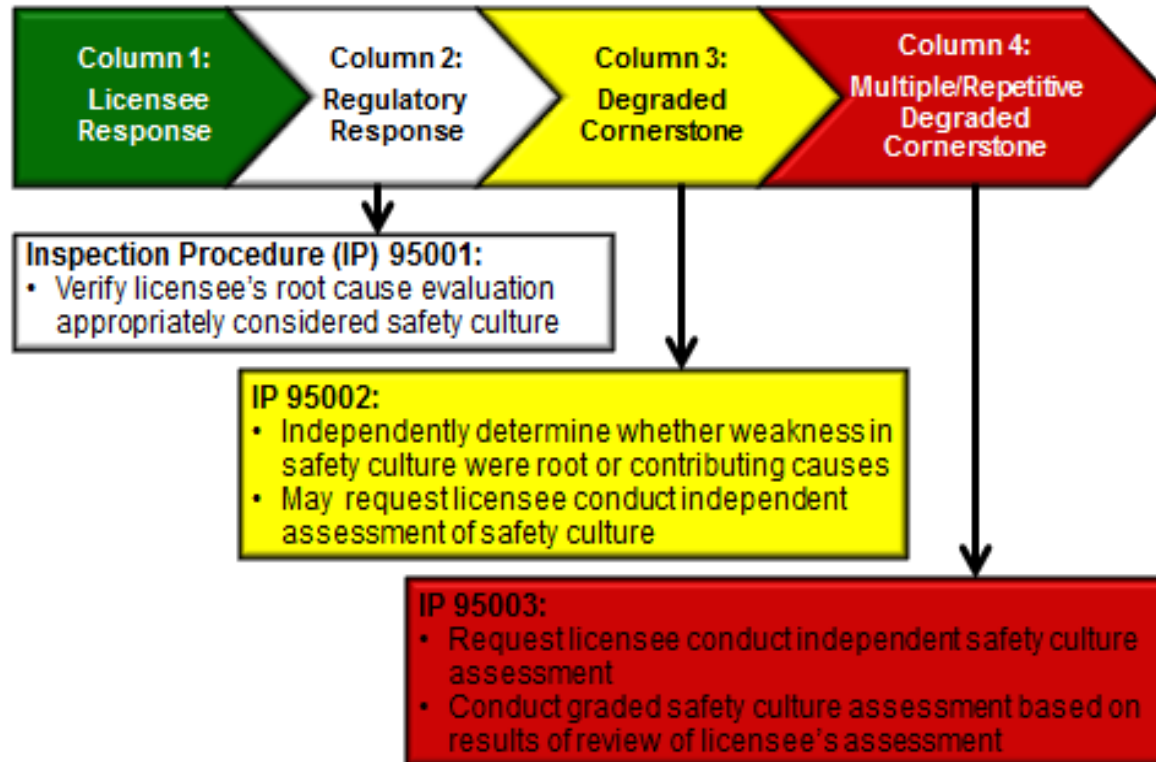
**Agreement States and Their Licensees**  
*The Organization of Agreement States supports the use of this educational resource by its members and licensees. The Commission encourages the Agreement States, Agreement State licensees and other organizations interested in nuclear safety to support the development and maintenance of a positive safety culture.*

# NRC Approach to Safety Culture



- Licensees bear primary responsibility for safety
- NRC's Safety Culture Policy Statement (SCPS) states safety culture **expectation**, but is not a regulatory requirement
- NRC considers safety culture within the Reactor Oversight Process (ROP) for nuclear power reactors
  - NRC assessment of safety culture is primarily as a result of an event or degradation in performance
  - Different levels of inspection activity based on NRC's overall assessment of licensee performance
- Alternative Dispute Resolution Process can result in Confirmatory Orders for safety culture activities

# Reactor Oversight Action Matrix



# NRC Allegation and Enforcement Programs



- Addresses safety culture through use of Chilling effect letters (CELs).
- Uses Confirmatory Orders (COs) in the ADR Program to resolve discrimination and wrongdoing cases.

# Fuel Cycle Facilities



- Oversight of fuel cycle facilities
  - Corrective Action Program Focus with Inspection Procedure 88161.

# Importance of Safety Culture Activities Internationally and with other Regulators

- International Activities
  - IAEA:
    - Action Plan for Nuclear Safety
    - Development of Technical Documents
    - Common Language Framework efforts
  - NEA:
    - SC of the Regulator
- Other U.S. Regulators

# Summary



- NRC communicates safety culture expectations through the Safety Culture Policy Statement
- NRC continues outreach and education
- NRC direct involvement in safety culture assessment is graded, based on licensee performance through the ROP and safety culture can be addressed through the allegation and enforcement processes.
- NRC staff continues working with U.S. regulators and the international community



## For More Information:



- Please visit NRC's safety culture webpage at:  
<http://www.nrc.gov/about-nrc/safety-culture.html>
- Contact NRC staff via email at:  
[external\\_safety\\_culture.resource@nrc.gov](mailto:external_safety_culture.resource@nrc.gov)

