Safety Culture Policy Statement Stakeholder Workshop Questions

Topic 1: Should NRC combine its expectations in the policy statement for safety culture and security culture or should NRC keep its expectations separate?

The policy statement for safety culture should be a single statement that addresses safety culture expectations for all personnel with unescorted access to a nuclear power station. Security should not be addressed separately within that single statement. Security forces are in most cases fully integrated into the plant processes, procedures, and expectations for safe operation and protection of public health and safety. Significant progress has been made in recent years to ensure security personnel have the same expectations regarding a nuclear safety culture that other plant workers involved in safety related activities have. They have the same processes available to report nuclear safety issues or concerns. These expectations and processes are routinely reinforced through training and refresher materials. To address security in a separate policy or within a single policy may only provide negative reinforcement that security is held to a different standard and current proven processes are not sufficient. This would be an undesirable outcome.

1. **Within organizations, one can think about safety and security in different ways. For example, safety may take precedence over security, security may take precedence over safety, or both may be treated equally. Different types of licensees, certificate holders and organizations have a variety of experiences and perspectives. How does your organization view the relationship or hierarchy between safety and security functions and decision making?**

   The safety and security organizations work together to provide protection of public health and safety. NRC regulations require integration to ensure they both remain effective across a wide range of normal and contingency events. Security works closely with station operations and ultimate authority and responsibility is given to the Operations Shift Manager to assure that both disciplines work together to assure nuclear safety is maintained during a contingency event. This is another reason to ensure that security is fully integrated into plant processes as they provide a uniform and controlled mechanism to maintain nuclear safety.

2. **While efforts to maintain safety and security have the same common goal of protecting public health and safety, there can be distinct differences in the approach used to achieve that goal and that may have competing outcomes. One example is how information is shared to mitigate risks, where increased sharing of information may contribute to maintaining safety, but presents increased security risks. What are other examples where efforts to maintain safety and security require different approaches or result in competing outcomes that need to be addressed to achieve the desired outcome or goal?**

   Meeting nuclear safety objectives and assuring security measures are maintained is not particularly difficult to manage. As the first sentence in this question states, they have the same common goal. The key is to integrate and manage processes as outlined in the

answer to question 1. Leaders at the stations recognize the importance of security in the safe operation of their plants and expectations are established that all plant disciplines work with security to assure work is well planned and executed without compromising security objectives. Similarly, security activities are planned and executed in a manner that doesn't compromise the ability to conduct work and maintain nuclear safety.

The NRC has a Draft Regulatory Guide DG-5021, "Managing the Safety/Security Interface." This document is expected to be issued final in April 2009. The approaches and examples described in this guidance provide a method of compliance for the interface between safety and security. Each licensee is responsible for balancing the needs of both safety and security to ensure that it can and will meet all program goals, requirements, and procedures. The guidance in this regulatory guide is intended to facilitate the effective interface between safety and security to ensure that a licensee can implement changes to its safety and security programs without adversely affecting its other site programs and its ability to satisfy NRC regulations.

The intended purpose of establishing the effective interface between safety and security is to ensure that the respective staffs coordinate and assess planned and emergent safety- or security-related changes and activities at the facility to identify potential adverse effects on safety and security measures before implementation of the proposed changes or activities.

Licensees of operating power reactors currently have management controls or processes for reviewing, assessing, and managing plant activities or changes to provide continued assurance of adequate safety and security

3. **When resolving differences or conflicts while seeking to maintain safety and security — such as when managing risk, sharing information, planning work, correcting problems, etc. — and where changes or actions that are taken to address either a safety issue or a security issue could have an adverse effect on the other (i.e., security or safety, respectively); what challenges does your organization face?**

When issues arise that have the potential to negatively impact on either discipline, they are entered into the station's corrective action system for resolution and to prevent recurrence. Although the corrective action program is the preferred, and in most cases the most effective, means to resolve potential conflicts, a variety of avenues are available to any individual that may wish to identify a issue or concern. Some of these include reporting the issue to their supervisor, reporting the issue to operations or plant leaders, utilizing the employee concerns program, and reporting the issue to NRC. If the individual raising the concern would prefer anonymity, several of these processes can accommodate it.

