

NMSS Safety Culture Pilot Workshop

Amy M. Snyder

Office of Nuclear Material Safety and Safeguards (NMSS)

Division of Fuel Cycle Safety and Safeguards (FCSS)

Fuel Manufacturing Branch (FMB)

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Topics

- Background
- Information Gathering Activities and Insights
- Draft Pilot Options
- Stakeholder Input
- Schedule



Background

- NRC's Position on Safety Culture
- Objectives/Scope
- Safety Culture Components
- Schedule



Background (continued)

NRC's Position on Safety Culture



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.”

Background (continued)

NRC's Position on Safety Culture



- Licensees should support a safety culture.
- NRC will not regulate a licensee's safety culture.



Background (continued)

Pilot Objective

- Determine how to enhance the current Fuel Cycle Inspection and Oversight Program for addressing safety culture.
 - Knowledge Transfer
 - Lessons Learned



Background (continued)



Pilot Scope

- Fuel Fabrication Facilities
- Other Material Sites?
- Two Phases

Background (continued)

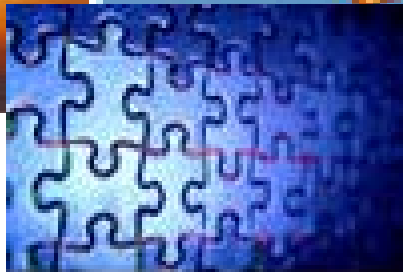
13 Safety Culture Components

- Decision making
- Resources
- Work Control
- Work Practices
- Corrective Action Program
- Operating Experience
- Self and Independent Assessments
- Environment for Raising Concerns
- Preventing, Detecting, and Mitigating Perceptions of Retaliation
- Accountability
- Continuous Learning Environment
- Organizational Change Management
- Safety Policies



Information Gathering (continued)

Insights



Information Gathering (continued)

- FCSS inspection program document
- Review of FCSS inspection procedures (~50)
- Event Reports (40)
- Generic Communication (60)
- Staff interviews (~35)
- External interviews (~50)
- Site visits (2 sites, 2 days/ea.)



Information Gathering (continued)

Insights - Safety Culture Components

- All safety culture components are implicitly addressed in FCSS regulatory oversight:
 - programmatic documents
 - procedural documents
 - not explicitly defined or referenced as safety culture components
 - Some occur in multiple procedures
- Level of depth of coverage - varies
- Guidance - varies



Information Gathering (continued)

Insights - Safety Culture Components

- License –
 - Some safety culture components are implicitly addressed in licenses but not consistently
- Terminology –
 - Safety culture component related terms were not always familiar to interviewees, although concepts were familiar.



Information Gathering (continued)

Insights – Programs

- **Routine Inspections** – no programmatic mechanism to document most information related to safety culture components
- **Reactive Inspections** – provides greater focus for information related to safety culture components than routine inspections.
- **License Performance Review** – no explicit guidance for addressing safety culture components.



Information Gathering (continued)

Insights – Programs (continued)

- **Event Reporting** – causes not described in enough detail to assess safety culture component contributors.
- **Enforcement** – several decisions points are directly related to several safety culture components, but not called out as such.
- **Generic Communication** – level of coverage varies.



Information Gathering (continued)

Insights – Site Visits

- **Safety Culture** – applies to all safety functions, programs and processes.
- **Programs and Processes Related to Safety Culture Components** – exist, but vary in scope and formality
- **Safety Culture Components** –
 - apply to fuel cycle facilities
 - comprehensive



Information Gathering (continued)

Considerations to Inform Decision Making

- Identify an approach considering different types of licensees (Part 70, Part 40, Part 76).
- Develop training for inspectors for the pilot (depending on option selected)
 - how to use the safety culture components
 - how to document
 - how to trend/assess information
 - how to communicate results
- Involve stakeholders –
 - Mechanisms for engaging stakeholders
 - Orientation for Pilot licensees



