



## **NRC's Safety Culture Initiative**

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**2<sup>nd</sup> NRC Workshop on Vendor  
Oversight for New Construction**

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## Overview

- Why safety culture is important to the NRC, and to the those engaged in activities involving nuclear materials.
  - Historical events
  - Nexus
- What is a Policy Statement versus Regulation
- NRC Safety Culture Policy Statement
  - Key messages
  - Commission Direction
- Safety Culture workshop
- Next Steps

## Why Safety Culture is Important to the NRC

- Operating experience has demonstrated there is a nexus between SC and events at NRC-regulated facilities.
- Because of the connection between the safe and secure use of radioactive materials and events where there is a weak or non-existent SC, NRC has a responsibility to consider SC.

## Historical Events Involving a Weaknesses SC

- 2002: Davis Bess involving a degraded pressure vessel head cavity
- 2007: Peach Bottom Atomic Power Station, involving deliberate inattentiveness and deliberate failure to report observations
- 2002 - 2008: Philadelphia VA Medical Center, involving 97 radioactive treatment errors where Iodine-125 seeds were incorrectly placed in the treatment of prostate cancer.

## Policy Statement vs. Regulation

- Policy statements may be issued to address
  - internal NRC programs or processes and
  - other matters relating to activities that are within NRC jurisdiction and of particular interest/importance to the Commission
- Policy statements are not rules and are not accorded the status of a rule.
- Policy statements are not binding upon, or enforceable against, NRC or Agreement State licensees.

## Previous NRC SC Policy Statements

- Previous SC policy statements :
  - 1989 Conduct of Operations
  - 1996 Safety Conscious Work Environment
- In February 2008, the Commission directed the staff “to expand the Commission’s policy on safety culture to address the unique aspects of security and to ensure that the resulting policy is applicable to all licenses and certificate holders.”

## Key Messages of the 2009 Policy Statement

- Applies to anyone performing or overseeing NRC regulated activities.
- Proposes a definition and characteristics of a positive SC.
- Safety and security are equally important in a positive SC.
- Licensees and certificate holders are responsible for developing and maintaining a positive SC.
- The NRC has an independent oversight role.

## Commission Direction

- Publish the SCPS in the *Federal Register*
- Consider incorporating suppliers and vendors.
- Continue to engage broad range of stakeholders.
- Seek opportunities to comport terminology with existing standards and references.



## Safety Culture Workshop

- Large variety of stakeholders attended (e.g., reactors, medical facilities, fuel cycle & gage manufactures, universities, Organization of Agreement States).
- Workshop was structured so that a panel of 16 stakeholders with various affiliations, with frequent attendee input, reached alignment on a SC definition and traits.
- Workshop defined: **Nuclear Safety Culture** as “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.”
- NRC draft definition of **Safety Culture** is “that assembly of characteristics, attitudes and behaviors in organizations and individuals, which establishes that as an overriding priority, nuclear safety and security issues receive the attention warranted by their significance.”

NRC (Draft) SC Characteristics	February 2-4, 2010, SC Workshop Traits
<p><b>Problem Identification and Evaluation</b>            The organization ensures that issues potentially impacting safety or security are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance.</p>	<p><b>Problem Resolution and Metrics</b>            The organization ensures that issues potentially impacting safety or security are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance.</p>
<p><b>Work Practices</b>            Personnel demonstrate ownership for nuclear safety and security in their day-to-day activities.</p>	<p><b>Personal Responsibilities and Attitudes</b>            Everyone is personally responsible for nuclear safety.</p>
<p><b>Work Planning and Control</b>            Process for planning and controlling work activities are implemented such that safety and security are maintained.</p>	<p><b>Processes and Procedures</b>            Processes for planning and controlling work activities are implemented such that safety is maintained.</p>
<p><b>Continuous Learning Environment</b>            The organization maintains a continuous learning environment in which opportunities to improve safety and security are sought out and implemented.</p>	<p><b>Continuous Learning</b>            Organizational learning is embraced.</p>
<p><b>Licensee Decision Making</b>            The organization's decisions ensure that safety and security are maintained.</p>	<p><b>Leadership Safety Behaviors</b>            Leaders demonstrate commitment to safety.</p>
<p><b>Safety Conscious Work Environment</b>            The organization maintains a safety conscious work environment in which personnel feel free to raise safety and security concerns without fear of retaliation.</p>	<p><b>Encouraging Report of Problems</b>            The organization maintains a safety conscious work environment in which personnel feel free to raise concerns without fear of retaliation.</p>
	<p><b>Effective Safety Communication</b>            Effective communication is essential to maintain focus on safety.</p>
	<p><b>Respectful Work Environment</b>            Trust and respect permeate the organization.</p>
<p><b>Accountability</b>            Roles, responsibilities, and authorities for safety and security are clearly defined and reinforced.</p>	
<p><b>Resources</b>            The organization ensures that the personnel, equipment, tools, procedures, and other resources needed to ensure safety and security are available.</p>	

## Schedule and Next Steps

- Consider the public comments on the draft SC policy statement, results of the February 2-4, 2010, workshop, and any comments received through SC website.
- Revise SC draft policy statement.
- Complete staff recommendations for final SC policy statement (by March 2011).
- Evaluate oversight programs for SC considerations.

## Comments

- NRC is interested in your views:
  - If you would like to submit comments on the SC definition and traits, please submit comments at the following website by November 24, 2010:  
<http://www.nrc.gov/about-nrc/regulatory/enforcement/contact-oe.html>.
  - Please indicate which SC definition and traits you prefer and/or include potential comments to improve the SC definition and traits.

# Questions?

# The Shaw Group

## SCWE & New Nuclear Construction

Bruce C. Williams

June 17, 2010

# Importance

- New Workforce
  - Diverse Experience Level & Background
  - Merging of Multiple 'Safety Cultures'
- Expedited Nuclear Safety Culture Maturation

# Shaw Participation in Industry Initiatives

- NEI Working Group for 09-12 Development
- NRC Safety Culture and SCWE Workshop Panelist
- INPO Supplier Participant Advisory Committee
- Former Commissioner Jeff Merrifield - NEI Regulatory Process Working Group
- David Hastie - Construction ROP Industry Task Force
- Bruce Williams - Construction ROP Safety Culture Task Force



# Domestic AP 1000 Activities

- Functional Group reports directly to President
- Deployment of Nuclear Safety Culture Strategy
- Training Developed and Implemented
  - Tailored to Site or Home Office Environment
  - Specific Training for ‘Supervisors’ and Above
  - Executive Management Team through ‘First Lines’ have been trained in NSC and SCWE
- Employee Concerns Program Implemented
  - Home Office and Site Staffing
  - Industry Experienced Individuals

# Domestic AP 1000 Activities

- In-processing - key time to train workforce in Nuclear Safety Culture
  - CAP
  - Respect for the QA/QC process
  - SCWE
  - Following processes and procedures – Human Performance Fundamentals
- Out-processing Exit Interviews
  - Learn how the program is working ?

# When Unsure

