STARS Self-Assessment Workshop February 23, 2005

USNRC

Region IV

NUCLEAR REGULATORY COMMISSION

- Strategic Goal - In the Use of Nuclear Reactors
  - Prevent radiation-related deaths and illnesses
  - Promote the common defense and security
  - Protect the environment

SOME NRC PERFORMANCE MEASURES

- No Statistically Significant Adverse Industry Trends
- No more than 1 Significant Precursor Per Year
- No Reactor Events Result in Overexposure

NRC PERFORMANCE

- No Statistically Significant Adverse Industry Trends - None
- No more than 1 Significant Precursor Per Year - Davis-Besse 2002
- No Reactor Events Result in Overexposure - None

DAVIS-BESSE LESSONS LEARNED

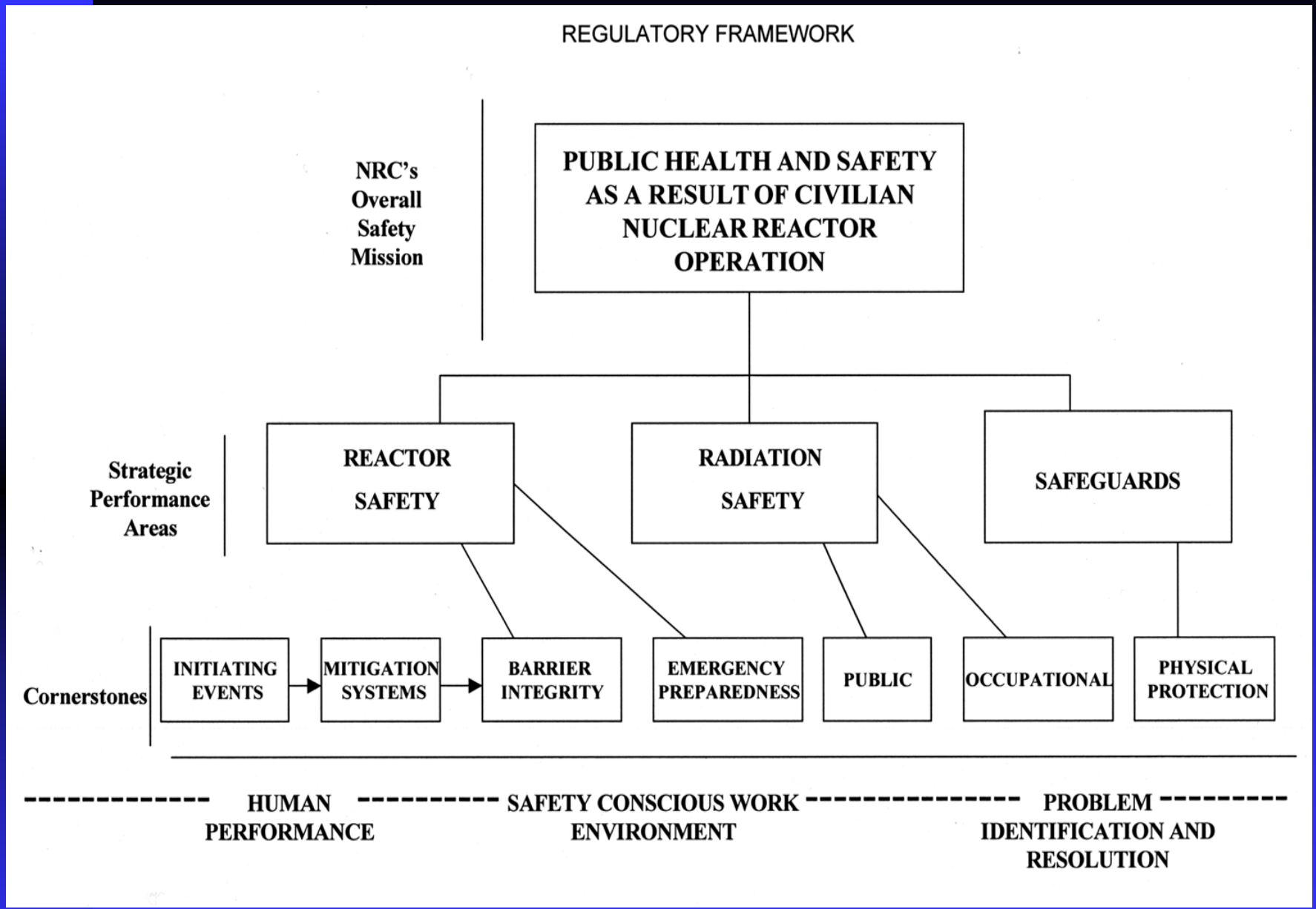
- Why was Davis-Besse Head Degradation allowed to occur?
- Objective is to upgrade NRC oversight so that we will recognize and draw attention to latent failures and longstanding equipment degradation

