Summary of NRC Public Meeting on Safety Culture Initiatives
December 8, 2005

The purpose of this meeting was for NRC staff and stakeholders to come to a common understanding of safety culture terminology and definitions, in preparation for the safety culture initiatives public meeting on December 15, 2005.

Participants observed that prior to the meeting, NRC, the Institute of Nuclear Power Operations (INPO), and industry representatives (including from INPO, the Nuclear Energy Institute [NEI], and utilities) performed a mapping between the INPO and NRC's attributes/components of safety culture. INPO and NRC staff presented their views on the mapping at this meeting.

INPO Presentation

A representative from INPO discussed the outcome of their mapping exercise. He explained that the International Atomic Energy Agency's (IAEA) concepts had been incorporated directly into the development of the INPO document "Principles for a Strong Nuclear Safety Culture". The following points were made in the presentation:

- INPO had recommendations for minor word changes, which they committed to provide in writing at a later date. For example, one recommendation is for a change to the Safety Culture Component *work control* description, "maintenance scheduling is both predictive and reactive"... industry would *like* to be predictive, but it is not always possible, and when it is not predictive, it is not necessarily an indication of a safety culture deficiency.

- INPO and NRC agreed that there was a great deal of overlap in components/attributes of safety culture although the emphasis might be somewhat different (e.g., NRC's focus is regulatory).

- There was a caution that some of NRC's proposed component and sub-component descriptions are written such that, non-safety culture problems could be tagged as potential safety culture issues. For example, errors could be made in the work control process that are not necessarily indicative of a safety culture shortfall, yet would still fall within NRC's definition as currently worded.

- NRC's definitions are in general outcome-based while INPO's definitions contain a mix of outcome- and behavior-based aspects.

- INPO covers safety culture attributes not covered by NRC's sub-components. For example, dignity and respect, and the relationship between operations and owners, as aspects of safety culture that are covered by INPO, but appropriately, not by NRC.
- Industry took an active part in developing the INPO principles document. Introduction of additional language at this point could be confusing. Since the industry attributes already cover all of the NRC sub-components, a question was raised that can the NRC just adopt the industry's language?

General Discussion

The meeting participants discussed differences in language and framework between the INPO and NRC documents, and potential implications.

One stakeholder pointed out that INPO has eight principles while the NRC has four components, which meant that while the documents may be the same in aggregate, the entire construct/structures of the two documents are different. Therefore if licensees are self-assessing to INPO's eight principles, and NRC inspectors are trained to NRC's four components, there will be a delta between the two. NRC staff agreed that the Reactor Oversight Process (ROP) looks at cornerstones and that there is a fundamental difference in construct between INPO evaluations (based on functional areas, such as maintenance) and the ROP (based on cornerstones of performance). However, staff emphasized that it was not important to make INPO's functional areas match the cornerstones, rather it was important to have a common understanding of terminology. Staff further emphasized that there are a number of places where INPO's language is excellence-oriented, which would not be appropriate regulatory language.

A stakeholder commented that Senator Voinovich had set a goal for the NRC effort to identify leading indicators to catch problems before the next Davis Besse. Why wasn't the NRC coming up with acceptance criteria for safety culture evaluations? NRC staff responded that it was not important for the regulator to step back and make a conclusion about the health of the forest in the baseline inspection program. What needs to be done is to see how the health is reflected in the quality of soil, new tree growth, etc. From a regulatory point of view it is not helpful to issue to a licensee a "safety culture" finding. It is more useful and within the ROP framework to consider the cross-cutting aspects (i.e., safety culture components) related to a Human Performance or a Problem Identification and Resolution finding, for example. The cross-cutting areas of the baseline inspection program is the most leading piece of the initiative.

NRC Presentation

NRC staff discussed the outcome of their exercise mapping INPO principles, attributes, and applicable performance objectives onto the NRC components and sub-components of safety culture. The following points were made:

- INPO has coverage of the NRC safety culture components and sub-components.
- Staff distributed a sub-component descriptions draft document with revisions highlighted based on review and comparison with the INPO safety culture principles and attributes and selected Performance Objectives and Criteria document so that the NRC descriptions would be better aligned with INPO terminology, as appropriate.

