



# **NRC Safety Culture Activities**

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**International Regulatory Development Partnership**  
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Nuclear Safety and Security Directorate  
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# Overview

- NRC's Mission, Organizational Values, and Scope of Responsibility
- Safety Culture Background
- NRC Internal Safety Culture
- External Safety Culture
- References

# The U.S. NRC Mission



To license and regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment.

# NRC Organizational Values

In conducting all our work, the NRC adheres to the following organizational values which guide our actions and decisions on safety, security, and environmental issues, as well as how we perform administrative tasks and interact with our fellow employees and other stakeholders:

- Integrity
- Service
- Openness
- Commitment
- Cooperation
- Excellence
- Respect

# NRC Organizational Values

## **Integrity**

...in our working relationships, practices and decisions  
...trustworthy, reliable, ethical, unbiased

## **Service**

...to the public, and others who are affected by our work  
...responsive, accountable, proactive

## **Openness**

...in communications and decision-making  
...transparent, forthright

## **Commitment**

...to public health and safety, security and the environment  
...dedicated, diligent, vigilant

## **Cooperation**

...in the planning, management, and performance of agency work  
...helpful, sharing, team-oriented, engaged

## **Excellence**

...in our individual and collective actions  
...high quality, continuously improving, self-aware

## **Respect**

...for individuals' diversity, roles, beliefs, viewpoints, and work-life balance  
...professional, courteous, objective, compassionate

# NRC Principles of Good Regulation

As a responsible regulator with a very important safety and security mission, our values guide us in maintaining certain principles in the way we carry out our regulatory activities. These principles focus us on ensuring safety and security while appropriately balancing the interests of the NRC's stakeholders, including the public and licensees.

- Independence
- Openness
- Efficiency
- Clarity
- Reliability

# NRC Principles of Good Regulation

## Independence:

- Highest possible standards of ethical performance and professionalism influence regulation
- Independence does not imply isolation
- All available facts and opinions are openly sought from licensees and other interested members of the public
- The many and possibly conflicting public interests are considered
- Final decisions are based on objective, unbiased assessments of all information, and documented with reasons explicitly stated

# NRC Principles of Good Regulation

## Openness:

- Nuclear regulation is the public's business, and is transacted publicly and candidly
- The public is informed about and have the opportunity to participate in the regulatory processes as required by law
- Open channels of communication are maintained with Congress, other government agencies, licensees, the public, and the international nuclear community



# NRC Principles of Good Regulation

## Efficiency:

- American taxpayer, the rate-paying consumer, and licensees are entitled to the best possible management and administration of regulatory activities
- Highest technical and managerial competence is required, and must be a constant agency goal
- Establish means to evaluate and continually upgrade regulatory capabilities
- Regulatory activities are consistent with the degree of risk reduction achieved
- Where several effective alternatives are available, adopt the option which minimizes the use of resources
- Regulatory decisions are made without undue delay

# NRC Principles of Good Regulation

## Clarity:

- Regulations are coherent, logical, and practical
- There is a clear nexus between regulations, and agency goals and objectives whether explicitly or implicitly stated
- Agency positions are readily understood and easily applied

# NRC Principles of Good Regulation

## Reliability:

- Regulations are based on the best available knowledge from research and operational experience
- Systems interactions, technological uncertainties, and the diversity of licensees and regulatory activities are all taken into account so that risks are maintained at an acceptably low level
- Regulation are perceived to be reliable and not unjustifiably in a state of transition
- Regulatory actions are fully consistent with written regulations and are promptly, fairly, and decisively administered so as to lend stability to the nuclear operational and planning processes

# NRC Scope of Regulatory Responsibility

- Reactors: commercial reactors for generating electric power and non-power reactors used for research, testing, and training
- Materials: uses of nuclear materials in medical, industrial, and facilities that produce nuclear fuel
- Waste: transportation, storage, and disposal of nuclear materials and waste, and decommissioning of nuclear facilities from service

# Edward Schein: Organizational Culture

A pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way you perceive, think, and feel in relation to those problems.

# What is Safety Culture?

**Safety culture** is used to describe the way in which safety is managed in the workplace. It often reflects the attitudes, beliefs, perceptions and values that management and employees share in relation to safety.