NRC ASSESSMENT PROGRAM - KEY OVERSIGHT TOOL

- Objective Review of Industry Performance
- Action Matrix Determines NRC Response:
  - Supplemental Inspection
  - Management meetings
  - Orders for plant shutdown

REACTOR OVERSIGHT ASSESSMENT PROGRAM

- NRC's Operating Reactor Assessment Program
- http://www.nrc.gov/reading-rm/doc-collections/insp-manual/manual-chapter/mc0305.pdf


REGULATORY FRAMEWORK
NRC's Overall Safety Mission
PUBLIC HEALTH AND SAFETY AS A RESULT OF CIVILIAN NUCLEAR REACTOR OPERATION
Strategic Performance Areas
REACTOR SAFETY
RADIATION SAFETY
SAFEGUARDS
Cornerstones
INITIATING EVENTS
MITIGATION SYSTEMS
BARRIER INTEGRITY
EMERGENCY PREPAREDNESS
PUBLIC
OCCUPATIONAL
PHYSICAL PROTECTION
HUMAN PERFORMANCE
SAFETY CONSCIOUS WORK ENVIRONMENT
PROBLEM IDENTIFICATION AND RESOLUTION

REACTOR OVERSIGHT PROCESS

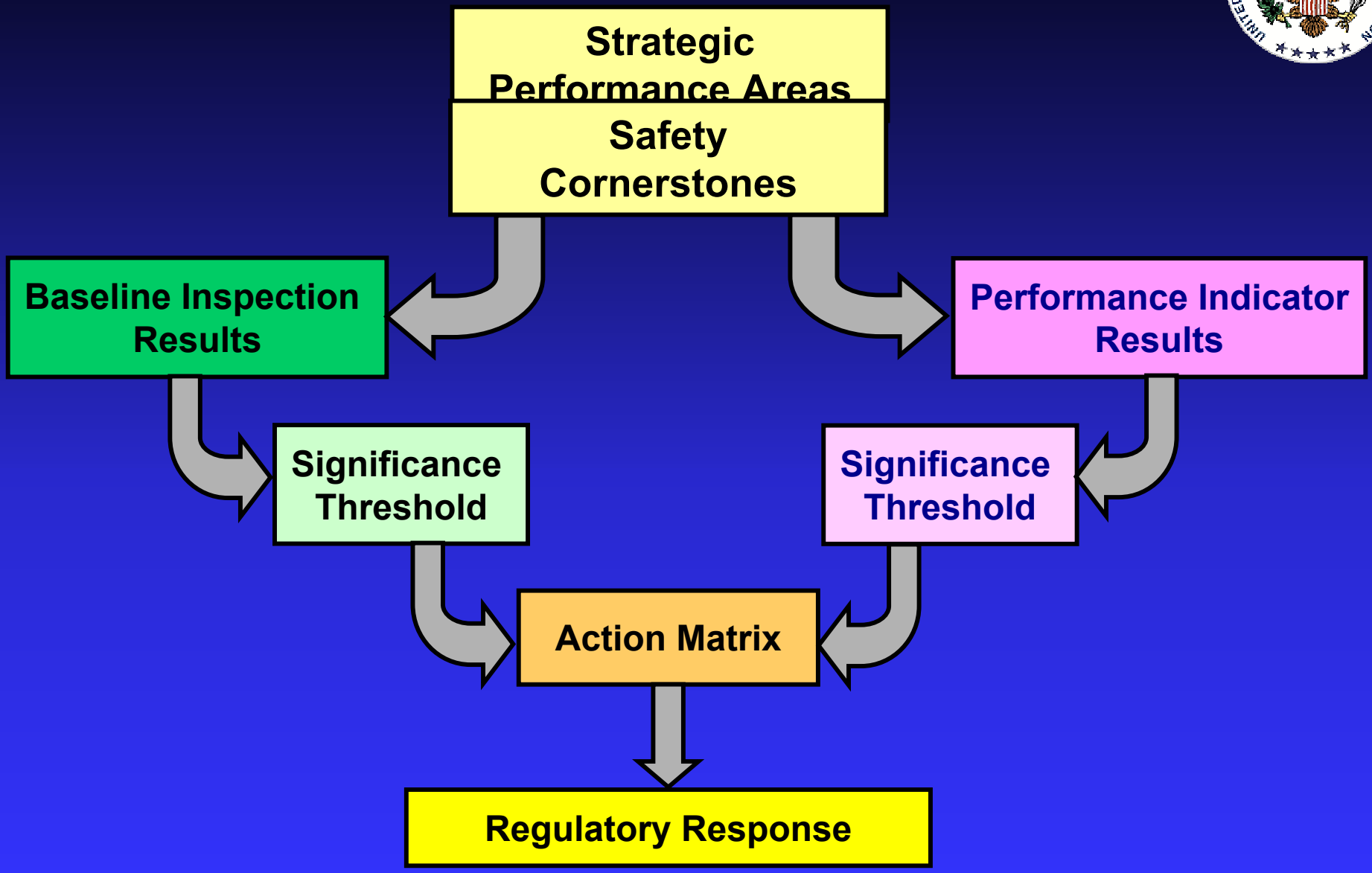
- Indicators Plus Inspection Comprehensively Cover Cornerstones
- Gather Inputs
  - Performance Indicators
  - Inspection Results

