

Enclosure 3
April 2009 Meeting NRC Handout
Meeting Summary of the 04/16/09 Public Meeting to
Discuss Industry's Proposed Safety Culture Process
Dated May 12, 2009

Industry Nuclear Safety Culture Process

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April 16, 2009**

Meeting Objectives

- **Describe status of industry guidelines**
 - NEI 09-07 Fostering A Strong Nuclear Safety Culture
 - Nuclear Safety Culture Assessment Process Manual

- **Better understanding by NRC management of rationale for industry alternative and appreciation of value to NRC**

- **Better understanding by industry of NRC concerns that need to be addressed within the alternative approach**

Strategic Goals

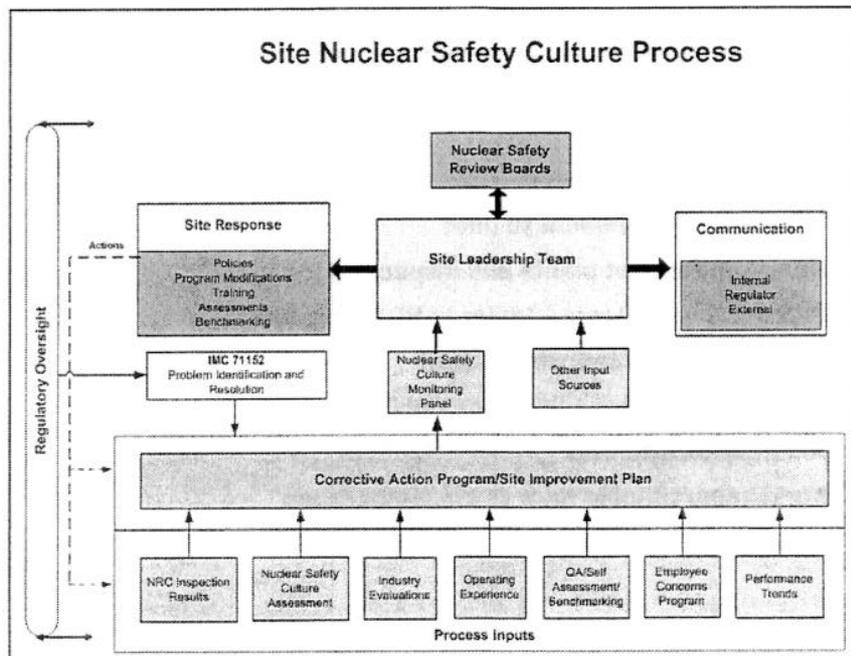
- **Industry and the NRC employ common methodology and terminology**
- **Provide a better window into nuclear safety culture**

Problems with the Substantive Cross Cutting Issue as an Indicator of safety culture

- **Based on a limited set of data (inspection findings)**
- **High degree of subjectivity**
- **Not risk-informed/ safety-focused**
- **Determinations not transparent**
- **Can drive resources and attention**

Summary of Industry Approach

- Uses multiple inputs to assess nuclear safety culture
 - Interpret inputs using INPO principles and attributes model
 - Process inputs include inspection findings, cultural assessments, industry evaluations, self assessments, audits, Employee Concerns, site performance indicators, etc.
- Nuclear Safety Process Monitoring Panel
 - Addresses emergent issues
 - Trends and analysis input data on quarterly basis
- Site Leadership Team reviews on a semi-annual basis



NRC Role

- **NRC would independently assess licensee actions:**
 - **Enhanced PI&R inspections**
 - **Focus on CAP**
 - **Licensee identified safety culture findings entered into CAP**
 - **Corrective action effectiveness**
 - **Observation of safety culture assessment processes**

Key Milestones

- **Complete development of industry guidance**
- **Commission agreement to pilot**
- **Workshop for pilot plants and inspectors**
- **Pilot at several plants (similar to ROP initiation)**
- **Lessons Learned and assessment**
- **Revision to guidance (industry and NRC)**
- **Commission approval**
- **Workshops/training prior to implementation**
- **Implement in 2010**

