

# **Surry Power Station Annual Assessment Meeting**

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**Reactor Oversight Program – CY 2003**



**Nuclear Regulatory Commission, Region II**

**Surry, Virginia**

**April 8, 2004**

# Purpose of Today's Meeting

- A public forum for discussion of the Surry's performance
- NRC will address Surry performance issues identified in the annual assessment letter
- Site Management will be given the opportunity to respond to the information in the letter and inform the NRC of new or existing programs to maintain or improve their performance

# Agenda

- Introduction
- Review of Reactor Oversight Process
- National Summary of Plant Performance
- Discussion of Plant Performance Results
- Surry Response and Remarks
- NRC Closing Remarks
- Break
- NRC available to address public questions

# Region II Organization

Luis Reyes  
Regional Administrator

Loren Plisco  
Deputy Regional Administrator

Victor McCree  
Director Division of Reactor Projects

Leonard Wert  
Deputy Director

Branch Chief  
Kerry Landis

Surry  
Resident Inspectors  
Gerry McCoy  
Norman Garrett  
Dan Arnett

Project Engineers  
Binoy Desai  
Larry Garner

Charles Casto  
Director Division of Reactor Safety

Harold Christensen  
Deputy Director

Regional Specialists

# NRC Performance Goals

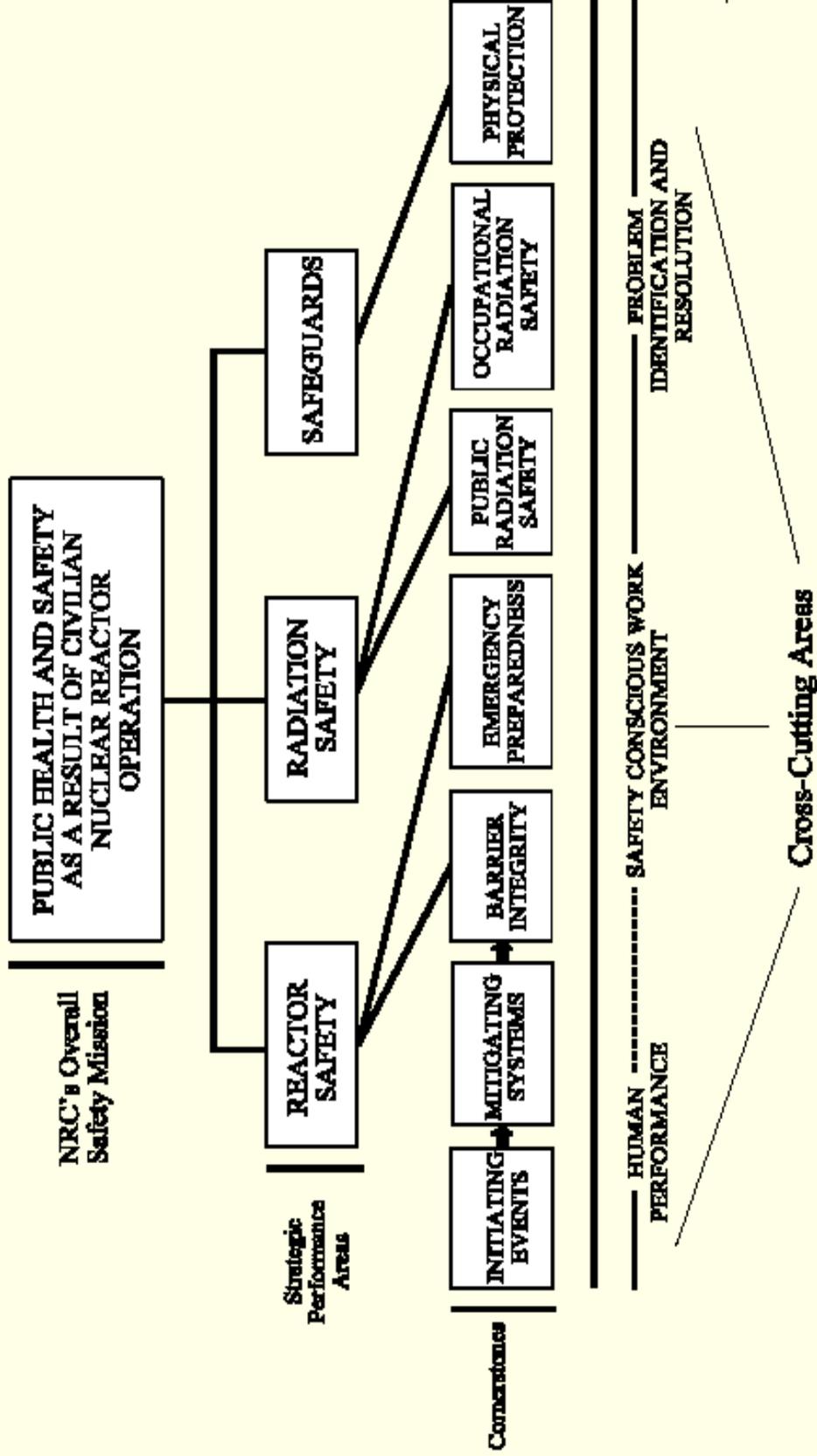
## PRIMARY

- Maintain safety and protect the environment

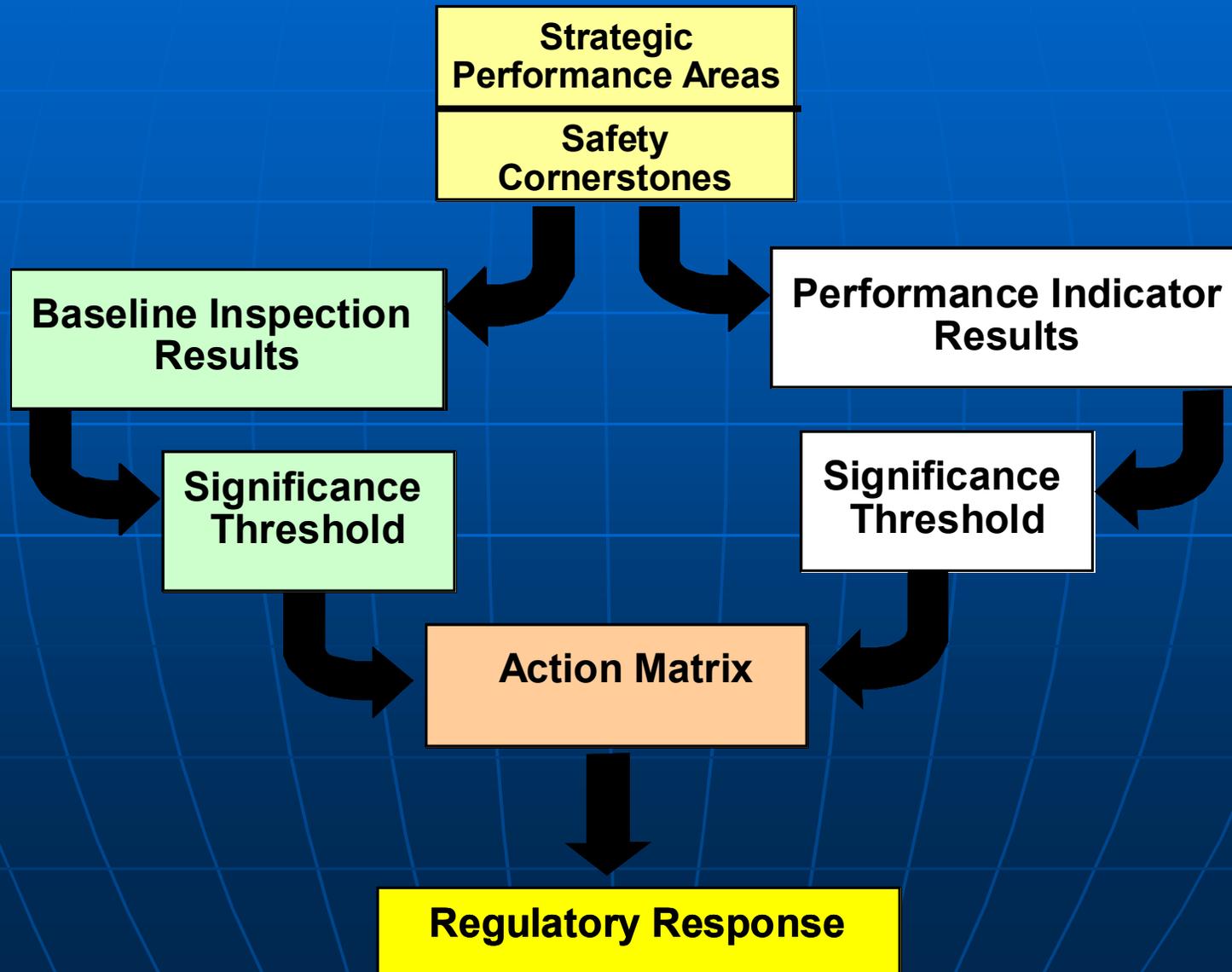
## OTHER

- Enhance public confidence
- Improve effectiveness, efficiency, and realism of processes and decision making
- Reduce unnecessary regulatory burden