4. **What challenges or complexities arise when licensees and certificate holders work with contractors and vendors where the organizations either take different approaches to resolving conflicting outcomes when they seek to maintain safety and security or the organizations may balance the conflicting outcomes of efforts to maintain safety and security differently?**

The licensee is ultimately responsible for the safe and secure operation of the plant. Licensees are responsible to establish and enforce expectations related to nuclear safety and security. Contracts are established that contain these expectations and training and licensee oversight is provided to assure that contractors and vendors meet station expectations. Oversight of contractors is provided by observation of work by licensee supervisors, QA surveillance, management observation tours, behavior observation programs, and security observations, among other methods. Contractors and vendors have access to processes and programs provided by the licensee or have equivalent processes to promote a nuclear safety culture. Issues are entered into the station corrective action program or reported through the other processes previously discussed.

5. What practices have been used to effectively address the conflicts to achieve the desired outcomes or goals?

Use of the corrective action program, reporting an issue to a supervisor, reporting an issue to operations or plant leaders, utilizing the employee concerns program, and reporting the issue to NRC have all been successfully used to resolve issues and achieve desired outcomes. All of these processes are provided to individuals in training and periodically reinforced through refresher information and recurring training. Health of the programs is monitored by station management through surveys, assessments and audits.

6. Given that there are several ways to think about safety culture and security culture within organizations, the NRC wishes to express a policy in a way that best furthers its goals of protecting the public and environment and ensuring the secure use and management of radioactive materials. If the above issues are viewed in terms of safety culture and security culture implementation, what benefits or challenges would licensees, certificate holders, Agreement States, or others foresee with a single policy statement? Two separate policy statements?

The policy statement for safety culture should be a single statement that addresses safety culture expectations for all personnel with unescorted access to a nuclear power station. Security should not be addressed separately within that single statement. Security forces are in most cases fully integrated into the plant processes, procedures, and expectations for safe operation and protection of public health and safety. Significant progress has been made in recent years to ensure security personnel have the same expectations regarding a nuclear safety culture that other plant workers involved in safety related activities have. They have the same processes available to report nuclear safety issues or concerns. These expectations and processes are routinely reinforced through training and refresher materials. To address security in a separate policy or within a single policy may only provide negative reinforcement that security is held to a different standard and current proven processes are not sufficient. This would be an undesirable outcome.

Regarding fuel cycle and materials licensees and certificate holds, the industry supports a single policy statement to establish the expectation that the safety culture inherently includes a security culture as an integral and necessary component. Extraction of one key component, such as security, chemical safety, or radiation protection, from the overall facility safety program would potentially result in a disproportionate level of resources being

devoted to one program component that could have a negative impact on the overall safety program. Such program elements must be integrated to ensure that the overall safety goal is met. As such, two separate policy statements, one for safety and one for security, could cause confusion and create conflicts regarding the level of emphasis to be placed on each component of the safety culture.

7. How can the NRC best express a policy that gives appropriate weight to safety culture and security culture across the range of licensees and certificate holders? Given the diversity among the licensees and certificate holders regulated by the NRC and the Agreement States, how should the policy statement address any differences in emphasis on safety and security at the different types of licensees and certificate holders?

The policy should be written at a level that allows licensees to choose differing approaches to achieve the same objectives. Different approaches may be required for organizations of different sizes, management structures, regulatory requirements, site configurations, etc. However, the overarching objective of maintaining a strong safety and security culture can be met regardless of these differences if the policy is constructed in a manner that sets clear expectations for maintaining processes and procedures that promote a healthy nuclear safety culture, but does not prescribe methodology.

8. Given the diversity among the licensees and certificate holders regulated by the NRC and the Agreement States, how should the policy statement address any differences in emphasis on safety and security at the different types of licensees and certificate holders?

Diversity among licensees and certificate holders should not result in differing standards when it comes to maintaining a nuclear safety and security culture that protects the health and safety of the public

Topic 2: How should NRC increase attention by licensees and certificate holders to safety culture in the materials area?