Nuclear Safety Culture Assessment

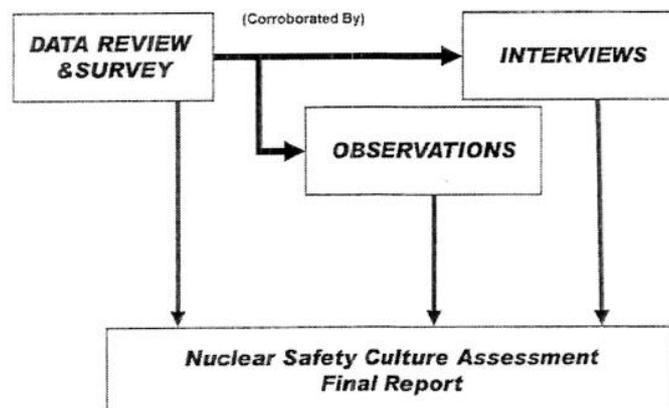
Nuclear Safety Culture Assessment

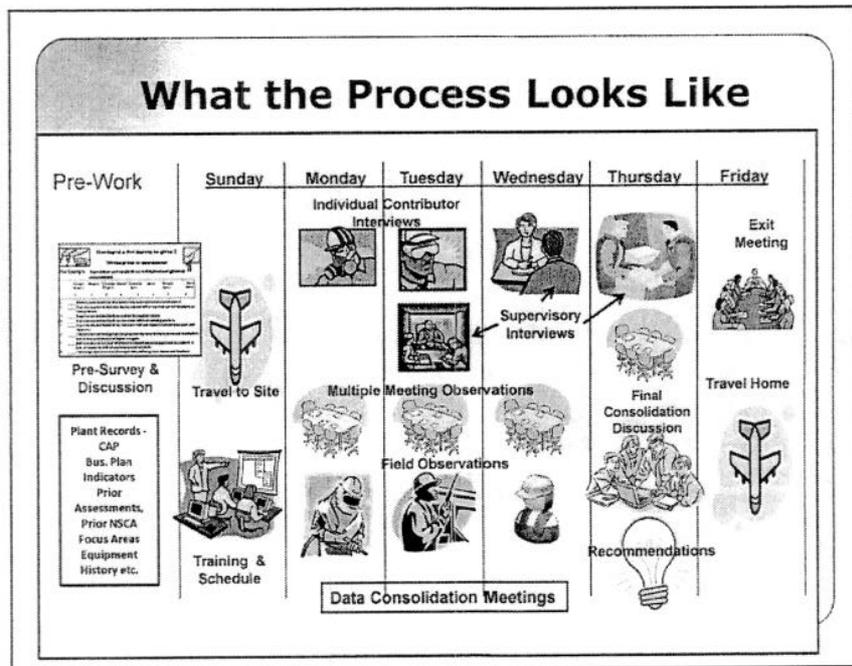
- The 95003 safety culture assessment experience at Palo Verde identified the value of developing a standardized approach
- NEI agreed to develop industry guideline
- Established task force to develop guideline that could be used for self, independent and third party assessments
- All sites required to perform biennial self assessments
 - Required by INPO SOER 02-4
 - Some use contractors for surveys and/or assessments
 - No industry-wide consistency
 - USA has a methodology it has used successfully for five years
- Industry is modifying the USA approach to create a Nuclear Safety Culture Assessment Process Manual

USA NSCA Process

- Structured on INPO's *Principles and Attributes for a Strong Nuclear Safety Culture*; results are provided in that context
- Pre-assessment automated survey and document review
- Assessment of leadership and worker attitudes, opinions, and perceptions through structured interviews and behavioral observations
- Full week evaluation with Friday exit
- Can be scaled up for "independent" or "third party" assessment (see handout)

NSCA Assessment Process





Typical Coverage Pattern

- Start with individual contributors, then supervision
- Data tracking ensures coverage of all INPO attributes and all organizations
- Generally includes:
 - 40 to 60 interviews of individuals and small groups
 - Attend 10-15 meetings and make 10-12 Field Observations
- Survey is provided to all employees (~ 70% response)
- In total 250-300 employees are interviewed or observed
- Typically over 1000 data points go into profile
- Sample size is scaled up for third party assessment

PlantX 2008: Utilities Service Alliance – Nuclear Safety Culture Assessment, Phase II+ Score Sheet						INTERVIEWS	
INPO Principle	INPO Principle	INPO Principle	INPO Principle	INPO Principle	INPO Principle	INPO Principle	INPO Principle
Personnel is personally responsible for their actions (LAW)	Leaders are committed to safety (LAW)	Trust permeates the organization	Decision-making reflects nuclear safety (SIC)	Recent technology is recognized as crucial and unique	A governing culture is established	Organizational learning is embraced	Nuclear safety management is continuous
1A	2A	3A	4A	5A	6A	7A	8A
1B	2B	3B	4B	5B	6B	7B	8B
1C	2C	3C	4C	5C	6C	7C	8C
1D	2D	3D	4D	5D	6D	7D	8D
1E	2E	3E	4E	5E	6E	7E	8E
1F	2F	3F	4F	5F	6F	7F	8F
1G	2G	3G	4G	5G	6G	7G	8G
1H	2H	3H	4H	5H	6H	7H	8H
P1a	P2a	P3a	P4a	P5a	P6a	P7a	P8a
P1b	P2b	P3b	P4b	P5b	P6b	P7b	P8b
P1c	P2c	P3c	P4c	P5c	P6c	P7c	P8c
Total	Total	Total	Total	Total	Total	Total	Total