REACTOR OVERSIGHT PROCESS

Risk Ranking Colors

GREEN	- very low
WHITE	- low to moderate
YELLOW	- substantial
RED	- high

REACTOR OVERSIGHT PROCESS



REACTOR OVERSIGHT PROCESS - ASSESSMENT

- Continuous
- Quarterly
- Middle of Cycle
- End of Cycle
- End of Cycle Summary Meeting
- Agency Action Review Meeting

REACTOR OVERSIGHT PROCESS - ACTION MATRIX

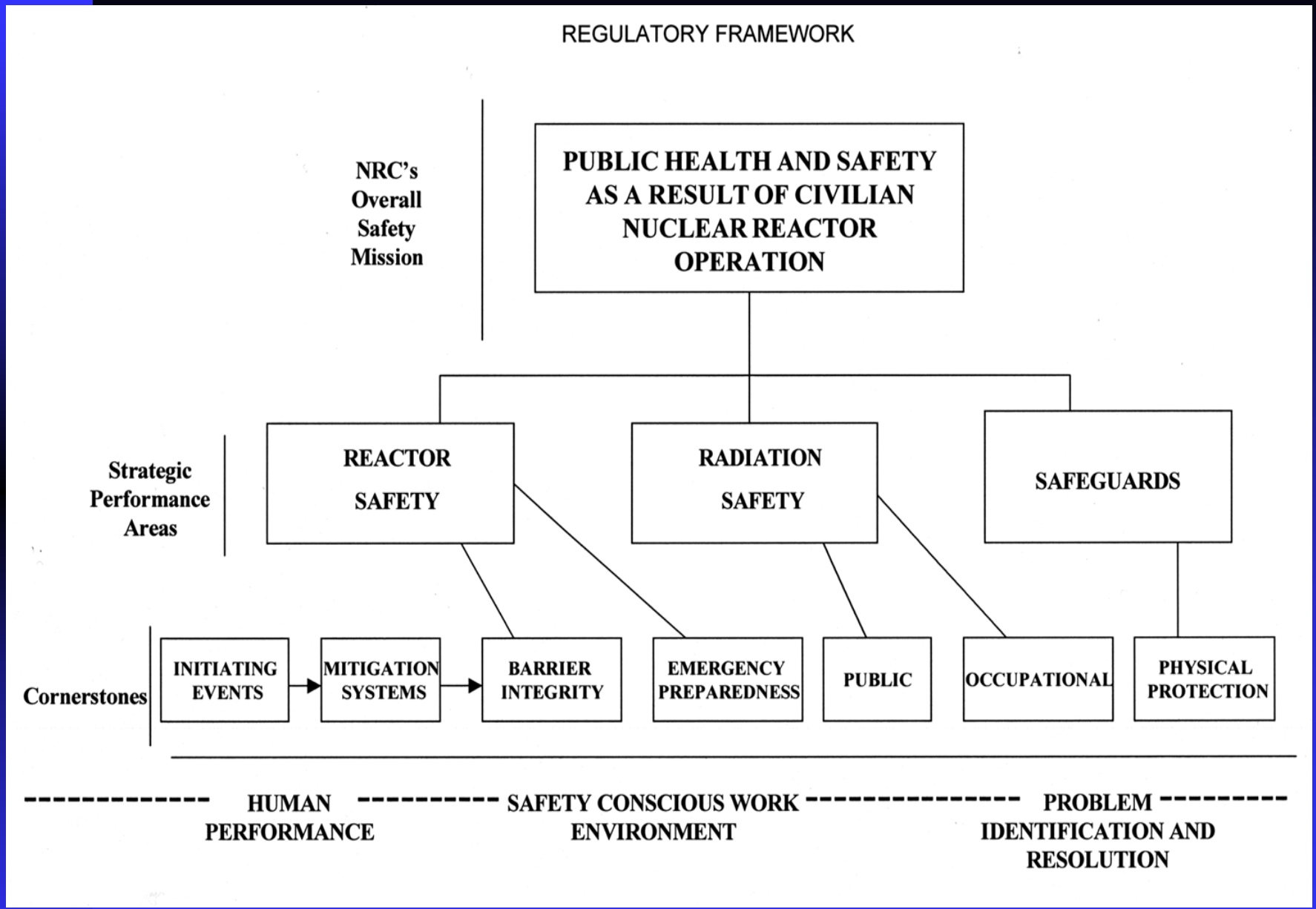
- Exhibit 5 of Inspection Manual Chapter 0305

REACTOR OVERSIGHT PROCESS - ACTION MATRIX

- Cooper Cornerstone Analysis

NRC ASSESSMENT PROGRAM - DEVIATIONS

- Action Matrix Deviations
  - EDO Approves All Deviations
  - EDO Notifies Commission of Approved Deviations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PROBLEM IDENTIFICATION AND RESOLUTION

Cross-Cutting Aspects (Bedrock - Safety Culture)

- Manual Chapter 0305 "Operating Reactor Assessment Program"
  - Human Performance
  - Safety Conscious Work Environment
  - Problem Identification and Resolution

Cross-Cutting Aspects Causal Factors

- Causal Factor - Human Performance
  - Personnel
  - Resources
  - Organization

Cross-Cutting Aspects Causal Factors

- Causal Factor - Problem Identification and Resolution
  - Identification
  - Evaluation
  - Corrective Action

Cross-Cutting Aspects

- Safety Conscious Work Environment
  - Review Allegations
  - Public Meetings
  - Survey Results

Substantive Cross-Cutting Issues

- NRC concern with the licensee's scope of efforts or progress
- Based on multiple (3 or more) green or safety significant inspection findings within the current 12-month assessment period with documented cross-cutting aspects
- Common performance characteristic

Substantive Cross-Cutting Issues

- Help NRC gage supplemental response
- NRC actions per the Action Matrix are not taken in response to these issues alone
- Focused Baseline, including additional PI&R may, be performed or rescheduled

Substantive Cross-Cutting Issues

- The assessment letter should:
  - Identify the number of examples in various cornerstones and describe their cross-cutting aspects
  - Describe the NRC's plan to monitor the issue
  - Defining criteria for clearing the cross-cutting issue

Closing Substantive Cross Cutting Issues

- Substantive cross-cutting issues are closed
  - Criteria From Assessment Letter are Met
  - Conditions for Opening the Issue Have Been Addressed