# IAEA/INSAG Definition of Safety Culture

INSAG (1991) - 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.

# What Safety Culture is Not

- It's not separate or different from organizational culture
- It's not a “thing” with an objective existence
- It's not a policy, program, or procedure



# Safety Culture Relationships



# Overall Importance of Safety Culture

- Operating experience has demonstrated nexus between safety culture and events
- Safety culture contributes to the safe and secure use of radioactive materials
- NRC recognizes that licensees and other users of regulated material bear the primary responsibility for the safe and secure use of nuclear materials while the NRC, as the regulator, must consider the importance of safety culture in its oversight programs and activities

# NRC Internal Safety Culture Activities

# NRC Organizational Culture

- Expectations and desired behaviors established by the NRC Mission, Values and Principles
- As part of the organizational and safety culture, the NRC strives to establish and maintain an open collaborative work environment (OCWE)
- Continuous learning and improvement

# ***OCWE: Key Element of Safety Culture***

- Intended to encourage speaking up and sharing concerns and differing views without fear of negative consequences.
- Diverse views, alternative approaches, critical thinking, collaborative problem solving, unbiased evaluations, and honest feedback are encouraged, recognized, and valued.
- Trust, respect, and open communication promote a work environment that maximizes the potential of all individuals and improves our regulatory decision making.
- Everyone has a role in safety and that we are all responsible for promoting a strong safety culture and achieving our mission and living our values.

# OCWE: Being a “Team Player”

- To achieve an OCWE, we must collectively act as a team and individually behave as “team players.”
- In some organizations, being a “team player” means accepting management's views during the decision making process and not “rocking the boat.” Being an NRC Team Player does not mean those things.
- Employees are expected to routinely engage in discussions on issues with their coworkers and supervisors, especially in cases where they may have differing views. In addition to informal discussions, individuals have various processes for expressing and having their views heard by decision-makers.

# Differing Views Processes

- Open Door Policy
- Non-Concurrence Process
- Differing Professional Opinions Program

# Open Door Policy

- Supports and allows any employee to initiate a meeting with an NRC manager or supervisor, including a Commissioner or the Chairman of the NRC
- Discuss any matter of concern to the employee
- Don't have to notify immediate supervisor
- Management Directive 10.160



# Non-Concurrence Process

- Employees may choose not to concur on any part of a document in which he or she has disagreed
- The Non-Concurrence Process allows employees to document their concerns early in the decision making process, have their concerns responded to, and attach them to proposed staff positions or other documents to be forwarded with the position as it moves through the management approval chain
- Employee can request that record of non-concurrence be made public
- Management Directive 10.158

# Differing Professional Opinions

- Allows employees and contractors to have their differing views on established, mission-related issues considered by the highest level managers in their organizations, i.e., Office Directors and Regional Administrators
- Provides managers with an independent, three-person review of the issue (one person chosen by the employee)
- Employee may appeal final decision to the Executive Director for Operations
- Employee can request that DPO record be made public
- Management Directive 10.159

# Communication Reinforces Expectations

- Management speeches and electronic communications
- Poster and brochures
- Web Site
- Employee newsletters
- New employee orientation
- New supervisor training
- All hands meetings
- “Brown bag” lunches
- NRC Team Player award

# Internal Safety Culture Assessments

- NRC Office of Inspector General Safety Culture and Climate survey
  - Every 3-4 years
  - Independent
- NRC Internal Safety Culture Task Force
  - Active during 2008-2009
  - Resulted in additional dedicated resources to lead internal safety culture activities

# Internal Safety Culture Task Force

- April 2008 Commission Direction
  - Look for ways to increase awareness of safety culture internally
  - Identify potential initiatives that could improve the agency's internal safety culture
    - Complementary to Commission direction to develop an externally-focused safety culture policy statement
- Range of data collection activities

# Internal Safety Culture: *Goals*

- Support NRC's safety mission
  - Strengthen programs/processes and influence attitudes and behaviors to continuously improve internal safety culture
  - Increase awareness and knowledge level about safety culture throughout the NRC
  - Integration of related activities
  - Consider how to apply insights from the external safety culture efforts to internal safety culture

# Task Force: *Areas of Focus*

- Need for clarity on what is meant by “internal safety culture”
- Importance of clear expectations, feedback on performance, and bases for decisions
- Leaders model safety culture behaviors (from external benchmarking)