# Exhibit 1: REGULATORY FRAMEWORK



# Reactor Oversight Process



# Examples of Baseline Inspections

- Equipment Alignment ~92 hrs/yr
- Triennial Fire Protection ~200 hrs every 3 yrs
- Operator Response ~125 hrs/yr
- Emergency Preparedness ~80 hrs/yr
- Rad Release Controls ~100 hrs every 2 yrs
- Worker Radiation Protection ~100 hrs/yr
- Corrective Action Program ~200 hrs every 2 yrs
- Corrective Action Reviews ~60 hrs/yr

# Performance Thresholds

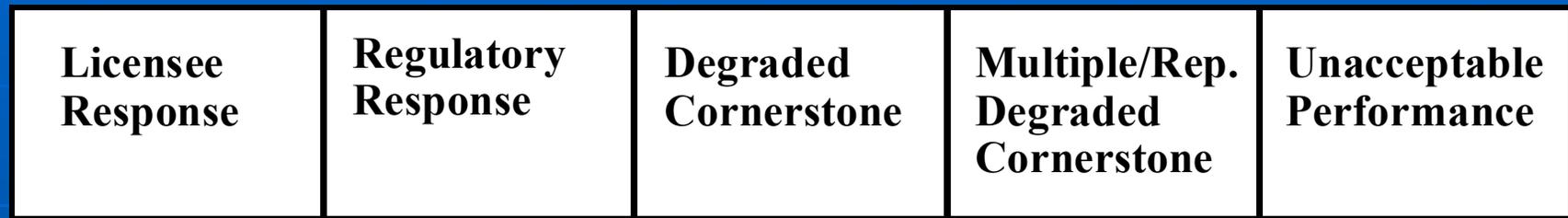
## Safety Significance

- Green:** Very low safety significance
- White:** Low to moderate safety significance
- Yellow:** Substantial safety significance
- Red:** High safety significance

## NRC Inspection Efforts

- Green:** Only Baseline Inspection
- White:** May increase NRC oversight
- Yellow:** Increased NRC oversight
- Red:** Increased NRC oversight and other NRC actions

# Action Matrix Concept



**Increasing Safety Significance**

**Increasing NRC Inspection Efforts**

**Increasing NRC/Licensee Management Involvement**

**Increasing Regulatory Actions**

# National Summary

- Performance Indicator (PI) Results (CY 2003)

▶ Green	1825
▶ White	15
▶ Yellow	0
▶ Red	0

- Total Inspection Findings (CY 2003)

▶ Green	748
▶ White	19
▶ Yellow	2
▶ Red	4

# National Summary of Plant Performance

Status at End of CY 2003

Licensee Response	75
Regulatory Response	22
Degraded Cornerstone	2
Multiple/Repetitive Degraded Cornerstone	3
Unacceptable	0
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Total	102*

\*Davis-Besse under a special restart inspection process

# Surry Power Station Inspection Activities

January 1 – December 31, 2003

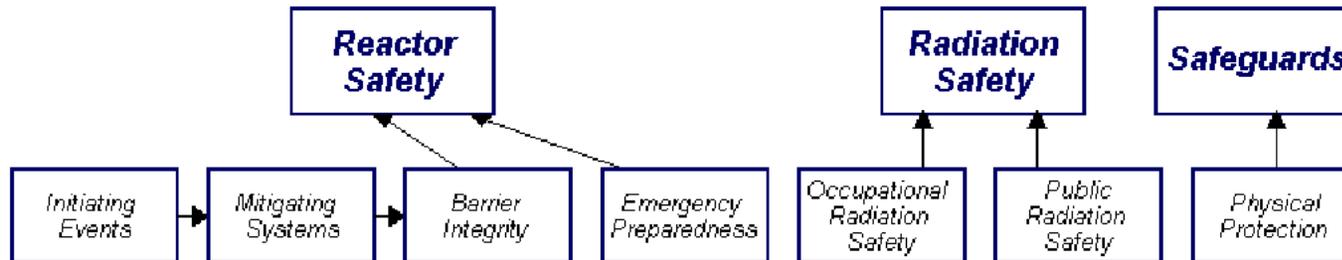
- 4600 hours of inspection related activities
- Resident inspector daily inspections
- Triennial Fire Protection inspections
- Reactor Vessel Head replacement inspections
- Containment repair inspections
- Emergency Preparedness inspections
- Radiation Protection inspections
- Problem Identification & Resolution Inspections