In the area of fuel-cycle and byproduct materials licensees, we offer the following specific points. First, consistent with the position of the commercial nuclear power industry, there is general consensus among materials licensees that a *single* policy statement be drafted to address both safety and security. The policy should clearly state the Commission's expectation that licensees and certificate holders ensure that an appropriate safety culture, that includes a security culture component, exists at each facility. This approach would reflect the fact that safety programs in place today are comprised of several components, e.g., radiation protection, chemical safety, security, etc. Secondly, the policy should recognize and allow for a graded approach to facility safety and security culture based on the relative risks of the authorized materials and activities. For example, the sophistication, formality and level of detail in an effective safety culture program at a uranium enrichment plant would far exceed the program at a facility that manufacturers tritium exit signs. Third, more coordination with the Agreement States and the wide variety of fuel-cycle and byproduct materials licensees is needed prior to finalizing and implementing a policy statement. The purpose of such coordination would be to gain additional insights on existing safety and security cultures to better define and articulate the agency's specific goals and expectations regarding enhancements to the current safety and security culture at regulated facilities.

1. What is the NRC doing that is working well to help materials licensees and certificate holders to maintain their safety culture and security culture?

To date, NRC has not developed rules, regulations or guidance on safety and security culture in the materials area. Such a performance-based approach allows licensees and certificate holders the necessary flexibility to implement safety culture components specific to their facility and make changes to their programs in response to events, self assessments or other initiators *without* prior NRC approval or coordination. We appreciate that NRC has not dictated a specific approach or criteria which may work for some licensees but would be detrimental for others. We believe that this performance-based approach is working well and is beneficial to both NRC and the regulated community both from a safety and resource perspective.

2. What might the NRC do differently, or that it is not currently doing, to increase NRC, licensee, or certificate holder attention to safety culture at materials licensees and certificate holders?

The question implies that the current level of attention to safety culture at regulated facilities by the licensee or certificate holder is inadequate. We are not aware of any data to support this assumption. We also disagree with the NRC comment made during the February 3, 2009 workshop that the number of Abnormal Occurrences (AO) reported annually to Congress is the basis for an increased NRC regulatory role in safety and security culture. In fact, the probability of an AO occurring at a regulated facility is extremely low (11 in 2007) when compared to the extremely high volume of regulated activities, uses and applications of licensed material on a daily basis (e.g., >10,000 medical dosages nationwide).

We suggest that NRC consider revising its current approach to enforcement action when assessing the safety and security culture at a facility. Specifically, in a few cases, the NRC's involvement has been detrimental to the safety and security culture at a regulated facility. Licensees work very hard to engrain in their workers the responsibility to report safety violations or unsafe conditions. However, NRC inspection reports and License Performance Reports very seldom acknowledge program successes, highlights or best practices. Instead, the NRC inspection report focuses only on potential violations, thereby diminishing the level of effort to implement and maintain an effective safety and security culture. Industry also believes that there is a negative impact on the program when NRC inspectors mine the facility's corrective action files and internal audits and include such findings in their reports as if the NRC had identified them. Finally, NRC should consider not citing a violation that is self-identified and where NRC determines that effective correction action was taken to prevent a recurrence. Such a performance-based and more cooperative approach to safety culture would encourage facilities to more routinely self-audit and self-identify potential violations and this approach would likely enhance safety culture at regulated facilities.

3. How could the NRC better interact with materials licensees and certificate holders to help them to pay greater attention to maintaining their safety culture and/or security culture?

As stated previously, certain NRC questions imply that the current level of safety and security at regulated facilities is inadequate. That being said, NRC could better interact with licensees and certificate holders by acknowledging the success of maintaining safe and secure operation of these facilities today and by engaging licensees to gain specific insights on the safety and security culture in place today and our mutual goals for culture enhancements. A more cooperative approach whereby the regulator and regulated work together to meet their common goal of safe and secure operations would, in the end, achieve loftier results.

4. If the NRC expresses a policy for materials licensees and certificate holders to maintain safety culture and security culture, or made its references to safety culture and security culture more explicit in its interactions with these licensees and certificate holders, how would their performance change?

The current level of performance would likely not change at many facilities or change very little at best. The biggest concern is that any policy statement or guidance from the NRC on safety and security culture could be detrimental to existing programs if it is prescriptive, focuses more on one aspect of safety culture to the detriment of others, or does not provide the facility with flexibility to make changes to safety culture components as needed without NRC approval or coordination.

