October 16, 2009

SECRETARY

## COMMISSION VOTING RECORD

DECISION ITEM: SECY-09-0075

TITLE: SAFETY CULTURE POLICY STATEMENT

The Commission (with all Commissioners agreeing) approved the subject paper as recorded in the Staff Requirements Memorandum (SRM) of October 16, 2009.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

Annette L. Vietti-Cook
Secretary of the Commission

Attachments:
1. Voting Summary
2. Commissioner Vote Sheets

cc:     Chairman Jaczko
        Commissioner Klein
        Commissioner Svinicki
        OGC
        EDO
        PDR

# VOTING SUMMARY - SECY-09-0075

## RECORDED VOTES

|  | APRVD | DISAPRVD | ABSTAIN | NOT PARTICIP | COMMENTS | DATE |
|---|---|---|---|---|---|---|
| CHRM. JACZKO | X | | | | X | 6/5/09 |
| COMR. KLEIN | X | | | | X | 8/21/09 |
| COMR. SVINICKI | X | | | | X | 9/22/09 |

## COMMENT RESOLUTION

In their vote sheets, all Commissioners approved the staff's recommendation and provided some additional comments. Subsequently, the comments of the Commission were incorporated into the guidance to staff as reflected in the SRM issued on October 16, 2009.

# NOTATION VOTE

## RESPONSE SHEET

TO:        Annette Vietti-Cook, Secretary

FROM:     CHAIRMAN JACZKO

SUBJECT:   SECY-09-0075 – SAFETY CULTURE POLICY
           STATEMENT


Approved __X__     Disapproved _____ Abstain _____

Not Participating _____

COMMENTS:   Below ___ Attached _X_ None ___


_____
SIGNATURE

_____
DATE

Entered on "STARS" Yes _x_ No ___

I approve of the staff's recommendation to publish the draft Safety Culture Policy Statement as an FRN for a 75-day public comment period to facilitate additional discussions with stakeholders and interested parties before developing a draft final policy statement.

I commend the staff for their excellent outreach efforts thus far on developing this draft Safety Culture Policy Statement. I think the staff has used a great mix of traditional methods of soliciting comments, such as a public workshop and federal register notices. I also am pleased to hear about some of the newer methods the staff has been using to communicate and intends to use as they move forward – including the "webinar." Making sure we do our best to hear a broad range of concerns and ideas is the best way to ensure that the ultimate path the agency chooses is well informed and effective. I am also pleased to see that the recommendation contained in a staff non-concurrence will be included in the questions for the public to consider. I think the Commission is well served by being able to consider broad perspectives on issues of policy.

The recent Commission meeting provided a good opportunity to discuss many of the considerations before the Commission. I think it is important to draw the distinction that in this paper we are focusing on the first step of establishing a draft Safety Culture Policy Statement. After finalizing the Safety Culture Policy Statement, the Commission and staff could then consider if any updates to the Reactor Oversight Process and materials oversight are needed. I concur with the staff's conclusion that this is the time to continue to engage the Agreement States for their ideas and comments seeking ways to increase the attention of materials licensees to safety culture. Additionally, the staff should consider incorporating suppliers and vendors of safety related components into the Safety Culture Policy Statement.

There should be no doubt that it is the responsibility of each licensee or certificate holder to develop and maintain a positive safety culture. Nonetheless, this does not diminish our role as the regulatory agency to continue to maintain our independent oversight role in this important area.
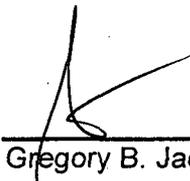
Gregory B. Jaczko      6/5/09    Date

# NOTATION VOTE

## RESPONSE SHEET

TO:       Annette Vietti-Cook, Secretary

FROM:     Commissioner Klein

SUBJECT:  SECY-09-0075 – SAFETY CULTURE POLICY
          STATEMENT


Approved __X__     Disapproved _____     Abstain _____

Not Participating _____

COMMENTS:     Below ___  Attached _X_  None ___



_____
SIGNATURE

_____08/2 | /2009_____
DATE

Entered on "STARS"  Yes ___  No ___

## Commissioner Klein's comments on SECY-09-0075, Safety Culture Policy Statement

I approve the draft safety culture policy statement as modified by former Commissioner Lyons, subject to the attached additional edits.

The Commission has a long history of dealing with safety culture issues. In 1989, in response to instances of operator inattentiveness and unprofessional behavior in the control room of some nuclear power plants, the Commission first published a policy statement to foster the development and maintenance of a safety culture at nuclear power plants. The 1989 policy statement and the supporting regulatory activities have helped to improve control room decorum over the years.

In 1996, in response to reports of management retaliation against licensee personnel for raising safety concerns, the Commission issued a policy statement affirming its expectation for NRC licensees to establish and maintain a safety-conscious work environment in which employees would feel free to raise concerns both to their own management and the NRC without fear of retaliation. The policy envisioned a positive environment reinforced by a management attitude that promotes employee confidence in raising and resolving concerns -- where employees and managers would exhibit open and questioning attitudes with a positive orientation toward admitting and correcting personnel errors.