- NRC defined the safety culture components and sub-components in language that was more regulatory in nature.

- There is close alignment among descriptions in NRC, INPO, and IAEA documentation.

- It is important that the sub-components do not cut across multiple cross-cutting areas.

General Discussion

Stakeholders had questions about the possible unintended consequences of incorporating safety culture components into the ROP and the issue of threshold. Additional concerns were voiced on

how the NRC would expect to use the components with respect to the Option G approach. NRC staff responded that the cross-cutting components (i.e., safety culture components within the cross-cutting areas) would not be reviewed unless there was a performance deficiency already determined (as is the case for the existing process).   In other words, a plant would not see a change in day-to-day interaction with the regulator unless it had moved across the columns in the action matrix.

Stakeholders asked that the use of "incentives" in the definition of accountability be dropped because of the potential for intrusiveness. They also asked that "adequate" be dropped from adequate resources and that it just be "resources." Stakeholders emphasized that this is one of the cases where it is important that the language be couched in terms of performance, rather than intent. With regard to resources, NRC staff responded that inspectors were not going to be looking over business plans, capital improvement plans, etc. What they would be looking at is, for example, whether a number of procedures were not changed over a period of time that should have been, and the inspector would then be expected to pull the string and find out the reason why and focus on that. If there were performance deficiencies with the same common cause, this would inform NRC's assessment as it is currently done in the ROP assessment process.

Stakeholders commented on NRC's use of the INSAG-4 definition. Why take the INSAG definition when others may be more precise? NRC staff stated that all safety culture definitions were closely aligned. In response to a stakeholder request, the NRC staff indicated that it's view on acceptability of INPO definitions will be articulated in a SECY paper. In addition, the ROP basis document will need to be updated, which is another place where NRC can capture its views on the acceptability of safety culture definitions. In response to stakeholder requests for guidance the staff stated that there would be consideration given to doing a Regulatory Issues Summary on this topic.

Stakeholders asked if implementation of Option G would require that there be a change in what inspectors would have to do on a day-to-day basis (baseline inspections)? Another stakeholder commented on how important it was that the regulatory process give licensees sufficient time to deal with cross cutting issues, since they were usually related to cultural problems that take a long time to fix. Stakeholders warned NRC not to push the licensee to take action too fast and too shallow to address the real problem. NRC staff assured stakeholders that questions related to process would be answered more fully at the December 15, 2005 public meeting,

A stakeholder also commented that the INPO process had been used by NRC in the past, e.g., for operator training and that the NRC should give consideration to using INPO assessments as an input to NRC assessments, e.g., for leadership behavior and safety attitudes. NRC staff cautioned that consistent with the NRC/INPO Memorandum of Understanding (MOU), NRC can look at INPO evaluations, but does not follow up on specific INPO corrective actions, as laid out in the MOU. If NRC has a safety issue, and INPO has already looked at it too, NRC can follow up on that. There is an existing structure for NRC using INPO evaluations. The INPO representative indicated that it's open to add to that MOU, if necessary.

Summary

- NRC is satisfied that INPO documents include what is important to safety culture, and go beyond NRC in certain areas. NRC will document this publicly.
- There is agreement that NRC can not just transfer INPO's principles and attributes because the INPO and ROP frameworks do not line up.

- There is a common understanding of the meaning of safety culture terminology used.
- There is convergence on NRC's use of the INSAG definition of safety culture since it is closely aligned with INPO's definition and has a more regulatory aspect.
- NRC staff will use the construct and definitions proposed at this meeting for its presentations at the December 15, 2005 public meeting.

Acronyms

AP	Alternative Process
CAP	Corrective Action Program
CCA	Cross-Cutting Area (in ROP)
IAEA	International Atomic Energy Agency
INPO	Institute of Nuclear Power Operations
INSAG	International Nuclear Safety Advisory Group (of IAEA)
MOU/MOA	Memorandum of Understanding/Agreement
NRC	U.S. Nuclear Regulatory Commission
QA	Quality Assurance
PI&R	Problem Identification and Resolution
RIS	Regulatory Issue Summary
ROP	Reactor Oversight Process
SCWE	Safety-Conscious Work Environment
SECY	Secretary of the Commission, Office of the (NRC)
SOER	Significant Operating Experience Report