Interview and Observation Results
N = XXX

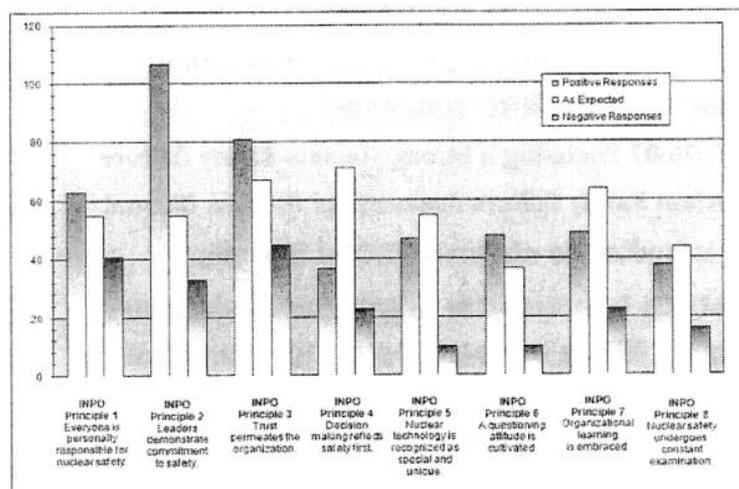
XXXX Positive Responses
 XXXX As Expected Responses
 XXXX Negative Responses
 XXXX Total data Points

Missing = 200 responses
 Green = 100-200 responses
 Red = 201-300 responses
 Purple = 301 or > responses

Assessment Results

- Exit meeting followed by written report
- Can include other areas of Site VP interest
- Both descriptive and graphic results
- Strengths, weaknesses, recommendations
- Follow-up from previous assessment
- Entered in the CAP and/or improvement plan
- Wide communication of results

Typical Summary Graphic of Assessment



Additional graphs exist to show individual attributes of each principle

NSCA Process Manual is Being Upgraded

- Modified to reflect three levels of assessment (self, independent and third party)
- Upgrade survey to distinguish between departments and levels in the organization
- Conduct validation of survey
- Reviewed against revised 95003
- Available for NRC comment May 15

In conclusion

- **Industry is completing two guidelines and will provide them for NRC comment:**
 - NEI 09-07 Fostering a Strong Nuclear Safety Culture
 - Nuclear Safety Culture Assessment Process Manual
- **NRC is invited to observe NSCAs this year**
- **Industry is interested in refining the approach – including NRC's oversight role – for Commission consideration, piloting and implementation in 2010**

Table 1: Graded Nuclear Safety Culture Assessment

	Self Assessment	Independent Assessment	Third Party Assessment
Purpose	To meet INPO SOER 02-4 (Davis Besse) biennial assessment	Requested by Site VP who wants deeper/more specific review	95003: Plant in Column 4 of action matrix
Base Assumptions	Standard Assessment (pre-survey ¹ , document review, interviews, behavioral observation, four 2 person teams, exit, written report) One week.	Standard Assessment plus review of additional area(s) of concern to Site VP. Could require an additional team of assessors to address issues. Typically one week.	Standard Assessment plus review of additional areas of concern determined by Site VP and Team Leader. Two weeks.
Work Product	Assessment Report, including: executive summary, survey and interview results by principle and attribute, follow-up from previous assessment, positive traits observed, conclusions and recommendations for improvement.	Same as Standard Assessment, with conclusions and recommendations on additional topic requested by Site VP.	Same as Standard Assessment with conclusions and recommendations addressing 95003 issues.
Coverage	INPO principles and attributes; minimal additional topics. Typically 40-60 interviews, 15 observations, survey offered to 100%; goal of 70% response (including write in comments)	Same as self assessment with coverage of additional areas of concern and perhaps 20% more interviews and observations.	INPO principles and attributes and additional topics selected to address 95003 issues. Approximately twice the number of interviews and observations as self assessment
Team Makeup	Team Leader (outside site) Team Executive (outside site) 4 external team members (fleet or outside) 4 internal team members 1 Host peer 2 admin (host station) 1 NSCA or fleet process manager	Team Leader (outside utility) Team Executive (outside utility) 8-10 external team members (at least half outside utility, remainder fleet) 1 Host peer 2 admin (host station) 1 NSCA or fleet process manager Optional: Behavioral scientist (MA level)	Team Leader (outside utility) Team Executive (outside utility) 10 external team members (outside utility) 1 Host peer 2 admin (host station) 1 NSCA or fleet process manager Behavioral scientist (MA level)
Team Roles	Team Leader: Interfaces with host site and team members prior to the assessment; conducts ½ day training with team Sunday before assessment; leads team to ensure adequate number of interviews and observations are conducted; briefs site management; conducts exit; prepares report obtaining team concurrence. Team Executive: Provides senior oversight of the team; preferred attendance for entire week; required Wed-Friday. Interfaces with site VP. Team Members: Conduct interviews and observations as two person teams;	Same as Self Assessment. Behavioral scientist works at the direction of the Team Leader. Can provide insights into data analysis, interviewing techniques, and team findings and recommendations.	Same as Self Assessment. Behavioral scientist works at the direction of the Team Leader. Can provide insights into data analysis, interviewing techniques, and team findings and recommendations.