To help further this effort, the Commission directed the staff in 2003 to develop guidance that would identify best practices for establishing a safety-conscious work environment and to consider developing objective measures that could serve as indicators of possible problems with safety culture. In response to this Commission direction and the lessons learned from the reactor vessel head degradation event at Davis-Besse, which identified a weak safety culture as a root cause, the staff made changes to the Reactor Oversight Process in 2006 to address safety culture issues as part of the NRC inspection program. This draft safety culture policy statement for public comment is the culmination of 20 years of operating experience gained by the NRC in addressing safety culture issues in the nuclear industry.

I support a simple, generic safety culture policy statement, which can be utilized by the nuclear industry, the Agreement States and the NRC as a common foundation for a strong safety culture which addresses nuclear safety and security issues. During the public comment period the staff will need to engage all stakeholders, including the Agreement States and organizations representative of the nuclear industry (e.g., Organization of Agreement States, Institute for Nuclear Power Operations, Conference of Radiation Control Program Directors, Nuclear Energy Institute) to ensure the final policy statement presented to the Commission provides the necessary foundation for safety culture applicable to the entire nuclear industry.

I also want to join Chairman Jaczko and former Commissioner Lyons in commending the staff for leading by example in the area of safety culture, through the inclusion of a non-concurrence generated during the development of this paper. In particular, the staff directly asks for public comment on the topic of the non-concurrence in the draft policy statement which will ensure that all stakeholder input is received on this matter.

Attached is a listing of additional editorial comments on the draft policy statement.


_____     8/21/2009
Dale E. Klein                                Date

DRAFT FEDERAL REGISTER NOTICE

NUCLEAR REGULATORY COMMISSION

[NRC-2009-xxxx]

Draft Safety Culture Policy Statement:

Request for Public Comments

**AGENCY**:  Nuclear Regulatory Commission (NRC).

**ACTION**:  Issuance of draft safety culture policy statement and notice of opportunity for public comment.

**DATES**:  Comments are requested 75 days from the date of this *Federal Register* Notice. Comments received after this date will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before this date.  Please refer to the Supplementary Information section for additional information including questions for which the NRC is requesting comment.

**ADDRESSES**:  Members of the public are invited and encouraged to submit comments by 75 days from the date of this *Federal Register* Notice, by mail to Isabelle Schoenfeld, Office of Enforcement, Mail Stop O-4 A15A, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, or by e-mail to isabelle.schoenfeld@nrc.gov.

**SUMMARY**: The NRC is issuing a draft policy statement that sets forth the Commission's

expectation that all licensees and certificate holders[1] establish and maintain a positive safety

culture that protects public health and safety and the common defense and security when

carrying out licensed activities. The Commission defines safety culture as that assembly of

characteristics, attitudes, and behaviors in organizations and individuals, which ~~that~~ establishes

that, as an overriding priority, nuclear safety and ~~nuclear~~ security issues[2] receive the attention

warranted by their significance. The Commission also considers nuclear safety and security

issues to be equally important in a positive safety culture. The importance of treating safety and

security in an equal manner within NRC's regulatory framework is clearly evident in our mission

and strategic goals. Experience has shown that certain organizational characteristics and

personnel attitudes and behaviors are present in a positive safety culture. These include, but

are not limited to, individuals demonstrating ownership and personal responsibility for

maintaining safety and security in their day-to-day work activities; the implementation of

processes for planning and controlling work activities such that safety and security are

maintained; a work environment in which personnel feel free to raise safety and security

concerns without fear of retaliation; prompt and thorough identification, evaluation, and

resolution of nuclear safety and security issues commensurate with their significance; the

availability of the resources needed to ensure that safety and security are maintained; decision-

making processes that protect safety and security; clearly defined roles and responsibilities for

maintaining safety and security; and the seeking out and implementation of opportunities to

improve safety and security. The NRC expects its licensees and certificate holders to foster

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[1] Throughout this document, the phrase "licensee and certificate holders" includes licensees, certificate holders, permit holders, authorization holders, holders of quality assurance program approvals and applicants for a license, certificate, permit, authorization, or quality assurance program approval.
[2] Throughout this document, the terms "safety" or "nuclear safety," "security" or "nuclear security," and "safety culture" are used. These terms refer to matters that are related to NRC-regulated activities, including radiation protection, safeguards, material control and accounting, physical protection, and emergency preparedness.

these characteristics, attitudes, and behaviors in their organizations and among individuals who are overseeing or performing regulated activities commensurate with the safety and security significance of their activities and the nature and complexity of their organization and functions.

The NRC is requesting comments on the draft safety culture policy statement and associated questions.

