

Safety Culture Applications and Insights

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Session: Reactor Inspection and Assessment

Introduction

✓ Safety Culture

- Processes
- Behaviors

“We are wholly committed to maintaining a strong safety culture; it’s one of the foundations for our success. It’s important that we continue to hold ourselves accountable to ensure nuclear safety remains our top priority and focus.”

Chip Pardee, Chief Operating Officer – Exelon Nuclear

Processes

- ✓ Benchmarking
 - Surveys
- ✓ Self-Assessment
 - Mid-Cycle Self-Assessment
 - Recommendation 2 to INPO SOER 02-4, Revision 1, “Reactor Pressure Vessel Head Degradation at Davis-Besse Nuclear Power Station”
 - Holistic Work Environment Review
- ✓ Corrective Action Program
 - Cause Analysis
 - Trending

Processes (continued)

- ✓ Inspection Preparations
 - Pre-Inspection Self-Assessments
- ✓ Touchpoints During Inspections
 - Dialogue on Cross-Cutting Aspects
- ✓ Post-Inspection Activities
 - Cause Analysis for Safety-Significant Findings
 - Aspect Trending and Dialogue on Trends
- ✓ Cause Analysis for Performance Indicator Trends

Example Plant Cross-Cutting Aspects

COMPONENTS		ASPECTS	1Q06	2Q06	3Q06	4Q06	1Q07	Rolling 4 Quarters
HUMAN PERFORMANCE	Decision Making	Process						
		Assumptions				1		1
		Communication						
	Resources	Backlogs						
		Training						
		Documentation			1			1
	Work Control	Facilities						
		Planning						
	Work Practices	Coordination					1	1
		Prevention				1		1
Expectations				2			2	
	Oversight			1			1	
PI&R	Corrective Action Program	Identification	1					1
		Trending		1				1
		Evaluation	1	1		1		2
		Corrective Actions		1	1		1	3
		Alternative Processes						
	Operating Experience	Evaluation						
		Implementation						
Self- and Independent Assessments	Performance							
	Indicators							
	Communication							
SCWE	Environment for Raising Concerns	Behaviors						
		Alternative Processes						
	Preventing, Detecting, & Mitigating Retaliation	Training					1	1
		Investigation						
	Chilling Effect							

Example Fleet Cross-Cutting Aspects

COMPONENTS		ASPECTS	Plant A	Plant B	Plant C	Plant D	Plant E	Plant F
HUMAN PERFORMANCE	Decision Making	Process						
		Assumptions		1				
		Communication						
	Resources	Backlogs		1				
		Training						
		Documentation				4	1	
		Facilities						
	Work Control	Planning						
		Coordination			1			
	Work Practices	Prevention				1		
		Expectations	1	2		3	2	
		Oversight						
PI&R	Corrective Action Program	Identification		1				
		Trending				1		
		Evaluation		1				
		Corrective Actions	1		1		2	
		Alternative Processes						
	Operating Experience	Evaluation						
		Implementation						
	Self- and Independent Assessments	Performance						
Indicators								
Communication								
SCWE	Environment for Raising Concerns	Behaviors						
		Alternative Processes						
	Preventing, Detecting, & Mitigating Retaliation	Training						
		Investigation						
	Chilling Effect							

Behaviors

✓ Commitment to Safety

- Decision-Making
- Problem Solving
- Margin Management
- Metrics, Rewards, and Sanctions

✓ Accountability

- Line Ownership
- Teamwork
- Trust

✓ Communication

- Listen, Take Action, Provide Feedback

Conclusion

- ✓ Sound, robust processes and appropriate behaviors result in a culture that treats nuclear safety as our top priority