Draft Pilot Options

1. No Action
2. Explicitly Apply Safety Culture Components within the Current Inspection and Assessment Program
3. Develop and Implement a Separate Safety Culture Inspection and Assessment Procedure
4. Apply Safety Culture Components only in Reactive Inspections
5. Develop and Implement a More Comprehensive Integration of Safety, Security, and Safeguards Culture in the Areas of the Revised Inspection and Assessment Process and the Licensing and/or Rulemaking Processes

Draft Pilot Options (continued)

1. No Action

Pros: The current Fuel Cycle Inspection and Assessment -

- Program applies oversight to areas related to safety culture components, including licensee corrective action programs.
- Framework identifies trends in a licensee's safety performance and allows inspectors to act accordingly to address safety issues promptly.



Draft Pilot Options (continued)

1. No Action

Cons:

- Not responsive to the Commission direction to consider the ongoing assessment of safety culture components of the ROP and the Fuel Cycle Facility Pilot and their potential applicability to other NRC licensees.
- Does not use stakeholder input effectively to address safety culture.
- Does not take advantage of insights gained from the Reactor Oversight Process (ROP) on safety culture
- Does not take advantage of inspection and program insights from Phase I NMSS Safety Culture Pilot Efforts.
- Safety culture components are not consistently applied throughout the current Fuel Cycle inspection and assessment program.

2. Explicitly Apply Safety Culture

Components within the Current Inspection and Assessment Program

- Modify the safety culture component definitions at the aspect (example) level, as needed, so that they are more specific to fuel cycle facilities;
- Assess potential violations for safety culture component contributors.
- Modify the assessment process to address issues associated with safety culture components and determine appropriate actions.

Draft Pilot Options (continued)

2. Explicitly Apply Safety Culture

Components within the Current Inspection and Assessment Program

Pros:

- Within the current Fuel Cycle inspection and assessment framework
- Expands insights on performance in areas important to safety culture and in timeliness to detect safety performance decline earlier.
- Adds predictability and transparency to Fuel Cycle inspection and assessment program by explicitly and consistently applying safety culture components.
- Takes advantage of lessons learned (ROP, international, etc.)
- Allows for the effective use of stakeholder input.

Draft Pilot Options (continued)

2. Explicitly Apply Safety Culture

Components within the Current Inspection and Assessment Program

Con:

- Incorporating the safety culture components in the fuel cycle environment, in a more formalized way, maybe challenging and may be different for fuel cycle facilities.



Draft Pilot Options (continued)

3. Develop and Implement a Separate Safety Culture Inspection and Assessment Procedure

- Modify the safety culture definitions at the aspect (example) level, as needed, so that they are more specific to fuel cycle facilities;
- Develop criteria related to safety culture component inspection procedure that inform the assessment and enforcement processes.
- Incorporate safety culture components in a safety culture inspection temporary instruction that would be applied as a routine inspection procedure in the Pilot.

Draft Pilot Options (continued)

3. Develop and Implement Separate Safety Culture Inspection and Assessment Procedures

Pros:

- Efficiently enhances the inspection and assessment program, with regard to safety culture, into one inspection and one assessment procedure.
- Is responsive to the Commission direction to consider the ongoing assessment of safety culture components of the ROP and the Fuel Cycle Facility Pilot and their potential applicability to other NRC licensees.
- Should improve NRC's ability to detect weaknesses prior to violations.
- Allows for the effective use of stakeholder input to address safety culture for all NRC licensees, including fuel cycle licensees.

Draft Pilot Options (continued)

3. Develop and Implement a Separate Safety Culture Inspection and Assessment Procedure

Cons:

- Could be misinterpreted as regulating safety culture.
- Requires additional considerations, such as how to assess safety culture component deficiencies found through the use of such a procedure.



Draft Pilot Options (continued)

4. Apply Safety Culture Components only in Reactive Inspections

- Apply safety culture components only to reactive inspections.
- Modify the safety culture definitions at the aspect (example) level, as needed, so that they are more specific to fuel cycle facilities.
- Assess violations for safety culture component contributors in findings from reactive inspections only.
- Modify the assessment process to address issues associated with safety culture components and determine appropriate actions for reactive inspections.
- Incorporate safety culture components for the Pilot to “safety culture inform” the FCSS inspection and assessment program that address reactive inspections only.