**SUPPLEMENTARY INFORMATION:**

**(1)  Background**

The Commission has long expressed its expectations for safety culture in previous policy statements.  In 1989, the Commission published its "Policy Statement on the Conduct of Nuclear Power Plant Operations" (54 FR 3424; January 24, 1989) to make clear the Commission's expectations of utility management and licensed operators with respect to the conduct of operations.  The policy statement stated, "the phrase safety culture refers to a very general matter, the personal dedication and accountability of all individuals engaged in any activity which has a bearing on the safety of nuclear power plants."  The policy statement further stated that the Commission issued the policy statement to help foster the development and maintenance of a safety culture at every facility licensed by the NRC.

In 1996, the Commission published a policy statement, "Freedom of Employees in the Nuclear Industry to Raise Safety Concerns Without Fear of Retaliation" (61 FR 24336; May 14, 1996), to set forth its expectations that licensees and other employers subject to NRC authority will establish and maintain safety-conscious environments in which employees feel free to raise safety concerns, both to their management and to the NRC,

without fear of retaliation. This policy statement applied to NRC-regulated activities of all licensees and their contractors and subcontractors. A safety conscious work environment is an important attribute of safety culture and is one of the safety culture characteristics in the draft safety culture policy statement.

The importance of a positive safety culture for activities involving civilian uses of radioactive materials and other potential hazards has been demonstrated by a number of significant, high-visibility events world-wide that have occurred in the 20-year period since the Commission published its 1989 policy statement addressing safety culture in nuclear power plants. The events occurred across multiple industries including at nuclear power plants, fuel cycle facilities and in other industries such as chemical processing plants and aerospace. Examples of nuclear industry events include those that occurred at the Davis-Besse Nuclear Power Station and the Peach Bottom Atomic Power Station. Workers at the Davis-Besse Nuclear Power Station discovered a cavity in the reactor pressure vessel head caused by boric acid corrosion. The corrosion developed over a period of several years but was not discovered before the cavity developed. The licensee's analysis of the event identified weaknesses in the station's safety culture as the root cause of the event. It particularly noted that management prioritized "production over safety." At the Peach Bottom Atomic Power Station, personnel behaviors adverse to the security of the plant were identified, specifically, inattentiveness by security officers.

Other licensees have had recurring problems resulting in violations of NRC regulations. Through a Commission confirmatory order, a fuel cycle facility licensee, Nuclear Fuel Services, Inc., committed to having a third-party assessment of its safety culture to determine the causes of its continuing problems and in order to taking establish appropriate corrective actions. The third-party assessment identified weaknesses in every areas

important to-safety culture. In addition, weaknesses in the safety culture of licensees and certificate holders have contributed to unscheduled events or incidents that the Commission has determined to be significant from the standpoint of public health and safety. Examples linked to characteristics and attitudes in organizations and individuals associated with weak safety cultures include inadequate procedures; procedures not being followed; inadequate supervision; decision-making that does not ensure that safety and security are maintained; and ineffective problem identification, evaluation, and resolution. They have included medical misadministrations (such as giving iodine-131 to lactating females that resulted in the uptake by their infants and multiple events associated with prostate brachytherapy treatment) and overexposures arising from the loss of control of radiography or well logging sources.

## (2) **Statement of Policy**

It is the Commission's policy that a strong safety culture is an essential element for individuals, both internal to the NRC and external, performing or overseeing regulated activities. As such, the NRC will include appropriate means to monitor safety culture in its oversight programs and internal management processes. {PBL Edit} The NRC defines safety culture as that assembly of characteristics, attitudes, and behaviors in organizations and individuals, which that establishes that, as an overriding priority, nuclear safety and nuclear security issues receive the attention warranted by their significance. The Commission also considers nuclear safety and nuclear security issues to be equally important in a positive safety culture. Further, it is important for all organizations licensees and certificate holders to provide personnel in the safety and security sectors with an appreciation for the importance of each, emphasizing the need for integration and balance to achieve optimized protection. Safety and security activities are closely intertwined, and it

is critical that consideration of these activities be integrated so as not to diminish or adversely affect either safety or security. A safety culture that accomplishes this would include all nuclear safety and ~~nuclear~~ security issues associated with NRC-regulated activities including radiation protection, safeguards, material control and accounting, physical protection, and emergency preparedness issues among the issues that receive attention as a matter of priority.

The Commission's regulations are designed to protect both the public and workers against radiation hazards from the use of radioactive materials. The Commission's scope of responsibility includes regulation of commercial nuclear power plants; research, test, and training reactors; nuclear fuel cycle facilities; medical, academic, and industrial uses of radioactive materials; and the transport, storage, and disposal of radioactive materials and wastes. The Commission carries out these responsibilities in numerous ways including through such regulatory activities as inspecting licensed and certified facilities and activities; collecting, analyzing, and disseminating information about operational safety and security; investigating nuclear incidents; and developing policy and providing direction on safety and security issues.