5. What should the NRC consider when developing policy statement(s) on safety culture and security culture?

The first question that NRC should consider is, "What problem or perceived problem is NRC attempting to address?" Many regulated facilities have been operating safely under existing safety and security cultures for decades. That being said, facilities recognize, as with any program element, there is always room for improvement. Toward this end, NRC should work more closely with the Agreement States and the regulated community to determine key components of safety culture and incentives for facilities to more routinely conduct self-assessments or periodic independent audits to identify enhancements, in the absence of a requirement to do so. A lot can be shared and learned from site to site and, even between categories of licensees. Further, it would be beneficial if NRC recognized that facility operators work diligently each day to ensure safe and secure operations at regulated facilities because doing otherwise is unacceptable and in no one's best interest.

5.1. What is the current level of understanding of materials licensees and certificate holders of the NRC's expectations that they maintain a safety culture that is cognizant of issues relating to security? How does this level of understanding change with the type of licensee or certificate holder?

The licensees understanding of the NRC's expectation for maintaining a safety culture and cognizant of the security aspect is that the licensee will develop and maintain a safety culture which includes a security component. To date, this approach appears adequate and recognizes that the level of program complexity varies depending on the category of licensee and inherent risks, e.g., from a fuel fabrication facility to an industrial gage user.

5.2. How should the NRC consider the different activities (e.g., risk, type of material, quantities of materials, how the material is used, location, etc.) conducted at materials licensees and certificate holders when evaluating whether, or how, to express its policy?

The policy should be generic and not express specific expectations for one licensee category versus another. However, the policy should recognize that due to the risks associated with different categories of regulated facilities, "one size does not fit all" and include the expectation that individual licensees or certificate holders will use their intimate knowledge of regulated activities to determine the specific necessary attributes or components of a successful safety and security culture.

5.3. How should NRC consider differences in the materials licensees and certificate holders (e.g., size of workforce, relationship to activities not regulated by the NRC, etc.) when evaluating whether, or how, to express its policy? What differences should the NRC consider?

As stated in response to question 5.2., the policy should be generic, not express specific expectations for one licensee category versus another, and recognize that "one size does not fit all." The policy should also include the expectation that individual licensees or certificate holders will use their intimate knowledge of regulated activities to

determine the specific necessary attributes or components of a successful safety and security culture.

5.4. What are the unique aspects of security at materials licensees and certificate holders that the NRC should consider when expressing its policy?

Material licensees cover the extremes from facilities which have "Design Basis Events" to facilities which have basic industrial security provisions. The NRC policy needs to recognize that this extreme exists and not, as stated previously, apply a "one size fits all" mentality except to state its expectation that licensees ensure an appropriate safety and security culture commensurate with regulated activities.

5.5. What topics should be addressed in the policy statement(s) that would be of value to materials licensees and certificate holders?

It would be most valuable if the policy recognized that NRC and the Agreement States cannot and should not *regulate* the safety and security culture at facilities but they can and should encourage facilities to develop and implement effective programs, and build and maintain safety culture through periodic self assessments or audits. It should be recognized that it is not in anyone's best interest to have performance problems at regulated facilities due to the safety or security culture. Licensees work diligently through their corrective action programs, employee concern programs, their day-to-day operations, management controls, etc to help ensure that an appropriate culture exists.

5.6. How could the policy statement(s) effectively address issues that involve both safety and security (at the safety/security interface) at materials licensees and certificate holders?

The policy should recognize that security culture is one of several integrated parts of safety culture, i.e. there is no real distinction between cultures, there is not a standalone radiation safety culture, a nuclear criticality safety culture, a fire safety culture, or an environmental protection culture. All of these programs are focused on safety for a particular discipline; the licensee safety culture is approached in an integrated manner across discipline boundaries.

5.7. How can the NRC best express a policy that gives appropriate weight to safety culture and security culture across the range of licensees and certificate holders?

The policy should state the Commission's expectation in generic terms and encourage a performance-based approach to maintaining and enhancing the safety and security culture at regulated facilities. The NRC should not indicate that there is a distinction between safety and security, just like it does not distinguish between nuclear safety and radiation protection. There is a recognized difference between the facility which

processes high-enriched uranium and a facility which processes Mo-99 generators or manufactures tritium exit signs. The risks at each facility cover an extremely broad range but the safety culture is based on the risks specific to the facility.

5.8. Given the diversity among the licensees and certificate holders regulated by the NRC and the Agreement States, how should the policy statement address any differences in emphasis on safety and security at the different types of licensees and certificate holders?