# Task Force: *Areas of Focus* (continued)

- Effectiveness of the agency's differing views processes
- Communicating and demonstrating the appropriate focus in achieving potentially conflicting goals – quality vs. timeliness



# Task Force: *Implementation*

- Update and finalize internal safety culture framework and terminology
- Review accountability methods to identify potential changes to appropriately consider safety culture and OCWE
- Develop and conduct various training activities, including for new employees and for supervisors
- Develop improvements to the NRC's approach for identifying, evaluating, and resolving issues, concerns, and suggestions
- Identify opportunities for improvement with office level procedures
- Dedicated resources to lead, oversee, and implement activities

# NRC External Safety Culture Activities

# **NRC Safety Culture Background**

## **1989: Conduct of Operations Policy Statement**

- Expectations for a Safety Culture:
  - Full attention to safety matters
  - Personal dedication and accountability of all individuals engaged in any activity which has a bearing on nuclear power plant safety
  - Management fosters the development of a ‘safety culture’ at each facility and promotes a professional working environment in the control room, and throughout the facility, that assures safe operations

# **NRC Safety Culture Background**

## **1996: Safety Conscious Work Environment (SCWE) Policy Statement**

- Establish and maintain a SCWE
- Intended to assure the freedom of employees in the nuclear industry to raise safety concerns without fear of retaliation
- Applies to all NRC-regulated activities of licensees, contractors, and applicants

# NRC Safety Culture Background

## 2000: Reactor Oversight Process Implemented

- Monitors the “Cornerstones” that are the basis of plant safety:
  - Reactor safety
  - Radiation safety
  - Safeguards
- “Cross-Cutting” areas:
  - Human performance
  - Safety Conscious Work Environment (SCWE)
  - Problem Identification and Resolution (PI&R)

# **NRC Safety Culture Background**

## **2006: Reactor Oversight Process Enhanced**

- Safety culture definition
- 13 safety culture “components”
- Requirements added to specifically focus on safety culture evaluation for plants with degraded performance (columns 3 and 4 of the Action Matrix)
- Safety culture training provided to NRC inspection personnel
- Safety culture features added to selected NRC inspection procedures

# **NRC Safety Culture Background**

## **2008: Commission Direction**

(SRM-COMGBJ-08-0001A)

- Develop a draft safety culture policy statement
- Address the unique aspects of security
- Applicable to all licensees and certificate holders
- Increase attention to safety culture in the material area