The Commission believes that, because licensees and certificate holders use or provide services related to the use of radioactive material, they bear the primary responsibility for safely handling and securing these materials. It is, therefore, each licensee's and certificate holder's responsibility to develop and maintain a positive safety culture, which ~~that~~ establishes that nuclear safety issues and nuclear security issues, as an overriding priority, receive the attention warranted by their significance. Therefore, licensees and certificate holders should foster a positive safety culture in their organizations and among individuals who are overseeing or performing regulated activities. However, as the

regulatory agency, the Commission has an independent oversight role (through inspection and assessment processes) including addressing licensees and certificate holders performance related to areas important to safety culture.

**(3)  Safety Culture Concept**

In 1991, as a result of the 1986 Chernobyl accident, the International Nuclear Safety Group (INSAG) emphasized the concept of safety culture for the nuclear industry in its report, INSAG-4, "Safety Culture." INSAG is an advisory group to the International Atomic Energy Agency (IAEA). The INSAG-4 definition of safety culture is, "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."

Implied in the INSAG definition of safety culture is the recognition that every organization is continually faced with resolving conflicts among its goals for cost, schedule, and quality (or safety). The organization's members (groups and individuals) also face conflicts among different goals in performing their jobs. Management establishes the framework (management systems, programs, processes) and communicates its priorities for resolving conflicts among different goals. Members of the organization work within that framework and are influenced by management's priorities, but they have their own beliefs and attitudes about what is important and make individual choices on how to proceed when faced with multiple competing goals. The INSAG definition emphasizes that in a positive safety culture, the goal of maintaining nuclear safety receives the highest priority in the organization's and individuals' decision-making and actions when faced with a conflict with other organizational or individual goals.

The Commission modified the INSAG definition of safety culture which refers to "nuclear plant safety." The Commission is strongly committed to promoting positive safety cultures among its nuclear reactor licensees; however, the Commission regulates many other organizations and processes involving civilian uses of radioactive materials. These regulated activities include industrial radiography services; hospitals, clinics and individual practitioners involved in medical uses of radioactive materials; research and test reactors; large-scale fuel fabrication facilities; as well as nuclear power plants. The Commission also regulates the construction of new facilities where operations will involve radioactive materials with the potential to affect public health and safety and the common defense and security. Therefore, by revising the INSAG definition of safety culture to replace "nuclear plant safety" with "nuclear safety," the Commission is emphasizing that it expects all of its licensees and certificate holders to place the highest priority on nuclear safety commensurate with the risks inherent in the regulated activities.

The Commission also modified the INSAG definition to adequately capture or communicate the equal importance of nuclear security and nuclear safety in a positive safety culture. Following the terrorist attacks of September 11, 2001, the Commission increased its attention to the important role of security in regulated facilities whose operations can have an impact on public health and safety. The Commission issued orders enhancing security at its NRC-regulated facilities to further ensure public health and safety and the common defense and security. One of the insights gained from the greater emphasis on security is the importance of incorporating security considerations into a safety culture and effectively managing the safety and security interface. In general, the safety and security interface refers to the organizational and individual awareness that the functions and goals of safety and security must be considered together so that actions to achieve either set of functions

and goals do not inadvertently compromise the other. Therefore, to emphasize the equal importance of nuclear security and nuclear safety in a positive safety culture, the Commission has added "nuclear security" to the safety culture definition. The NRC's modified INSAG definition is provided in the Statement of Policy section above.

**(4) Stakeholder Outreach**

The Commission's February 28, 2009, Staff Requirements Memorandum (SRM)-COMGBJ-08-0001, "A Commission Policy Statement on Safety Culture," stated in part that the staff should, as part of its public stakeholder outreach, reach out to all types of licensees and certificate holders. In the development of the draft policy statement, the NRC staff sought insights and feedback from stakeholders. This was accomplished by providing information in a variety of forums such as stakeholder organization meetings, newsletters, and teleconferences and by publishing questions in *Federal Register* Notices entitled "Safety Culture Policy Statement: Public Meeting and Request for Public Comments" (74 FR 4260; January 23, 2009, and 74 FR 6433; February 9, 2009) that were related to the Commission's SRM. In addition, a significant stakeholder outreach activity was accomplished by a public workshop held on February 3, 2009, at NRC Headquarters in Rockville, Maryland. The staff reviewed and considered the stakeholder feedback derived from these different forums and incorporated it into the development of the draft policy statement and recommendations.

**(5) Safety and Security Culture**

In SRM-COMGJB-08-0001, the Commission also considered whether publishing the NRC's expectations for safety and security culture is best accomplished in one safety/security

culture statement or in two separate statements, one each for safety and security, while still considering the safety and security interface.

Based on a variety of sources including document reviews and stakeholder feedback, the Commission concluded there is no one definitive view of this issue, but the results weighed heavily toward a single policy statement to be titled a "Safety Culture Policy Statement." Document reviews and stakeholder feedback suggested that a single 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. For these reasons, the Commission determined that tThe term "safety culture" should include both safety and security. be considered as all encompassing because there would be no need for security pertaining to the use of radioactive material if it were not for radioactive material used by licensees and certificate holders.