As stated previously, the NRC policy should be generic such that the differences between licensees are recognized, allowed for and can be accommodated by both NRC and the regulated facility.

6. How should the NRC work with the Agreement States to encourage increased attention being focused on safety culture, including the unique aspects of security, at Agreement State licensees?

The NRC should use existing mechanisms to solicit Agreement State input on their programs and their understanding of Agreement State licensee programs to better inform the NRC's draft policy statement. Such mechanisms include NRC-Agreement State working groups, task forces, steering committees, phone surveys, public meetings, workshops, etc. After all, Agreement State licensees make up ~80% of byproduct materials licensees nationwide so it is imperative that they be involved to ensure attention to these matters nationwide. Also, some NRC licensees work within Agreement State jurisdiction and vice versa. Therefore, it is in everyone's best interest that further coordination occurs and that any NRC policy is adopted in a similar manner by the Agreement States.

6.1. What is the level of understanding at Agreement State licensees regarding the value in maintaining safety culture and security culture?

This question is best answered by the Agreement States or their licensees but we believe that most, if not all, Agreement State licensees value the development and maintenance of a safety culture and its relevance to security culture. There is no reason to believe that a licensee located in Delaware is any less focused on safety and security at its facility than a licensee located next door in Maryland.

6.2. What is the level of understanding of safety culture and security culture within the Agreement States?

Again, this question is best answered by the Agreement States but we believe that the Agreement States have a similar understanding and appreciation for safety culture and security culture as the NRC and licensees nationwide.

6.3. How do the Agreement States view the NRC's goal of increasing the attention paid to safety culture and security culture at materials licensees and certificate holders?

Again, this question is best answered by the Agreement States but we believe that the Agreement States value NRC's efforts and goal to help ensure safety culture and security culture at regulated facilities. We also believe that many if not all Agreement States would support a limited role for the regulator while supporting a performance-based approach that recognizes the wide variety in regulated facilities.

6.4. What topics do the Agreement States believe should be addressed in the policy statement(s)?

Again, this question is best answered by the Agreement States but we have no reason to assume that the Agreement States would offer topics for the policy statement that would be unique to them or their licensees since they regulate in a manner that is compatible with NRC.

6.5. How could the NRC help the Agreement States to increase attention to safety culture and security culture at their licensees?

Again, this question is best answered by the Agreement States but we believe that NRC needs to utilize existing coordination mechanisms as discussed in the response to question 6 to solicit input from Agreement States, their licensees and thereby increasing attention to the need for an adequate safety and security culture at regulated facilities.

6.6. How should the NRC address safety culture and security culture at Agreement State licensees that engage in activities within NRC jurisdiction under reciprocity?

As stated previously, the policy statement should include the expectation that the Agreement States will implement an approach to safety and security culture that is similar to NRC's approach on this matter. As we have stated in earlier communication with NRC on other matters, we encourage the NRC and Agreement States to find additional tools and mechanisms to share information of mutual interest regarding performance of licensees who work within both the NRC and Agreement State jurisdictions, e.g., industrial radiographers, mobile medical services. Information sharing in the areas of inspection and enforcement are particularly important for ensuring worker and public health and safety.

6.7. How might NRC use stakeholder involvement to increase the attention that materials licensees and certificate holders give to maintaining a safety culture, including the unique aspects of security?

NRC should share information, as it becomes available, in the form of a Regulatory Issue Summary or Information Notice that regulated facility operators could consider for incorporation into their programs to enhance the safety and security culture. Sharing of information between licenses and between categories of licensees is extremely useful and provides an incentive for facilities to periodically assess their programs for enhancements. As such, NRC could consider holding workshops across the nation with various categories of licensees and certificate holders to share information on safety and security culture, best practices, lessons-learned, etc to better inform NRC as it considers a policy statement and to provide a forum for the regulated community to share information on this important topic.

Topic 3: Does safety culture as applied to reactors needs to be strengthened?

