

January 21, 2011

Dr. Said Abdel-Khalik, Chairman  
Advisory Committee on Reactor Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT: RESPONSE TO THE ACRS LETTER DATED DECEMBER 15, 2010,  
ABOUT THE SAFETY CULTURE POLICY STATEMENT

Dear Dr. Abdel-Khalik:

On behalf of the U.S Nuclear Regulatory Commission (NRC) staff, I thank the Committee for your timely and constructive review of the draft final Safety Culture Policy Statement (Policy Statement). In your letter dated December 15, 2010, you summarized the conclusions and recommendations of the Advisory Committee on Reactor Safeguards (ACRS or the Committee) on the draft final Policy Statement. The Committee indicates that the Policy Statement is responsive to the Commission's direction and is an appropriate vehicle for communicating the Commission's expectations that all licensees and certificate holders establish and maintain a positive safety culture. Additionally, the Committee acknowledges that the proposed definition and traits use a common terminology that is meaningful to the affected stakeholders, including representatives from an array of organizations that the NRC regulates, the Agreement States, and the NRC staff. The Committee notes that although the definition and traits do not specifically mention security culture, its importance is discussed throughout the draft Commission paper ACRS reviewed. The Committee also notes that the paper describes the Commission's expectation that individuals and organizations performing regulated activities will establish and maintain a positive safety culture commensurate with the safety and security significance of their activities. Finally, the Committee recommends that implementation of the Policy Statement should allow the flexibility needed to address the broad spectrum of regulated activities that fall under the Commission's jurisdiction.

An important goal of the staff's process in developing the Policy Statement has been to engage representatives across the range of NRC stakeholders in the agency's long-standing internal and external conversation about safety culture. The staff facilitated the involvement of internal stakeholders through a working group and steering committee, and the staff participated in numerous external stakeholder outreach activities and provided many opportunities for public involvement, input, and comment. The staff has also worked closely with the Organization of Agreement States, recognizing the number, scope, and diverse nature of the regulated activities the Agreement States oversee. This process has permitted extensive internal and external dialogue to develop a Policy Statement that is understandable to the broad range of people and organizations engaged in civilian uses of nuclear materials.

The staff plans to continue this dialogue about enhancing safety culture subject to the Commission's decision on the final Policy Statement. This interactive process will permit the staff and external stakeholders to adapt the traits to the specific work environments and

activities in each regulated community and determine areas where additional definition and clarity could be appropriate. The staff agrees with your point that it is essential to match the rigor and scope of these activities to the potential risks posed by each affected community's work activities.

The NRC staff also appreciates the thoughtful comments presented in the "Additional Comments" portion of your letter.

The first comment is that the list of traits may not capture the most important traits that contribute to safety. The staff agrees that the traits cited as examples in this comment can be important in creating and maintaining a positive safety culture. We believe other traits are also important, including those identified in investigations of accidents and adverse events in nuclear and other sectors, in publications and research literature, and by other groups of experts and public commentators. The terms used to describe traits that are important to a positive safety culture often differ. For example, the staff and external stakeholders who participated in developing the Policy Statement may likely describe "organizational integrity" as a function of leadership (i.e., Leadership Values and Actions), whereas "individual integrity" is another way of describing the trait of Personal Accountability in the Policy Statement. Similarly, Work Practices and Procedures that support nuclear safety, another trait included in the Policy Statement, depend on technical competence to develop them. Overall, the Policy Statement recognizes and acknowledges that the nine traits included in it are not an exhaustive set of traits directly applicable to every regulated organization. The next step the regulated community may decide to take after publication of the final Policy Statement would be to adapt the overarching traits to their specific activities, including the terminology used, and determine areas where further clarification may be appropriate.

The second comment questioned whether "implementation of the Safety Culture Policy Statement may be an indirect method of imposing requirements on licensees without the discipline of the regulatory process." The staff's view is that a Policy Statement is not enforceable, but it is currently the best means to continue the productive dialogue about enhancing safety culture within the NRC and between the staff and external stakeholders. A Policy Statement allows the Commission to establish focused and defined expectations for a positive safety culture and provides a common terminology to facilitate further dialogue. The staff recognizes that the term "implementation" may not be the most appropriate choice to describe the next steps the regulated community and the NRC may decide to take with regard to the Policy Statement. When the Commission provides its direction on the final Policy Statement, the staff plans to continue active dialogue and interaction with the regulated community, especially those groups of licensees and other organizations that may be less familiar with the concept of safety culture. This dialogue and interaction should also permit the staff to monitor the various efforts to effectively use the Policy Statement and determine where additional guidance may be appropriate.

The third comment notes that there is little evidence that the listed traits (individually or collectively) “are assured to produce measureable improvements in safety and, in fact, that there is no quantitative evidence that they lead to cost-effective improvements in safety.” The staff agrees that there is little empirical evidence that this specific set of traits is assured to produce an improvement in safety. However, the effect of the proposed Policy Statement and traits on nuclear safety cannot be observed unless the regulated community applies them. The staff realizes that the way these traits are addressed by industry may also affect whether they lead to improved safety performance. However, quantitative research in other domains, including the Institute for Nuclear Power Operations construct validation study, indicates that these traits are associated with better safety performance. Studies conducted in other sectors have also demonstrated improved safety performance resulting from organizational interventions focused on safety culture and specific traits. As the stakeholders move to next steps following Commission direction on the final Policy Statement, the staff intends to continue to monitor the research literature, share information regarding effective interventions to address safety culture weaknesses, and continue the dialogue to enhance understanding and safety performance. Overall, we consider that the NRC’s issuance and stakeholders’ use of the Policy Statement can help minimize safety issues or reduce the scale of interventions and events that have their causation in weak safety culture by making the concept and expectations of safety culture more visible to leaders and workers, various oversight organizations (including the NRC staff), and the regulated community.

Fourth, the additional comments noted that implementation of the Policy Statement “appears orthogonal to the direction in which the NRC has been trying to move the nuclear safety regulatory system: that is, a regulatory system that is based on performance and not on perceived attitudes. The regulatory system should concentrate on issues that demonstrably pose risk to the public health and safety.” The current consensus is that the creation and maintenance of a strong safety culture is a viable means of protecting the public and the environment from the risks associated with the use of nuclear material. The staff will be mindful of the comment about the potential for an excessive focus on safety culture-related programs, metrics, and self-assessments that, if overdone, can divert both attention and resources away from safe operation and the accomplishment of a positive safety culture. The staff has every intent to maintain its focus on the performance of the regulated community. The staff considers an increase in the industry’s focus on safety culture in response to the issuance of the Policy Statement is appropriate and contributes to reducing risk to the public and the environment.

Overall, the Policy Statement focuses attention on the importance the Commission places on a positive safety culture. The traits are included to describe attributes that help clarify and flesh out the definition.

S. Abdel-Khalik

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We have benefited from our interactions with the Committee and are very appreciative of the insights and constructive feedback provided.

Sincerely,

***/RA by Michael Weber for/***

R. W. Borchardt  
Executive Director  
for Operations

cc: Chairman Jaczko  
Commissioner Svinicki  
Commissioner Apostolakis  
Commissioner Magwood  
Commissioner Ostendorff  
SECY

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