Safety and security have been the primary pillars of NRC's regulatory programs. However, in the current heightened threat environment, there has been a renewed focus on security, and the staff has implemented a number of efforts to enhance security and strengthen the safety and security interface. It is important to understand that both safety and security share a common purpose of protecting public health and safety. In today's environment, safety and security activities are closely intertwined, and it is critical that consideration of these activities be integrated so as to compliment each other and not to diminish or adversely impact either safety or security. Further, it is important for licensees and certificate holders to provide personnel in the safety and security sectors with an appreciation for the importance of each, emphasizing the need for integration and balance to achieve optimized protection. The importance of both safety and security in an equal

and balanced manner within NRC's regulatory framework is clearly evident in the Commission's mission and strategic goals.

While many safety and security activities complement each other or are synergistic, there remain areas where potential conflicts may arise differences. It is then imperative that mechanisms be established to resolve these potential conflicts to differences if we must assure the adequate protection of public health and safety and promote the common defensee and security. Hence, safety and security have implications for each other in connection with all aspects of nuclear activities. For example, the enhanced risk of a sabotage event has highlighted the importance of integrating safety and security in the field of protection and of identifying areas where they need to complement each other so that a terrorist event can be dealt with in as seamless a fashion as possible.

One potential important difference or challenge is the way in which individuals involved in safety and security activities approach the goal of risk mitigation and protection of public health and safety. The safety staff is typically focused on preventing errors that would result in an inadvertent accident while the security staff is focused on preventing deliberate attacks or diversion of certain materials that could cause harm. Another difference is the way in which individuals involved in safety and security activities approach information sharing. The safety staff promotes information sharing and collaboration while the security staff promotes the sensitivity of information and a need to know. These differences as well as any others identified through stakeholder interactions would need to be resolved and managed. Another challenge is that the organization/facility must ensure that the existence of motivated and capable persons with ill intent is recognized and that the importance of nuclear security to prevent such persons from unauthorized access is understood. This

need for an improved sensitivity to the current threat environment is exacerbated by the significant growth in nuclear utilization worldwide. To manage these potential conflicts or challenges, the Agency has recently issued regulations on the safety/security interface. An overarching safety culture policy statement which encompasses security supports and further enhances those regulations.

Based on the above considerations, the Commission concluded that a single policy statement would accomplish its goal that, as an overriding priority, safety issues and security issues receive the attention warranted by their significance. Although, in some cases, issues relating to security might be handled differently than issues related to safety. A single policy statement recognizes there is one overarching culture in an organization; however, safety and security functions and goals must be treated equally within that overarching safety culture.

## (6) **Characteristics of a Positive Safety Culture**

Experience has shown that certain organizational attributes and personnel attitudes and behaviors are present in a positive safety culture. Therefore, in 2006, when the NRC implemented an enhanced reactor oversight process (ROP) that more fully addressed safety culture, it identified and incorporated safety culture components that are overarching characteristics of a positive safety culture. The NRC based its development of the safety culture components on a review of a variety of sources of information including the Institute of Nuclear Power Operations; the IAEA; the Nuclear Energy Agency; the regulatory approaches of other domestic and international organizations; and the organizational behavior, safety culture, and safety climate research literature. The Commission presented

drafts of the safety culture components and aspects in frequent public meetings and modified them in response to stakeholder feedback.

For the purpose of this policy statement, the NRC modified the ROP safety culture components (termed "safety culture characteristics") to explicitly address security in the safety culture characteristics descriptions, create a more generic description for each safety culture characteristic that would apply to the range of NRC licensees and certificate holders, and maintain all the safety culture concepts in the safety culture components. The staff presented the draft safety culture characteristics for stakeholder comment in a February 3, 2009, public workshop and on the NRC's public safety culture Web site (http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html).

Although the safety culture characteristics themselves are applicable to all licensees and certificate holders, there may be other examples that more specifically address the unique characteristics of a licensee's or certificate holder's environment (i.e., unique for medical and industrial applications, operating reactors, research and test reactors, fuel cycle facilities, and new reactor construction environments). Hence, the Commission recognizes that these safety culture characteristics are not all inclusive; other characteristics and attitudes in organizations and individuals may be indicative of a positive safety culture. However, the Commission expects its licensees and certificate holders to consider the extent to which these characteristics and attitudes are present in their organizations and among individuals who are overseeing or performing regulated activities and to take steps, if necessary, to foster a positive safety culture commensurate with the safety and security significance of activities and the nature and complexity of the licensee's or certificate holder's organization and functions.

