



NUCLEAR ENERGY INSTITUTE

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USNRC

**Subject:** Draft Safety Culture Policy Statement: Request for Public Comments

**Project Number: 689**

Dear Mr. Lesar:

On behalf of the nuclear industry, the Nuclear Energy Institute (NEI)<sup>1</sup> offers the following comments in response to the November 6, 2009 *Federal Register* Notice (FRN) (74 Fed. Reg. 57525) regarding the Draft Safety Culture Policy Statement. The industry appreciated the opportunity to participate with other stakeholders in the public peer panel workshop held February 2-4, 2010, and many of our comments reflect the outcome of that workshop.

The attachment to this letter provides our response to the eight questions posed in the FRN. In addition, we provide comments in four key areas:

- The results of the February workshop deserve serious consideration as an alternative to the FRN's definition and characteristics.
- The regulated licensees and certificate holders bear the primary responsibility for developing and maintaining a strong nuclear safety culture.
- It is critical that a common language of safety culture traits and behaviors exist between the NRC and each of its unique regulated entities.

<sup>1</sup> NEI is the organization responsible for establishing unified industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, nuclear materials licensees, and other organizations and entities involved in the nuclear energy industry.

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Mr. Michael T. Lesar

March 1, 2010

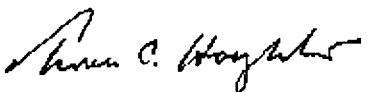
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- The inclusion of security in the basic definition places undue emphasis on one aspect of safety culture while ignoring equally important areas such as emergency preparedness, occupational and public radiation exposure, quality assurance, etc.

Again, the industry appreciates the opportunity to provide comments for your consideration as you proceed to draft a policy statement on the NRC's expectations for the safety culture at regulated facilities.

If you have any questions, please contact me (202-739 8107; [tch@nei.org](mailto:tch@nei.org)).

Sincerely,



Thomas C. Houghton

Attachment

c: Mr. Roy Zimmerman; U.S. Nuclear Regulatory Commission  
Mr. David Solorio, U.S. Nuclear Regulatory Commission

**Regarding  
Draft Safety Culture Policy Statement:  
Request for Public Comments  
74 Fed. Reg. 57525, November 6, 2009**

**General Comments**

In addition to providing responses to the specific questions posed in the Federal Register Notice (FRN), the Nuclear Energy Institute has four general comments regarding the Nuclear Regulatory Commission's (NRC) draft nuclear safety culture policy statement:

- The results of an NRC sponsored workshop, held during the public comment period, deserve serious consideration as an alternative to the FRN's definition and characteristics.
- The regulated licensees and certificate holders bear the primary responsibility for developing and maintaining a strong nuclear safety culture.
- It is critical that a common language of safety culture traits and behaviors exist between the NRC and each of its unique regulated entities.
- The inclusion of security in the basic definition places undue emphasis on one aspect of safety culture while ignoring equally important areas such as emergency preparedness, occupational and public radiation exposure, quality assurance, etc.

**NRC-Sponsored Workshop**

In responding to the following questions posed in the FRN, we have taken advantage of the February 2 through 4, 2010, NRC facilitated workshop which asked a group of sixteen panelists representing NRC licensees and certificate holders and other interested stakeholders to address the NRC draft safety culture policy and its eight proposed characteristics. Panelists included representatives from the nuclear medicine, materials, industrial applications, labor, fuel cycle, new construction and operating reactor industries, as well as a member of the public, an attorney specializing in employee concerns and an Indian Community Tribal Council member. The workshop consisted of initial panel sessions, followed by separate breakout sessions (for reactors and new construction; materials – medical; and materials – Industrial and Fuel Cycle) in which additional input and suggestions were provided by an even broader audience of stakeholders and licensee and certificate holders.

The workshop's goal was to develop a single unifying definition for "Safety Culture" that would be applicable to the full range of licensees and certificate holders and could be used in the development of a final safety culture policy statement (ref 74 FR 57525 dated November 6, 2009). The panel had available the FRN draft definition, the Institute of Nuclear Power Operations (INPO) definition and several other definitions,

including the International Atomic Energy Agency (IAEA). The cross-discipline panel developed the following proposed 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.**

This definition, the panel felt, best represented what nuclear safety culture meant to the community of NRC licensees and certificate holders and would be most useful in expanding the understanding and importance of nuclear safety culture in their communities. Thus the panel recommended this definition to the Commission in place of the FRN proposed definition.