Cross-Cutting Aspects and Substantive Cross-Cutting Issues

- Open substantive cross-cutting issues are discussed at the mid-cycle and end-of cycle meetings and the Agency Action Review Meeting (if applicable) to determine degree of NRC oversight

REACTOR OVERSIGHT PROCESS - ASSESSMENT

- Action Matrix Column
- Substantive Cross-Cutting Issues

SUMMARY

- We are looking for -
  - Longstanding equipment issues
  - Latent failures
  - Recurring equipment failures
  - Risk-significant equipment failures
  - Cracks in the bedrock

Exhibit 5 - ACTION MATRIX

		Licensee Response Column	Regulatory Response Column	Degraded Cornerstone Column	Multiple/ Repetitive Degraded Cornerstone Column	Unacceptable Performance Column	IMC 0350 Process
RESULTS		All Assessment Inputs (Performance Indicators (PIs) and Inspection Findings) Green; Cornerstone Objectives Fully Met	One or Two White Inputs (in different cornerstones) in a Strategic Performance Area; Cornerstone Objectives Fully Met	One Degraded Cornerstone (2 White Inputs or 1 Yellow Input) or any 3 White Inputs in a Strategic Performance Area; Cornerstone Objectives Met with Moderate Degradation in Safety Performance	Repetitive Degraded Cornerstone, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or 1 Red Input; Cornerstone Objectives Met with Longstanding Issues or Significant Degradation in Safety Performance	Overall Unacceptable Performance; Plants Not Permitted to Operate Within this Band, Unacceptable Margin to Safety	Plants in a shutdown condition with performance problems placed under the IMC 0350 process
RESPONSE	Regulatory Performance Meeting	None	Branch Chief (BC) or Division Director (DD) Meet with Licensee	DD or Regional Administrator (RA) Meet with Licensee	RA (or EDO) Meet with Senior Licensee Management	Commission meeting with Senior Licensee Management	RA (or EDO) Meet with Senior Licensee Management
	Licensee Action	Licensee Corrective Action	Licensee root cause evaluation and corrective action with NRC Oversight	Licensee cumulative root cause evaluation with NRC Oversight	Licensee Performance Improvement Plan with NRC Oversight		Licensee Performance Improvement Plan / Restart Plan with NRC Oversight
	NRC Inspection	Risk-Informed Baseline Inspection Program	Baseline and supplemental inspection procedure 95001	Baseline and supplemental inspection procedure 95002	Baseline and supplemental inspection procedure 95003		Baseline and supplemental as practicable, plus special inspections per restart checklist.
	Regulatory Actions[1]	None	Supplemental inspection only	Supplemental inspection only	-10 CFR 2.204 DFI -10 CFR 50.54(f) Letter - CAL/Order	Order to Modify, Suspend, or Revoke Licensed Activities	CAL/order requiring NRC approval for restart.
COMMUNICATION	Assessment Letters	BC or DD review/sign assessment report (w/ inspection plan)	DD review/sign assessment report (w/ inspection plan)	RA review/sign assessment report (w/ inspection plan)	RA review/sign assessment report (w/ inspection plan)		N/A. RA (or 0350 Panel Chairman) review/ sign 0350-related correspondence
	Annual Public Meeting	SRI or BC Meet with Licensee	BC or DD Meet with Licensee	RA (or designee) Discuss Performance with Licensee	RA or EDO Discuss Performance with Senior Licensee Management		N/A. 0350 Panel Chairman conduct public status meetings periodically
	Commission Involvement	None	None	None	Plant discussed at AARM	Commission Meeting with Senior Licensee Management	Commission meetings as requested, restart approval in some cases.
	INCREASING SAFETY SIGNIFICANCE ---------->						

Note 1: Other than the CAL, the regulatory actions for plants in the Multiple/Repetitive Degraded Cornerstone column and IMC 0350 column are not mandatory agency actions. However, the regional office should consider each of these regulatory actions when significant new information regarding licensee performance becomes available.
Note 2: The IMC 0350 Process column is included for illustrative purposes only and is not necessarily representative of the worst level of licensee performance. Plants under the IMC 0350 oversight process are considered outside the auspices of the ROP Action Matrix. See IMC 0350, "Oversight of Operating Reactor Facilities in a Shutdown Condition with Performance Problems," for more detail.