# **NRC Safety Culture Background**

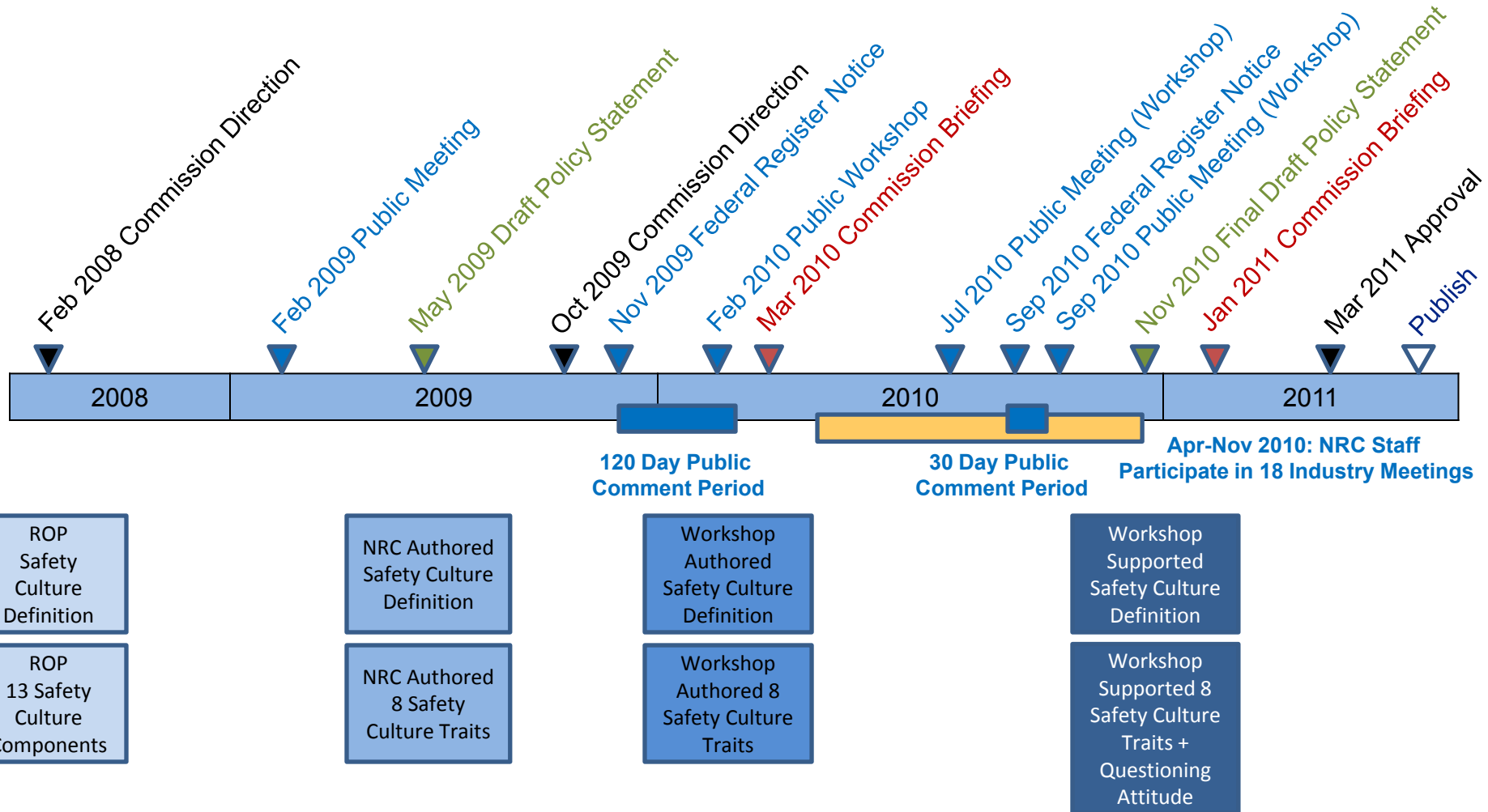
## **2009: Further Commission Direction**

(SRM-SECY-09-0075)

- Publish the draft safety culture policy statement for public comment
- Continue to engage a broad range of external stakeholders and the Agreement States
- Seek opportunities to achieve common safety culture terminology with existing standards and references
- Consider making the policy statement applicable to vendors and suppliers



# Safety Culture Policy Statement Timeline



# Statement of Policy

- Includes safety culture definition and nine traits
- Considers interface of safety and security
- Addresses “security” in a Preamble
- Recognizes diversity of regulated entities
- Applies to safety-related vendors and suppliers
- Considers negative factors (e.g., incentive goals)
- Does not address implementation directly

# Statement of Policy

*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*

# Applicability to Agreement States

*The Commission encourages the Agreement States and other organizations interested in nuclear safety to support the development and maintenance of a positive safety culture, as articulated in the Statement of Policy, within their regulated communities*

# 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

*Experience has shown that certain personal and organizational traits are present in a positive safety culture. 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.*

# Preamble *(continued)*

*It should be noted that although the term “security” is not expressly included in these traits, safety and security are the primary pillars of the NRC’s regulatory mission.*