In addition to the development of the definition, the panel also developed a set of supporting traits and behaviors for this definition. The panel had available the eight characteristics listed in the FRN, as well as the INPO Principles of a Strong Nuclear Safety Culture. The panel determined to develop their own set of traits (or characteristics) which they felt would provide the best communication to the community of licensees and stakeholders of what was meant by the safety culture definition. These are:

1. **Problem Resolution and Metrics.** The organization ensures that issues potentially impacting safety or security are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance.
2. **Personal Responsibilities and Attitudes.** Everyone is personally responsible for nuclear safety.
3. **Processes and Procedures.** Processes for planning and controlling work activities are implemented such that safety is maintained.
4. **Continuous Learning.** Organizational learning is embraced.
5. **Leadership Safety Behaviors.** Leaders demonstrate commitment to safety.
6. **Effective Safety Communication.** Effective communication is essential to maintain focus on Safety.
7. **Encouraging Reporting of Problems.** The organization maintains a safety conscious work environment in which personnel feel free to raise concerns without fear of retaliation.
8. **Respectful work environment.** Trust and respect permeate the organization.

The fact that the panel's definition and eight characteristics differ from the NRC's FRN draft definition and eight characteristics does not say that the latter are incorrect. Rather, in the panel's opinion, their wording will be more effective in communicating to the regulated organizations and to the public what is meant by nuclear safety culture and what are its key characteristics. By using the language which the regulated entities

suggested, the panelists believe a strong nuclear safety culture can be more effectively understood and implemented.

### **Licensee and Certificate Holder Primary Responsibility**

The Statement of Policy states "licensees and certificate holders... bear the primary responsibility for safely handling and securing materials. It is therefore each licensee's and certificate holder's responsibility to develop and maintain a positive safety culture..." The NEI agrees that the regulated industry should take the lead on safety culture, and in the operating reactor community has developed and is piloting a rigorous approach to assessing and ensuring the effectiveness of nuclear safety culture activities. We believe that implementation of this approach will permit the NRC to modify its current burdensome oversight of nuclear safety culture while maintaining its appropriate oversight role. The industry approach employs a more robust, holistic and integrated look at indications of safety culture than that used by the inspection staff. We believe that this approach will provide greater assurance to the NRC while employing fewer resources. NRC staff are observing and commenting on the pilot program. Details of the approach are available in NEI 09-07, *Fostering a Strong Nuclear Safety Culture*, which was provided to the NRC June 2, 2009 in a letter from T. Houghton to F. Brown. Appropriate methodologies for taking the lead in other licensee and certificate holder environments should be discussed by the NRC and the affected organizations.

### **Common Language**

The safety culture workshop conducted February 2-4 of this year was an excellent beginning toward a common language of nuclear safety culture. We believe that the basic definition and characteristics developed are appropriate for the NRC, its licensees and certificate holders, and all of the other NRC stakeholders. Once this high level of agreement and understanding of what is meant has been achieved, we believe the next critical step is to develop specific actionable characteristics and behaviors at the level of the uniquely different industries that the NRC regulates; for example, operating reactors, new construction, fuel facilities, etc. This "third tier," as it were, will provide more meaning in the individual industry and relate the general characteristics to specific behaviors and indications of a strong safety culture in that industry. We recommend that this level of development begin in the near future, and we are prepared to commence this work immediately in the operating reactor area. It is essential that the NRC in its oversight role of safety culture, and the licensee or certificate holder in its training of staff and assessment of safety culture use the same terminology.

### **Safety and Security Culture**

The FRN includes security culture, as well as safety culture in its definition. The FRN states that the policy statement "(1) builds on the fact that safety and security have the

same ultimate purpose of protecting people and the environment from unintended radiation exposure and (2) encourages attention to the ways safety and security interface.”

We find this argument unconvincing, in that the same comments can be made for other essential programs and areas, such as quality assurance, emergency preparedness, occupational and public radiation safety, etc. that protect the public and the environment. Furthermore, there can be potential interface issues in these other programs and potential conflicts, which must be addressed under the more general context of nuclear safety. No individual program or element of defense in depth should be singled out as more important than any other. The proposed statement places only security issues at the same level as nuclear safety, which is obviously not correct.

It is important to note that the February 2-4 workshop panel unanimously rejected the inclusion of the term “security” in the FRN proposed definition. Panelists expressed the concern that the policy statement should focus on nuclear safety and not on any individual aspect of nuclear safety at the highest level of definition. Placing an undue emphasis on just one of the many important aspects is distracting and raises unnecessary questions in the licensees’ and certificate holders’ minds.

To emphasize this point, one can look at several of the characteristics listed in the FRN:

“The organization maintains a safety conscious work environment in which personnel feel free to raise safety and security concerns without fear of retaliation.” Does this not apply equally to quality assurance concerns, or radiation exposure concerns?

“Roles, responsibilities and authorities for safety and security are clearly defined and reinforced.” Again, what about other roles and responsibilities critical to nuclear safety?

We do not believe that the area of security warrants separate elevation in the safety culture policy statement. At a minimum it is distracting and denigrates other equally important processes that defend the public, and at its worst, implies that there are nearly incompatible goals between safety and security. This is certainly untrue.