The following characteristics that are indicative of a positive safety culture, are relevant across the broad range of licensees' and certificate holders' activities carried out by the nuclear industry, the Agreement States and the NRC, and address the importance of nuclear safety and security:

- Personnel demonstrate ownership for nuclear safety and security in their day-to-day work activities by, for example, ensuring that their day-to-day work activities and products meet professional standards commensurate with the potential impacts of their work on safety and security. They proceed with caution when making safety- or security-related decisions and question their assumptions, especially when faced with uncertain or unexpected conditions, to ensure that safety and security are maintained.

- Processes for planning and controlling work ensure that individual contributors, supervisors, and work groups communicate, coordinate, and execute their work activities in a manner that supports safety and security. For example, individuals and work groups communicate and cooperate during work projects and activities to ensure their actions do not interact with those of others to adversely affect safety or security. In addition, managers and supervisors are accessible to oversee work activities, including those of contractors or vendors, and they challenge work activities and work products that do not meet their standards.

- The organization licensee or certificate holder maintains a safety conscious work environment in which personnel feel free to raise safety and security concerns without fear of retaliation. For example, claims of harassment, intimidation, retaliation, and discrimination are investigated consistent with the regulations regarding employee protection. If an instance of harassment, intimidation, retaliation, or discrimination for

raising a safety or security concern is identified, corrective actions are taken in a timely manner.

- The organization licensee or certificate holder ensures that issues potentially impacting safety or security are promptly identified, fully evaluated, and promptly addressed and corrected, commensurate with their significance.

- The organization licensee or certificate holder ensures that the personnel, equipment, tools, procedures, and other resources needed to assure safety and security are available. For example, training is developed and implemented or accessed to ensure personnel competence. Procedures, work instructions, design documentation, drawings, databases, and other job aids and reference materials are complete, accurate, and up-to-date.

- The organization's licensee or certificate holder decisions ensure that safety and security are maintained. For example, production, cost, and schedule goals are developed, communicated, and implemented in a manner which demonstrates that safety and security are overriding priorities.

- Roles, responsibilities, and authorities for safety and security are clearly defined and reinforced. For example, personnel understand their roles and responsibilities in maintaining safety and security. Programs, processes, procedures, and organizational interfaces are clearly defined and implemented as designed. Leaders at all levels of the organization consistently demonstrate that safety and security are overriding priorities.

- The organization ~~licensee or certificate holder~~ maintains a continuous learning environment in which opportunities to improve safety and security are sought out and implemented. For example, individuals are encouraged to develop and maintain current their professional and technical knowledge, skills, and abilities and to remain knowledgeable of industry standards and innovative practices. Personnel seek out and implement opportunities to improve safety and security performance.

## (7) Implementation of Policy

This policy statement describes areas important to safety culture, but it does not address how the nuclear industry, the Agreement States and the NRC ~~licensee or certificate holder~~ should establish and maintain a positive safety culture in ~~its~~ their organizations. ~~Licensees, and certificate holders~~ The nuclear industry, the Agreement States and the NRC differ in their size and complexity, infrastructure, and organizational frameworks. Therefore, a single approach for establishing and maintaining a positive safety culture is not possible. Nevertheless, the Commission expects that nuclear safety and security issues receive the attention warranted by their significance, and all organizations ~~licensee or certificate holder~~ 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.

## 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?

(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?

(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?

(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 that establishes that, as an overriding priority, nuclear safety and nuclear security issues receive the attention warranted by their significance." Does this definition need further clarification to be useful?

(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?

(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?

(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?

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

To ensure efficient consideration of your comments, please identify the specific question numbers with your comments when applicable.  When commenting, please exercise caution with regard to site-specific security-related information.  Comments will be made available to the public in their entirety.  Personal information such as your name, address, telephone number, and e-mail address will not be removed from your submission.

For the Nuclear Regulatory Commission.

_____

Cynthia A. Carpenter, Director

Office of Enforcement

Dated at Rockville, Maryland, this_____day of_____, 2009.

# NOTATION VOTE

## RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER SVINICKI

SUBJECT: SECY-09-0075 – SAFETY CULTURE POLICY STATEMENT

Approved __XX__     Disapproved _____     Abstain _____

Not Participating _____

COMMENTS: Below ___ Attached _XX_ None ___

_____
SIGNATURE

_____09/22/09_____
DATE

Entered on "STARS" Yes √ No ___

## Commissioner Svinicki's Comments on SECY-09-0075
## Safety Culture Policy Statement

I approve the staff's recommendation to publish, for comment, the draft safety culture policy statement as edited in the attachment to Commissioner Klein's vote and as further edited in the attached markup. Over the past months, I have studied the history of safety culture (even before it was necessarily termed as such) at the NRC and the staff's more recent work leading up to SECY-09-0075. I have also searched out pockets of expertise in this area, such as the work conducted through the Institute of Nuclear Power Operations (INPO).