Cooper Nuclear Station Performance Summary Matrix

	Calendar Year 2001		Calendar Year 2002				Calendar Year 2003			
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Cornerstone	7/1/01 - 9/30/01	10/1/01 - 12/31/01	1/1/02 - 3/31/02	4/1/02 - 6/30/02	7/1/02 - 9/30/02	10/01/02 - 12/31/02	1/1/03 - 3/31/03	4/1/03 - 6/30/03	7/1/03 - 9/30/03	10/01/03 - 12/31/03
Initiating Events	Green	Green	Green	Green	Green	Green	Green	Green	Green	White (6) (12/01/01)
Mitigating Systems	Green	White(1) (12/6/01)	White Continued	White Continued	White Continued	Green	Green	Green	Green	Green
Barrier Integrity	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Emergency Preparedness	White(2) (10/11/00)	Green	Green	Green	Green	Green	Green	Green	Green	Green
	White(3) (6/27/01)	White Continued	White Continued	White Continued	White Continued	White Continued	White Continued	White Continued	White Continued	White Continued
	White(4) (9/6/01)	White Continued	White Continued	White Continued	White Continued	White Continued	White Continued	White Continued	White Continued	White Continued
	White(5) (9/6/01)	White Continued	White Continued	White Continued	White Continued	White Continued	White Continued	White Continued	White Continued	White Continued
Public Radiation Safety	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Occupational Radiation Safety	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Physical Protection	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Action Matrix	Degraded Cornerstone	Degraded Cornerstone	Degraded Cornerstone	Repetitive Degraded	Repetitive Degraded	Repetitive Degraded	Repetitive Degraded	Repetitive Degraded	Repetitive Degraded	Repetitive Degraded

Dates in parenthesis are exit dates for the findings.

Notes:

1). Compromise of the requalification biennial written examinations
2). Failure of exercise critique process
3). Ineffective corrective actions to prevent recurrence of a dose assessment performance weakness
4). Failure to perform timely offsite notifications following an Alert
5). Failure to meet planning standard for timely augmentation of emergency response facilities
6). Exceeded Performance Indicator threshold for Unplanned Scrams per 7000 Critical Hours

Plant	1Q2001	2Q2001	3Q2001	4Q2001	1Q2002	2Q2002	3Q2002	4Q2002
Region IV	1	1	1	1	2	2	3	3
ANO 1								
ANO 2								
Callaway							PIR	PIR
Columbia					HP	HP	HP	HP
Comanche Pk 1								
Comanche Pk 2								
Cooper	PIR	PIR	PIR	PIR	PIR/HP	PIR/HP	PIR/HP	PIR/HP
Diablo Canyon 1								
Diablo Canyon 2								
Fort Calhoun								
Grand Gulf								
Palo Verde 1								
Palo Verde 2								
Palo Verde 3								
River Bend								
San Onofre 2								
San Onofre 3								
South Texas 1								
South Texas 2								
Waterford								
Wolf Creek								
Total X-Cu	5	6	6	6	8	8	13	13

Legend

- Licensee Reponse Column
- Regulatory Response Column
- Degraded Cornerstone Column
- Multiple/Repetitive Degraded Cornerstone

1Q2003	2Q2003	3Q2003	4Q2003	1Q2004	2Q2004	3Q2004	4Q2004	
4	4	5	5	5	5	4	4	
				PIR	PIR	PIR	PIR	
				PIR	PIR	PIR	PIR	
PIR	PIR	PIR	PIR	PIR	PIR			
HP	HP	HP	HP	PIR	PIR	PIR	PIR	
PIR/HP	PIR/HP	PIR/HP	PIR/HP	PIR/HP	PIR/HP	PIR/HP	PIR/HP	
		HP	HP	HP	HP	PIR/HP	PIR/HP	
		HP	HP	HP	HP	PIR/HP	PIR/HP	
PIR	PIR	PIR	PIR					
13	13	17	17	14	14	14	14