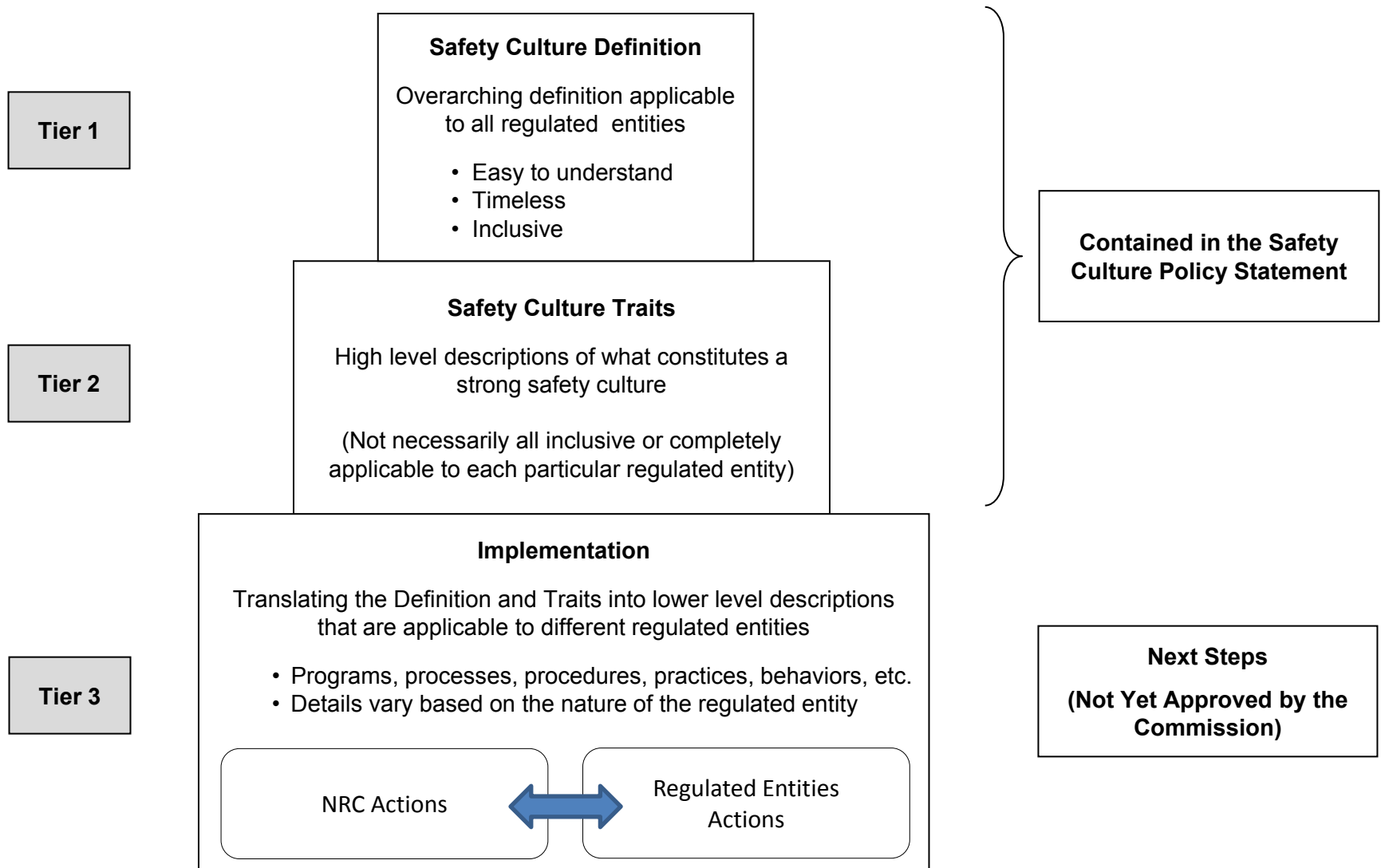
*Consequently, consideration of both safety and security issues, commensurate with their significance, is an underlying principle of this Statement of Policy.*

# 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



# Safety Culture Policy Statement “Tiers”



# Policy Statement Current Status

- The Commission approved, with revisions, the safety culture policy statement on March 7, 2011
- SRM 11-005 provided Commission direction to continue dialogue and education efforts
- The policy statement was published in the *Federal Register* (76 FR 34773) on June 14, 2011, after OMB review and approval pursuant to the Congressional Review Act

# Staff Roles and Responsibilities

- The staff is continuing to engage in activities to increase an awareness and understanding of the benefits of a positive safety culture for those entities covered by the safety culture policy statement (SCPS)
- Implementation activities require prior Commission review and approval
- The program offices have the lead in working with regulated entities, Agreement States and the Regions
- OE is supporting the program offices and is coordinating SCPS activities that span multiple program offices

# References

- Reactor Oversight Process:  
<http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html>
- NRC safety culture website: <http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html>
- NRC Open Collaborative Work Environment (OCWE) website:  
<http://www.nrc.gov/about-nrc/values.html#open>

Thank You.