I find the language and terminology used in INPO's "Principles for a Strong Nuclear Safety Culture" to convey the fundamental concepts in a way that can have nearly universal application. As a reminder, the INPO principles are: 1) Everyone is personally responsible for nuclear safety; 2) Leaders demonstrate commitment to safety; 3) Trust permeates the organization; 4) Decision-making reflects safety first; 5) Nuclear technology is recognized as special and unique; 6) A questioning attitude is cultivated; 7) Organizational learning is embraced; and, 8) Nuclear safety undergoes constant examination.

As the staff already heard in February's public workshops, some stakeholders believe the NRC and industry should strive to adopt common language to describe safety culture attributes and principles. I believe there is merit in this goal and worry about the distraction of burdening our communications on this important topic with unnecessary translation steps between us and those we regulate. As noted by the industry in "Fostering a Strong Nuclear Safety Culture" [NEI 09-07 Rev. 0], "[u]sing a consistent model and terminology throughout the entire process will allow clear communication of issues." In developing the draft final policy statement and while making the necessary adjustments to encompass security within the statement, staff should seek opportunities to comport our terminology with that of existing standards and references, where possible.

Finally, given the Commission's goal of soliciting the comments of not only the Agreement States but also receiving feedback from the Agreement States' diverse community of regulated entities, I do not believe that a 75 day comment period, as proposed by the staff, will be ample. I support a comment period of no less than 90 days, as a substantial increment of this time will likely be used just in building awareness of the draft statement and the opportunity for comment.

Kristine L. Svinicki                    09/2 2/09

DRAFT FEDERAL REGISTER NOTICE

NUCLEAR REGULATORY COMMISSION

[NRC-2009-xxxx]

Draft Safety Culture Policy Statement:

Request for Public Comments

**AGENCY**: Nuclear Regulatory Commission (NRC).

**ACTION**: Issuance of draft safety culture policy statement and notice of opportunity for public comment.

**DATES**: Comments are requested ~~75~~ 90 days from the date of this *Federal Register* Notice. Comments received after this date will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before this date. Please refer to the Supplementary Information section for additional information including questions for which the NRC is requesting comment.

**ADDRESSES**: Members of the public are invited and encouraged to submit comments by 75 days from the date of this *Federal Register* Notice, by mail to Isabelle Schoenfeld, Office of Enforcement, Mail Stop O-4 A15A, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, or by e-mail to isabelle.schoenfeld@nrc.gov.

without fear of retaliation. This policy statement applied to NRC-regulated activities of all licensees and their contractors and subcontractors. A safety conscious work environment is an important attribute of safety culture and is one of the safety culture characteristics in the draft safety culture policy statement.

The importance of a positive safety culture for activities involving civilian uses of radioactive materials and other potential hazards has been demonstrated by a number of significant, high-visibility events world-wide that have occurred in the 20-year period since the Commission published its 1989 policy statement addressing safety culture in nuclear power plants. The events occurred across multiple industries including at nuclear power plants, fuel cycle facilities and in other industries such as chemical processing plants and aerospace. Examples of nuclear industry events include those that occurred at the Davis-Besse Nuclear Power Station and the Peach Bottom Atomic Power Station. Workers at the Davis-Besse Nuclear Power Station discovered a cavity in the reactor pressure vessel head caused by boric acid corrosion. The corrosion developed over a period of several years but was not discovered before the cavity developed. The licensee's analysis of the event identified weaknesses in the station's safety culture as the root cause of the event. It particularly noted that management prioritized "production over safety." At the Peach Bottom Atomic Power Station, personnel behaviors adverse to the security of the plant were identified, specifically, inattentiveness by security officers.

Other licensees have had recurring problems resulting in violations of NRC regulations. Through a Commission confirmatory order, a fuel cycle facility licensee, ~~Nuclear Fuel Services, Inc.,~~ committed to having a third-party assessment of its safety culture to determine the causes of its continuing problems ~~and~~ in order to ~~taking~~ establish appropriate corrective actions. The third-party assessment identified weaknesses in ~~every~~ areas

regulatory agency, the Commission has an independent oversight role (through inspection and assessment processes) including addressing licensees' and certificate holders' performance related to areas important to safety culture.

## (3) Safety Culture Concept

In 1991, as a result of the 1986 Chernobyl accident, the International Nuclear Safety Group (INSAG) emphasized the concept of safety culture for the nuclear industry in its report, INSAG-4, "Safety Culture." INSAG is an advisory group to the International Atomic Energy Agency (IAEA). The INSAG-4 definition of safety culture is, "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."

Implied in the INSAG definition of safety culture is the recognition that every organization is continually faced with resolving conflicts among its goals for cost, schedule, and quality (or safety). The organization's members (groups and individuals) also face conflicts among different goals in performing their jobs. Management establishes the framework (management systems, programs, processes) and communicates its priorities for resolving conflicts among different goals. Members of the organization work within that framework and are influenced by management's priorities, but they have their own beliefs and attitudes about what is important and make individual choices on how to proceed when faced with multiple competing goals. The INSAG definition emphasizes that in a positive safety culture, the goal of maintaining nuclear safety receives the highest priority in the organization's and individuals' decision-making and actions when faced with a conflict with other organizational or individual goals.

culture statement or in two separate statements, one each for safety and security, while still considering the safety and security interface.

