EDO Principal Correspondence Control

FROM: DUE: 12/30/04 EDO CONTROL: G20040859
DOC DT: 12/13/04
FINAL REPLY:

A. C. Tollison, Jr.
Institute of Nuclear Power Operations (INPO)

TO:

Chairman Diaz

FOR SIGNATURE OF : ** PRI ** CRC NO: 04-0765

Chairman Diaz

DESC:

Principles for a Strong Nuclear Safety Culture

ROUTING:

Reyes
Virgilio
Kane
Merschoff
Norry
Dean
Burns/Cyr
Collins, RI
Travers, RII
Caldwell, RIII
Mallett, RIV

DATE: 12/20/04

ASSIGNED TO: CONTACT:

NRR Dyer

SPECIAL INSTRUCTIONS OR REMARKS:

Prepare short acknowledgement letter to
A. C. Tollison, Jr., for the Chairman's signature.

OFFICE OF THE SECRETARY
CORRESPONDENCE CONTROL TICKET

Date Printed: Dec 20, 2004 13:10

PAPER NUMBER:	LTR-04-0765	**LOGGING DATE:**	12/17/2004
ACTION OFFICE:	EDO		
AUTHOR:	Mr. Alfred Tollison		
AFFILIATION:	INPO		
ADDRESSEE:			
SUBJECT:	Provides document from an INPO internal review to identify lessons learned and to develop improvements at INPO that could help prevent a recorrence of a similar event (Davis-Besse)		
ACTION:	Signature of Chairman		
DISTRIBUTION:	RF, SECY to Ack		
LETTER DATE:	12/13/2004		
ACKNOWLEDGED	No		
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NOTES:	Chairman's Correspondence		
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DATE DUE:	01/04/2005	**DATE SIGNED:**	

EDO --G20040859

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A. C. Tollison, Jr.
President and Chief Executive Officer

December 13, 2004

The Honorable Nils J. Diaz
Chairman
U.S. Nuclear Regulatory Commission
Mail Stop O-16 C1
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Dear Chairman Diaz:

This letter forwards a document that will be influencing INPO's activities for some years to come. After discovery of reactor vessel head corrosion at the Davis-Besse Nuclear Power Station in March 2002, INPO conducted an internal review to identify lessons learned and to develop improvements at INPO that could help prevent recurrence of a similar event. A key finding was that INPO needed to be able to better recognize and more openly address issues affecting safety culture (including excessive production pressure) in its evaluation, assistance, and operating experience activities.

Enclosed is the final version of *Principles for a Strong Nuclear Safety Culture.* This document describes the essential attributes of a healthy nuclear safety culture, with the goal of creating a framework for open discussion and continuing evolution of safety culture throughout the commercial nuclear electric generating industry. It builds on and supports the *Principles for Enhancing Professionalism of Nuclear Personnel.* It is complementary to, and is expected to be used in conjunction with, INPO's other principles documents.

The initial version of this document was issued in "preliminary" form in November 2003. We encouraged our members to make in-depth comparisons between the preliminary principles and their day-to-day policies and practices and to use any differences as a basis for improvement. We also asked for feedback and suggestions for improvement based on their applications. Industry feedback validated the scope and content of the preliminary document; and as a result, the final version does not vary greatly from the preliminary. However, the feedback provided some key concepts, now included, that are worthy of the industry's attention.

Attachment 1 summarizes the major differences between the preliminary and final documents. Attachment 2 lists some ways INPO member stations have used the preliminary document over the last year to advance their nuclear safety culture.

If you have any questions, please contact me at (770) 644-8200 or Clair Goddard of my staff at (770) 644-8683.

Sincerely,

Fred

ACT:msp

Enclosures: (As stated above)

SIGNIFICANT CHANGES TO THE FINAL DOCUMENT – PRINCIPLES FOR ENHANCING A STRONG NUCLEAR SAFETY CULTURE

1. The importance of clear communication has been emphasized by highlighting its role in building trust (Principle 3), encouraging management to consider issues from the employee perspectives (Principle 2), and checking worker understanding of the bases for key decisions (Principle 3).

2. Employee confidence in sound corrective action programs and employee concerns programs has been made more visible. Principle 7 contains a new attribute regarding employee confidence that safety issues will be prioritized, tracked, and resolved. An existing attribute in Principle 3 regarding employee concerns was enhanced.

3. Principle 1 was modified to reinforce the notion that each individual should understand his or her personal responsibility for nuclear safety. A new attribute was added under this principle on the role that support groups have in contributing to a strong safety culture.

4. Principle 2 contains a new attribute on the need to consider safety culture in selecting and evaluating managers.

5. Principle 3 recognizes how trust can be strengthened by treating individuals with dignity and respect. An attribute was added under this principle to recognize the contribution of management incentives in improving long-term plant performance.

6. Principle 4 acknowledges that decisions can be improved through the review of past operational decisions when associated facts and underlying assumptions change. Also, a new attribute captures the notion that staff, supervisors, and managers need to understand and respect one another's role in the full range of decisions-making possibilities.

7. Principle 5 was reworded to better communicate the special characteristics and unique hazards of the nuclear industry that make it different from other industries. It further emphasizes the vigilance needed to maintain the integrity of fission product barriers.