Draft Pilot Options (continued)

4. Apply Safety Culture Components only in Reactive Inspections

Pros:

- Focus on safety culture components during significant safety, security, or safeguards events to inform the cause analyses.
- Is responsive to the Commission direction to consider the ongoing assessment of safety culture components of the ROP and the Fuel Cycle Facility Pilot and their potential applicability to other NRC licensees.
- Could be applied within the current inspection and assessment framework.
- Allows for the effective use of stakeholder input to address safety culture for all NRC licensees including fuel cycle licensees.

Draft Pilot Options (continued)

4. Apply Safety Culture Components only in Reactive Inspections

Cons

- Reactive inspections occur infrequently; NRC attention to safety culture could be too late to prevent significant safety, security, or safeguards events or program deterioration.
- Does not take advantage of insights gained from the ROP on safety culture initiative during routine inspections.
- Does not take advantage of insights from Phase I of the NMSS Safety Culture Pilot for routine inspections.
- Less opportunity for NRC to expand insights on safety, security, or safeguards performance related to areas important to safety culture and timely detection of performance decline.

Draft Pilot Options (continued)

5. Develop and Implement a More Comprehensive Integration of Safety, Security, and Safeguards Culture...

In the areas of the:

- Revised inspection and assessment process
- Licensing and/or Rulemaking processes



Draft Pilot Options (continued)

5. Develop and Implement a More Comprehensive Integration of Safety, Security, and Safeguards Culture ...

Pros

- Is responsive to the Commission direction to consider the ongoing assessment of safety culture components of the ROP and the Fuel Cycle Facility Pilot and their potential applicability to other NRC licensees.
- Provides the most comprehensive consideration of safety, security, and safeguards culture, including management measures needed to ensure the availability and reliability of Items Relied On For Safety.

Draft Pilot Options (continued)

5. Develop and Implement a More Comprehensive Integration of Safety, Security, and Safeguards Culture...

Pros (continued)

- Recognizes the importance of safety culture from the beginning of the process to encourage licensees and applicants to consider it well before beginning operations of a particular nuclear process and before adverse performance trends.
- Allows for the effective use of stakeholder input in developing the regulatory framework for safety, security, and safeguards culture.



Draft Pilot Options (continued)

5. Develop and Implement a More Comprehensive Integration of Safety, Security, and Safeguards Culture ...

Cons

- Goes considerably beyond the safety culture initiative under the ROP.
- Could be seen as too invasive affecting the management prerogative of licensees and an unjustified regulatory burden.



Stakeholder Input

Draft Pilot Options

1. Comments on draft pilot options pros and cons?
 - Workshop discussion today
 - Written comments by July 21 (see contact information on next slide).
2. New options?
3. Will be provided for management review as they are considering options

Workshop Discussion:

- Summarized and placed on website within 30 days.

Contact Information



Amy M. Snyder
NMSS Safety Culture Pilot Lead
US NRC
Washington, D.C. 20555
MS EBB2-C40M

301 492-3225
Fax 301 492-3359
Amy.Snyder@nrc.gov



Schedule

Phase I Information Gathering (5/07 – 6/08) (~1 year)

NRC Document Review
Interview NRC Staff (2/08)
Site Visits (2/08)
Data Evaluation (3/08)
Data Report (6/08)
Communicate Results to Stakeholders (6/08)

Phase II Pilot Implementation and Assessment(6/08 – 6/10) (~2 years)

Develop Implementation Strategy (06 – 08/08)
- Based on Results of Phase I
- Stakeholder Input
Develop Technical Instructions (TI) 8/08 -10/08
-Communicate/Concurrence
-Train Staff on TI 10/08 -12/08
- Implement TI (~ 1year)
Evaluate and Refinement (3 months or more)
Communicate Results/Concurrence
Modify Program Documents

Questions