The nuclear power industry believes that a strong nuclear safety culture is an essential element in the safe and reliable production of electricity and that leadership at each site is the appropriate body to take responsibility for setting and implementing expectations for nuclear safety culture. The industry employs the INPO Principles for a Strong Nuclear Safety Culture to provide a common language for all employees to understand their responsibilities and the importance of effective processes and procedures in assuring nuclear safety. The industry also believes that it is the responsibility of the NRC to oversee the licensees' safe operation of the stations and adherence to regulations. The current NRC approach to safety culture is too limited in that it only looks at a limited set of data (10-15 findings that occur at a plant over a year) and makes subjective judgments on this very limited set of data every six months. This approach is backward looking and distracts industry and NRC management from their appropriate roles of direct responsibility for nuclear safety culture and oversight of industry, respectively. The industry has proposed an alternative approach which will strengthen nuclear safety culture. This approach was discussed at the public meeting and is described in enclosure (2) to this letter. The industry alternative uses all the data that is available (inspection results, culture surveys/assessments, employee concerns, industry evaluations, quality assurance audits, self assessments, operating experience, performance trends, etc.) to the site leadership team to provide a holistic and integrated look at nuclear safety culture and to act in a timely manner to correct weaknesses. The NRC's appropriate regulatory footprint will remain its baseline and supplemental inspection program, with, we believe, an enhanced Problem Identification and Resolution inspection procedure which will look at the effectiveness of the nuclear safety culture program. We recommend that the NRC staff work with the industry to transition from the NRC's current approach to the industry proposed alternative, an effort which will include a pilot program. In addition, we believe that NRC and industry should be using a common language to describe the elements of nuclear safety culture. We recommend that the NRC safety policy statement support both of these efforts.

A number of enhancements were made to the ROP in 2006 to address safety culture (for example: safety culture cross-cutting aspect assignment to findings; identifying substantive cross-cutting issues; performing an independent NRC safety culture assessment for column 4 plants).

1. **What are the strengths and weaknesses of the current approach for evaluating licensee safety culture in the ROP?**

   Industry believes the current NRC approach is ineffective: (1) The approach is limited to one set of data (inspection findings) and does not consider data on culture, such as attitudes, values, behaviors, and also does not consider other sources of data, such as industry evaluations, quality assurance audits, employee concerns program, operating experience, site performance indicators, benchmarking, etc. (2) Conclusions on a plant's safety culture, and whether there is a "crosscutting issue" (which implies a cultural problem *across* departments or *across* processes), are based only on four inspection findings in a year's time. (3) NRC decisions whether adequate action has been taken are not predictable or transparent. Neither licensees nor the public can understand how decisions are made.

For example, one of the most common crosscutting issues is procedure adherence. Four usually green (very low significance) inspection findings in procedure adherence in an entire year is weak evidence of a *crosscutting* problem at a site where there are several hundred procedures carried out every day, 365 days a year.

During the 18 month initial implementation period, the number of substantive crosscutting issues (SCCIs) more than doubled, and after 24 months more than a third of the sites in the industry had one or more SCCI. During this same time period, industry performance, as measured by the ROP performance indicators and inspection findings and the INPO performance indicators, continued to improve in safety. There is no apparent relationship between measured plant performance and the significant increase in SCCIs.

Despite this anomaly, the NRC has not conducted an assessment of the effectiveness of the SCCI approach, although the NRC had stated that it would do so in RIS 2006-13, *Information on the changes made to the reactor oversight process to more fully address safety culture* (page 6)[1]. An assessment would include answers to such questions as: Did the new process meet intended objectives and outcomes? Did it predict safety problems? Was the threshold for substantive crosscutting issues appropriate? Did it add value above its cost in NRC and licensee resources? Before implementing the ROP and the MSPI the NRC conducted pilots and an extensive assessment. The SCCI approach similarly warrants a hard look, not just public meetings to roll out lessons learned changes.

The founding principles of the ROP are to be transparent, understandable, objective, predictable, risk informed and performance based. Based on industry experience with the NRC's safety culture approach, it fails to meet these principles. Industry believes that it diverts both industry and NRC resources from their primary focus on plant safety equipment performance and essential plant procedures and processes. In the area of people (safety culture), it relies on limited insights from inspection findings (only four, usually green inspection findings in an entire year) in order to draw conclusions regarding issues with safety culture across an entire site.

2. How has the use of safety culture cross-cutting aspects that are assigned to inspection findings helped to identify potential safety culture issues? Suggest any alternative approaches that licensees could use to identify potential safety culture issues.