## **Questions for Which NRC Is Seeking Input**

- (1) The draft policy statement provides a description of areas important to safety culture, (i.e., safety culture characteristics). Are there any characteristics relevant to a particular type of licensee or certificate holder (if so, please specify which type) that do not appear to be addressed?**

As discussed above, we believe the characteristics developed by the February 2-4 workshop more effectively and comprehensively address the areas licensees and certificate holders feel are important to safety culture. We believe their language – plain language -- will mean more to the regulated communities, having been developed by representatives from those communities. Additional work is warranted to move beyond these more general characteristics to a “third tier” set of characteristics and behaviors unique to each community. Industry is prepared to support that essential effort to have a common industry specific language used by regulator and regulated. After the industry specific language has been developed, workshops and conferences would be appropriate to communicate the characteristics and establish expectations for future performance.

- (2) Are there safety culture characteristics as described in the draft policy statement that you believe do not contribute to safety culture and, therefore, should not be included?**

Again, we believe that the stakeholder developed product is more appropriate for agency use. We also do not believe that security should be called out and elevated to the level of nuclear safety itself and to the exclusion of equally important areas such as quality assurance, emergency preparedness, occupational and public radiation exposure.

- (3) Regarding the understanding of what the Commission means by a “positive safety culture,” would it help to include the safety culture characteristics in the Statement of Policy section in the policy statement?**

We believe that the general characteristics should be included in the supporting materials rather than in the Statement of Policy itself. Development of the plain language, actionable, industry specific characteristics will be key to a successful implementation of the policy statement.

- (4) The draft policy statement includes the following definition of safety culture: “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.” Does this definition need further clarification to be useful?**

As discussed above, we believe that the February 2-4 workshop panel definition will be clearer and more useful to regulated organizations which are responsible for establishing an environment and nurturing a strong nuclear safety culture than the one in the FRN. Also, we do not believe it is appropriate to call out security separately.

- (5) The draft policy statement states, “All licensees and certificate holders should consider and foster the safety culture characteristics (commensurate with the safety and security significance of activities and the nature and complexity of their organization and functions) in carrying out their day-to-day work activities and decisions.” Given the diversity among the licensees and certificate holders regulated by the NRC and the Agreement States, does this statement need further clarification?**

It will be essential that the diverse communities of licensees and certificate holders regulated by the NRC and the Agreement States develop additional information (in particular specific industry characteristics) to clarify NRC expectations. The draft policy statement developed during the February 2-4 workshop helped to generalize the policy statement for all stakeholders. An example of the diversity of outlook that will be needed was captured in the workshop, when representatives of the medical community pointed out that nuclear safety does not pre-empt or override patient safety in emergency medical situations. For example, life saving measures will always pre-empt decontaminating a patient in the emergency room.

- (6) How well does the draft safety culture policy statement enhance licensees’ and certificate holders’ understanding of the NRC’s expectations that they maintain a safety culture that includes issues related to security?**

We discussed above our recommendation to not call out security separately in the policy statement. All programs and processes must be fully integrated to avoid conflicts and degradation of safety, not just security.

- (7) In addition to issuing a safety culture policy statement, what might the NRC consider doing, or doing differently, to increase licensees’ and certificate holders’ attention to safety culture in the materials area?**

As NRC is aware, the level of familiarity with the safety culture concept and sophistication of licensees varies widely depending on the industry; e.g.,

commercial power reactor versus a single industrial gauge user. NRC needs to conduct workshops, in coordination with the Agreement States, to reach out to the wide variety of materials users to inform NRC's approach to this matter and help ensure that its expectations are clearly articulated and understood. NRC will need to provide clear guidance to licensees in how oversight will be provided in inspection programs. NRC should also work closely with the Agreement States to prioritize this effort relative to other regulatory issues. In the absence of adequate Agreement State support for this initiative, the safety culture concept would potentially only be applied to approximately twenty percent of the byproduct materials users nationwide. Finally, NRC should refrain from including safety culture issues in inspection reports and assessments until such time that the final policy has been issued, relevant coordination with the regulated community and Agreement States has occurred, and implementing guidance is issued to ensure that NRC's expectations are clear.

**(8) How can the NRC better involve stakeholders to address safety culture, including security, for all NRC and Agreement State licensees and certificate holders?**

NRC should work through the stakeholder February workshop planning committee to solicit input on how best to involve stakeholders for further development of the policy, characteristics, "third tier" characteristics, implementing guidance and outreach to industry and the Agreement States to ensure an effective nationwide effort on safety culture. With regard to the Agreement States, NRC should create additional opportunities, such as the Organization of Agreement States annual meeting, to prioritize this effort since they have limited and in many cases declining resources for a new regulatory initiative. With regard to regulated entities, it is conceivable that several workshops will be needed to convene the wide variety of organizations to effectively meet our mutual goal of ensuring that an adequate safety culture exists at regulated facilities nationwide.