Based on a variety of sources including document reviews and stakeholder feedback, the Commission concluded there is no one definitive view of this issue, but the results weighed heavily toward a single policy statement to be titled a "Safety Culture Policy Statement." Document reviews and stakeholder feedback suggested that a single 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. For these reasons, the Commission determined that t~~T~~he term "safety culture" should include both safety and security. ~~be considered as all encompassing because there would be no need for security pertaining to the use of radioactive material if it were not for radioactive material used by licensees and certificate holders.~~

Safety and security have been the primary pillars of NRC's regulatory programs. However, in the current heightened threat environment, there has been a renewed focus on security, and the staff has implemented a number of efforts to enhance security and strengthen the safety and security interface. It is important to understand that both safety and security share a common purpose of protecting public health and safety. In today's environment, safety and security activities are closely intertwined, and it is critical that consideration of these activities be integrated so as to compliment each other and not ~~to~~ diminish or adversely impact either safety or security. Further, it is important for licensees and certificate holders to provide personnel in the safety and security sectors with an appreciation for the importance of each, emphasizing the need for integration and balance to achieve optimized protection. The importance of both safety and security in an equal

and balanced manner within NRC's regulatory framework is clearly evident in the Commission's mission and strategic goals.

While many safety and security activities complement each other or are synergistic, there remain areas where potential conflicts may arise differences. It is then imperative that mechanisms be established to resolve these potential conflicts to differences if we must assure the adequate protection of public health and safety and promote the common defensce and security. Hence, safety and security have implications for each other in connection with all aspects of nuclear activities. For example, the enhanced risk of a sabotage event has highlighted the importance of integrating safety and security in the field of protection and of identifying areas where they need to complement each other so that a terrorist event can be dealt with in as seamless a fashion as possible.

One potential important difference or challenge is the way in which individuals involved in safety and security activities approach the goal of risk mitigation and protection of public health and safety. The safety staff is typically focused on preventing errors that would result in an inadvertent accident while the security staff is focused on preventing deliberate attacks or diversion of certain materials that could cause harm. Another difference is the way in which individuals involved in safety and security activities approach information sharing. The safety staff promotes information sharing and collaboration while the security staff promotes the sensitivity of information and a need to know. These differences as well as any others identified through stakeholder interactions would need to be resolved and managed. Another challenge is that the organization/facility must ensure that the existence of motivated and capable persons with ill intent is recognized and that the importance of nuclear security to prevent such persons from unauthorized access is understood. This

~~need for an improved~~ sensitivity to the current threat environment is ~~exacerbated by the significant growth in nuclear utilization worldwide~~. To manage these potential conflicts or challenges, the Agency has recently issued regulations on the safety/security interface. An overarching safety culture policy statement which encompasses security supports and further enhances those regulations.

Based on the above considerations, the Commission concluded that a single policy statement would accomplish its goal that, as an overriding priority, safety issues and security issues receive the attention warranted by their significance. Although, in some cases, issues relating to security might be handled differently than issues related to safety. A single policy statement recognizes there is one overarching culture in an organization; however, safety and security functions and goals must be treated equally within that overarching safety culture.

## (6) Characteristics of a Positive Safety Culture

Experience has shown that certain organizational attributes and personnel attitudes and behaviors are present in a positive safety culture. Therefore, in 2006, when the NRC implemented an enhanced reactor oversight process (ROP) that more fully addressed safety culture, it identified and incorporated safety culture components that are overarching characteristics of a positive safety culture. The NRC based its development of the safety culture components on a review of a variety of sources of information including the Institute of Nuclear Power Operations; the IAEA; the Nuclear Energy Agency; the regulatory approaches of other domestic and international organizations; and the organizational behavior, safety culture, and safety climate research literature. The Commission presented

- The organization ~~licensee or certificate holder~~ maintains a continuous learning environment in which opportunities to improve safety and security are sought out and implemented. For example, individuals are encouraged to develop and maintain current their professional and technical knowledge, skills, and abilities and to remain knowledgeable of industry standards and innovative practices. Personnel seek out and implement opportunities to improve safety and security performance.

## (7) Implementation of Policy

This policy statement describes areas important to safety culture, but it does not address how the nuclear industry, the Agreement States, and the NRC ~~licensee or certificate holder~~ should establish and maintain a positive safety culture in ~~its~~ their organizations. ~~Licensees, and certificate holders~~ The nuclear industry, the Agreement States, and the NRC differ in their size and complexity, infrastructure, and organizational frameworks. Therefore, a single approach for establishing and maintaining a positive safety culture is not possible. Nevertheless, the Commission expects that nuclear safety and security issues receive the attention warranted by their significance, and all organizations ~~licensee or certificate holder~~ 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.

## 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