The nuclear power industry believes that a strong nuclear safety culture is an essential element in the safe and reliable production of electricity and that leadership at each site is the appropriate body to take responsibility for setting and implementing expectations for nuclear safety culture. The industry employs the INPO Principles for a Strong Nuclear Safety Culture to provide a common language for all employees to understand their responsibilities and the importance of effective processes and procedures in assuring nuclear safety. The industry also believes that it is the responsibility of the NRC to oversee the licensees' safe operation of the stations and adherence to regulations. The industry has proposed an alternative approach which will strengthen nuclear safety culture. This approach was discussed at the public meeting and is described in enclosure (2) to this letter. The industry

[1] No formal assessment has been provided to the public.

alternative uses all the data that is available (inspection results, culture surveys/assessments, employee concerns, industry evaluations, quality assurance audits, self assessments, operating experience, performance trends, etc.) to the site leadership team to provide a holistic and integrated look at nuclear safety culture and to act in a timely manner to correct weaknesses. The NRC's appropriate regulatory footprint will remain its baseline and supplemental inspection program, with, we believe, an enhanced Problem Identification and Resolution inspection procedure which will look at the effectiveness of the nuclear safety culture program. We recommend that the NRC staff work with the industry to transition from the NRC's current approach to the industry proposed alternative, an effort which will include a pilot program. In addition, we believe that NRC and industry should be using a common language to describe the elements of nuclear safety culture. We recommend that the NRC safety policy statement support both of these efforts.

3. What may be better or more effective methods or tools that the NRC could use to help identify precursors to future plant performance deficiencies?

A more effective tool to identify precursors is to focus more on the physical condition of the power plant and the operation of the licensee's corrective action program. Inspectors should have more of their time allocated to ensuring that the licensee is appropriately identifying and prioritizing adverse conditions, analyzing the cause of the condition, including extent of cause and extent of condition, developing appropriate corrective actions and implementing corrective actions in a timely manner. This is the key to identifying precursors and would have been effective in the Davis Besse case.

4. In the following situations the NRC may/or will request a licensee to perform a safety culture assessment (licensee self-assessment, independent assessment, or a third-party assessment): (a) the same substantive cross-cutting issue had been identified in three consecutive assessment letters (generated from assessments conducted at 6 month intervals); (b) a 95002 inspection (Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area) that confirmed the licensee had not identified a safety culture component that either caused or significantly contributed to the risk-significant performance issue that resulted in the supplemental inspection; and (c) a plant enters Column 4 of the Action Matrix.

Under what other situations should the NRC consider requesting that a licensee perform a safety culture assessment?

Licensees currently are required by INPO to conduct a safety culture assessment on a biennial basis. Industry is developing a guideline which will use the same methodology but apply greater levels of independence moving from self to independent to third party. (See enclosure 2.) INPO also assesses safety culture in its biennial evaluations, so there is now an annual assessment of safety culture.

Another ROP enhancement was for the NRC to perform an independent safety culture assessment for plants that enter the multiple repetitive/degraded cornerstone column (column 4).

5. **In what other circumstances might the NRC consider performing an independent safety culture assessment?**

   Industry believes that once the industry has put in place its guideline on conducting nuclear safety culture assessments, including third party assessments, the 95003 inspection procedure should be revised to consist of evaluating the licensee's assessment and not conducting its own assessment.

6. **What other entity, other than the NRC, could perform an independent safety culture assessment or simply verify the results of the licensee's assessments and corrective actions?**

   The industry guideline on conducting nuclear safety culture assessments will provide for independent and third party assessments.

7. **What additional safety culture related ROP changes could help the NRC to improve the focus of NRC and licensee attention on site safety culture issues?**

   See questions 1 and 2.

The NRC has held public meetings where draft changes to several ROP guidance documents resulting from a lessons learned evaluation of the initial implementation period of the ROP safety culture enhancements have been made available for public comment.

8. **What areas beyond the draft changes (for example, a provision in IP95003 for the NRC to be able to conduct a graded safety culture assessment) presented by the NRC have the potential to further enhance how the ROP addresses safety culture?**

   Please see question 2 and enclosure (2).

   The NRC has not conducted an assessment of the effectiveness of the SCCI approach, although the NRC had stated that it would do so in RIS 2006-13, *Information on the changes made to the reactor oversight process to more fully address safety culture* (page 6)[2]. An assessment would include answers to such questions as: Did the new process meet intended objectives and outcomes? Did it predict safety problems? Was the threshold for substantive crosscutting issues appropriate? Did it add value above its cost in NRC and licensee resources? Before implementing the ROP and the MSPI the NRC conducted pilots

[2] No formal assessment has been provided to the public.

and an extensive assessment. The SCCI approach similarly warrants a hard look, not just public meetings to roll out lessons learned changes.