8. Principle 6 was changed to be consistent with more commonly understood terminology (questioning attitude versus "what-if" approach). It further recognizes that the actions and decisions of individuals should be shaped by an understanding that a nuclear facility, being a complex technology, can fail in ways that have yet to be predicted.

9. Principle 6 was modified and a paragraph was added to the background section of the document to emphasize the cultural aspects of flawed assumptions, values, and beliefs on serious events.

INDUSTRY APPLICATION OF *PRINCIPLES FOR A STRONG NUCLEAR SAFETY CULTURE*

USED IN SEMINARS AND TRAINING

- The principles were used to develop a leadership seminar for utility managers. The managers subsequently generated a policy statement and a model of safety culture based on the principles.
- Shift managers were asked to describe why "Nuclear is Different" during qualification interviews by the vice president.
- The document was used as a basis for leadership training (down to the department manager level). The training was subsequently extended to the supervisory level.
- The Nuclear Assessment Department was trained on the principles and began using them as part of ongoing assessment activities.
- The principles were used in supervisor leadership academy activities.
- The principles document was used in operator training.
- A three-day workshop, using the principles document, was conducted for 15 key site leaders after a recent significant event.
- The document was sent to training review boards for incorporation into training.
- The information was used as a resource in the development of training in conjunction with an Integrated Issues Resolution Process.
- A computer-based training module was created that defines and explains key characteristics and company expectations for both safety culture and a safety- conscious work environment.
- Site senior management, including the vice president, delivered "Leadership Courage" training to all first-line supervisors and above, focusing on the eight principles from the document.
- The plant manager conducted training for all licensed operators focused on Principle 5, "Nuclear is recognized as different," and using INPO 91-008, *In- Reactor Fuel-Damaging Events.*

USED TO STIMULATE DISCUSSION AND DIALOGUE

- The site vice president discussed the document at a meeting of department heads.
- The generation vice president used the document as a basis for discussions with second-level managers and above.
- Safety culture principles were placed on the list of topics discussed monthly as part of a leadership initiative.
- The principles were used in a presentation during an all-employee meeting that explained the site decision-making process.
- The information has been worked into the everyday vocabulary and is routinely brought up in discussions. It is used in weekly alignment meetings where principles are related to recent events.
- Managers and supervisors were provided "talking points" to use in creating dialogues with employees.
- The document was covered at a Nuclear Oversight Committee meeting.
- The site vice president shared the document with the site leadership team. Just before a refueling outage, the site vice president met with all incoming contractors, and safety culture was one of the items discussed.
- The chief nuclear officer held discussions with managers at each station to help the management team internalize the principles and attributes.
- The plant manager used the document in small group discussions and stressed the relationship of the attributes to the site culture.
- The document is used periodically to develop reinforcement messages. It is discussed quarterly in first-line supervisor meetings.
- During daily outage leadership meetings, the document was used as a discussion topic.
- The document was distributed to station supervisors to be used as a reference. It has also been used in supervisor alignment discussions and as a coaching tool.

USED IN SELF-ASSESSMENTS, SURVEYS, AND GAP ANALYSES

- Most attributes have been factored into the formal self-assessment process.
- The attributes were used to develop a survey that was given to about 150 employees.
- A self-assessment was conducted to identify "gaps."
- A chief nuclear officer conducted a formal review comparing the company nuclear safety culture to the principles and attributes. The CNO then met personally with each plant management team to discuss the review. The board of directors was also briefed on the principles document and the CNO review.
- The document was used to validate and adjust the station's existing safety culture assessment model.
- Station processes (such as the critical evolution process and the emergent equipment issues process) were revised to include appropriate principles.
- The operations department used the document in assessing itself against conservative operational decision-making.
- The operations manager led a self-assessment gap analysis using the principles document, the INPO operational decision-making document, and safety focus during changing times.
- The principles were used in a management exercise that developed site-specific attributes.
- The site leadership team held a facilitated discussion in which each principle was reviewed, followed by breakout sessions that rated each principle from strongest to weakest. For the weakest principle, a list was generated to define things the station should begin, continue, enhance, and discontinue, with the goal of strengthening that principle.

USED AS A BASIS FOR CRITIQUING RECENT PROBLEMS

- The principles were used during a refueling outage critique to pinpoint how some decisions could have been improved.
- The principles were helpful in pinpointing key lessons learned from an overpower event.
- An assessment was conducted using the principles and comparing them to underlying causes of past refueling outage events.

- A scoring tool was developed and used to sort the underlying causes from the station corrective action program (over the last year) into the associated safety culture principle. A numerical average was assigned to each principle, providing a simple visual display of strongest and weakest principles.

OTHER APPLICATIONS

- The principles have been integrated into the management annual appraisal process.
- The document was used as a personal reference, to self-check individual decisions.
- A cross-functional group was established to review the document and recommend ways to apply the principles.
- Key attributes from the document have been incorporated into a "safety culture field observation" card to guide management observations.
- Coaching cards were developed that contain the principles on one side and specific, observable attributes and standards on the other side.
- Attributes from the document have been formalized into an "Issue Resolution Document" that is used to assess decisions that have potentially significant nuclear, radiological, or personnel safety impacts as well as production and cost impacts.