¹ Surveys performed by contractors may be substituted for the USA survey if the results are provided to the assessment team in terms of the INPO principles and attributes.

	Self Assessment	Independent Assessment	Third Party Assessment
	<p>develop conclusions and findings</p> <p>Host Peer: Ensures logistics including badging, interview and observation scheduling; coordinates survey administration</p> <p>Admin: Ensure smooth execution of assessment and manage data collection.</p> <p>Process Manager: Ensures NSCA process is being followed.</p>		
Training	<p>Team Leader: Industry workshop training and previous assessor experience</p> <p>Team Members: Interviewing skills training (or experience in conducting evaluations which involve interviewing) and ½ day team training prior to the assessment.</p> <p>Admin: orientation by qualified Team Leader</p>	<p>Same.</p> <p>Behavioral scientist (Masters Level) will be familiar with assessment methodology.</p>	<p>Same.</p> <p>Behavioral scientist (Masters Level) will be familiar with assessment methodology.</p>
Document Review	<p>CAP, root cause evaluations past 2 years, policies on nuclear safety culture and SCWE, site process PIs, QA audits, self assessment and benchmarking reports, last nuclear safety culture assessment, NRC assessment letters, review ROP results on NRC website.</p>	<p>Same, with any additional materials provided by Site VP.</p>	<p>Same, with any additional materials provided by Site VP, and 95003 related reports.</p>

Nuclear Safety Culture Assessment Process Manual Table of Contents

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B4	Post-assessment Activities and Reports
B5	Sample Assessment Documents
B6	Assessment Report Format Template
B7	Excel Template for Data Collection
B8	PowerPoint Presentation Template for Exit Meeting
Tab #	NSCA Survey Support Section
C1	The General Survey Process
C2	Map of Survey to INPO Principles and Attributes of Strong Nuclear Safety Culture
C3	Creation of "top 10" and "bottom 10" List from survey questions identifying the most relevant INPO attributes.
C4	Desktop Manual for use in conducting Surveys
C5	Connecting with the server to access NSCA Survey
C6	Lessons Learned from NSCA Survey Process
C7	Research Plan for NSCA Survey
C8	Validation of NSCA Process
C9	Collecting Data during NSCA Process
C10	Utilization of the Interview Guidelines
C11	The connection between NSCA Survey and the NSCA Interview Guidelines
C12	Utilization of MS Access Backup plan for collecting data during NSCA Process

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D2	Field Observation Notes
Tab #	Interview Tools
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E2	Manager Interview Guide
E3	Supervisor Interview Guide
E4	Individual Contributor, Professional, non-craft, exempt
E5	Craft Individual Contributor, non-exempt, often in bargaining units
Tab #	INPO Related Documents
L1	INPO Principles and Attributes for a Strong Nuclear Safety Culture
L2	Simplified INPO Principles and Attributes for a Strong Nuclear Safety Culture
L3	SOER 02-4 Revision 1
L4	SOER 02-4, Revision 1 Evaluation Guideline
L5	INPO Principles for Effective Operation Decision Making
L6	SER 2-02
L7	INPO 97-003
L8	INPO Guidelines for Performance Improvement at Nuclear Power Stations
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M1	NRC Safety Culture Components, Short Descriptions, Compared to INPO Principles and Attributes
M2	Cross Reference, NRC Cross-cutting Components aspects and INPO Principles
M3	NRC Regulatory Issue Summary 2006-13
M4	NRC Sample Questions for Safety Culture Components
M5	Davis-Besse Reactor Vessel Head Degradation NRC Lessons-learned Task Force Report
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M10	Comparison of NRC new 9 SCC's and INPO NSC Guidelines and INPO PO&C's

M11	Enclosure NR 95003-2
M12	NRC Inspection Manual Chapter 0305 with NSCA Highlights
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