8.1. How would these potential changes enhance or improve how the NRC addresses safety culture through the ROP?

Under the industry approach, the NRC would focus on oversight, especially through the Problem Identification and Resolution inspection procedure, which includes both routine and biennial review of the corrective action system. Safety culture concerns will be entered into the CAP.

9. In what ways does the current process lead to consistency/predictability of implementation by the NRC? Provide examples to support your view.

It is not consistent and predictable across plants and regions.

9.1 In what ways does it lead to inconsistency or unpredictability?

Assignment of aspects or not is dependent on individual inspectors and is not consistent or repeatable. The decision whether the licensee has adequately assessed and taken action to correct a crosscutting issue (four or more aspects) is not consistent across regions and is not predictable. It is not understood by the public or licensees.

10. How effective is the ROP in addressing security culture issues?

The ROP includes a performance indicator, inspection, significance determination, assessment and enforcement of security. In addition, safety culture aspects are sometimes applied to inspection findings. As stated earlier, industry believes the industry approach to assessing safety culture is preferable to the NRC approach; the industry approach includes assessing the security department. Substantial progress has been made over several years toward the goal of fully integrating security into plant processes. Effectiveness would not be enhanced by a separate set of security culture aspects.

10.1. What ROP changes could help the NRC to improve the focus of NRC and licensee attention on site security culture issues?

Industry does not believe there should be a distinction made between safety and security culture issues. A security culture is one important element of a safety culture. If a station has a good safety culture, it would include personnel at the site understanding their role in supporting security as a component of nuclear safety.

In previous public meetings, the NRC has discussed using the Reactor Oversight Process safety culture components and modified aspects as a tool to understand the challenges to safety culture during new reactor construction.

11. How can challenges to safety culture in new reactor construction be identified and addressed in regulatory oversight?

Safety culture for construction differs from an operating plant environment. For a construction environment, safety culture can be inferred from three basic programmatic elements: a safety conscious work environment, quality assurance, and the Occupational Safety and Health Administration (OSHA) program.

Questions on Safety Culture Components

1. **Is there an area(s) important to safety or security culture that does not appear to be captured by the set of nine components? Is the missing area(s) relevant to a particular set of licensees or certificate holders? Or is it generically applicable? If so, please specify.**

   Industry has not had sufficient time to review the new set of nine components. They appear to cover the same areas as the previous set of thirteen. Industry believes that the best approach for the ROP and the industry would be to use a common set of components and aspects or principles and attributes so that we are speaking with a common language. Industry would be pleased to work with the NRC to achieve that goal.

2. **Of the identified components, is there a safety culture component(s) that you consider to not be important, or to not contribute, to safety culture and should therefore be dropped? If so, please specify.**

   See question 1.

3. **How should the Commission communicate a common understanding of the components of safety/security culture?**

   We should be communicating with the same language.

4. **How should the Commission, through the policy statement, influence licensee and certificate holders to use their understanding of safety/security culture to improve performance?**

   The policy statement should encourage industry to take the lead in developing common guidelines for assessing safety culture and correcting weaknesses.

5. **Should there be new regulatory requirements specifically addressing safety culture? If so, please explain. Or, how should safety culture insights to be used, e.g., to inform regulatory response to findings or violations within existing requirements?**

   Industry does not believe that there should be regulatory requirements in the area of safety culture.

6. **Given the range of NRC licensees and certificate holders, how can the Commission best communicate its expectations regarding the scope of programs and processes to address safety/security culture in a manner that appropriately considers the different licensee and certificate holders environment?**

Industry believes there should be a graded approach based on the size and type of safety issues involved in the facility.

7. How should the Commission define the components of safety and security culture (i.e., one set of components addressing both safety and security culture in an integrated manner or two sets of components, one to address safety culture and another to address security culture)? What are the risks and benefits of combining or separating them?

Regarding making distinctions between safety and security culture please see the responses to topic 1 questions. Industry believes there should be one set, and that the industry and NRC should work toward a common set of components or principles.