# Surry Power Station Assessment Results

January 1 – December 31, 2003

- Plant performance was within the Regulatory Response Column of the NRC's Action Matrix
- Unit 1 Unplanned Scrams Per 7000 Critical Hours PI for Initiating Events cornerstone was White for 3<sup>rd</sup> and 4<sup>th</sup> Quarter of CY 2003
- Units 1 and 2 Safety System Unavailability Emergency AC power PI for Mitigating System cornerstone continued to be White for all four Quarters of CY 2003
- All inspection findings were classified as very low safety significance (Green)
- The two White PIs reflected performance at a level requiring increased regulatory response

# Unit 1 Performance Indicator Summary



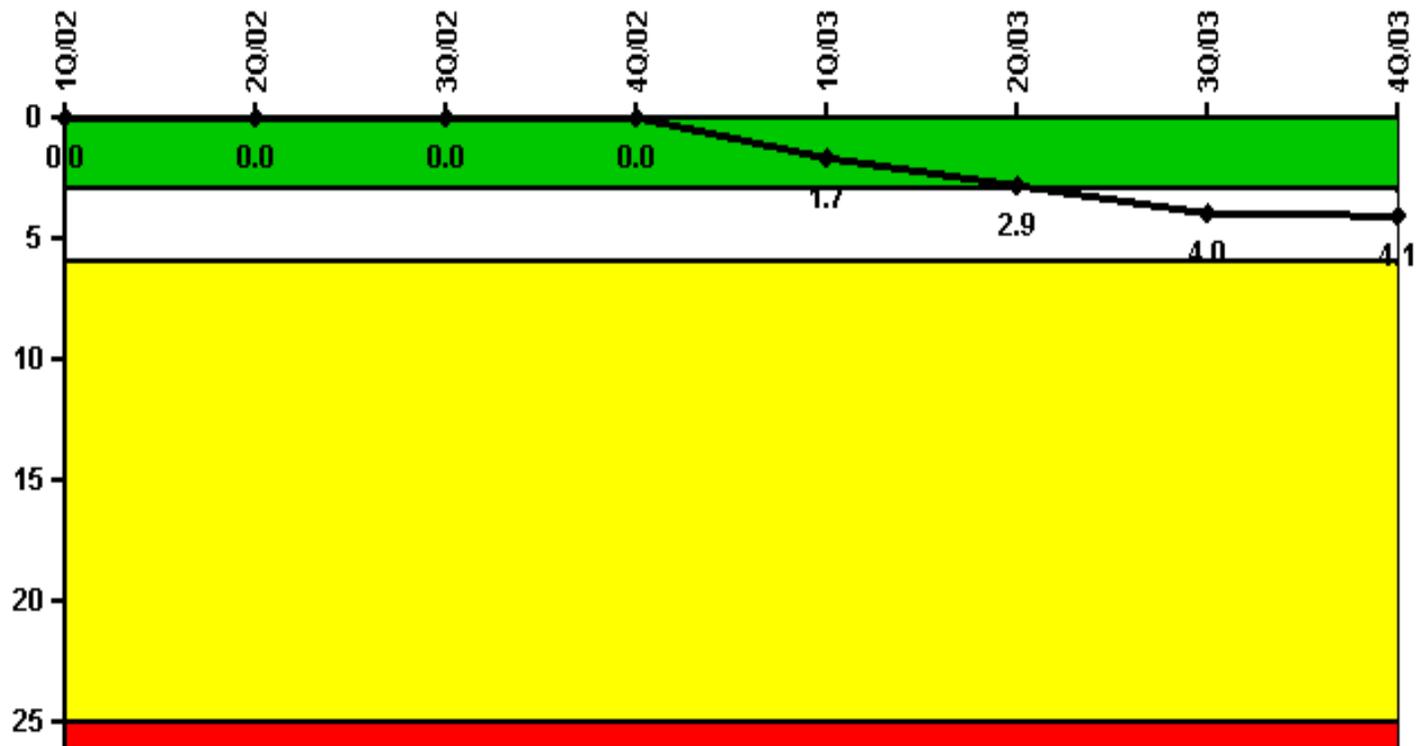
## Performance Indicators

Unplanned Srams (W)	Emergency AC Power System Unavailability (W)	Reactor Coolant System Activity (G)	Drill/Exercise Performance (G)	Occupational Exposure Control Effectiveness (G)	RETS/ODCM Radiological Effluent (G)	Protected Area Equipment (G)
Srams With Loss of Normal Heat Removal (G)	High Pressure Injection System Unavailability (G)	Reactor Coolant System Leakage (G)	ERC Drill Participation (G)			Personnel Screening Program (G)
Unplanned Power Changes (G)	Heat Removal System Unavailability (G)		Alert and Notification System (G)			FFD/Personnel Reliability Program (G)
	Residual Heat Removal System Unavailability (G)					
	Safety System Functional Failures (G)					

Last Modified: January 23, 2004

## Unit 1 Initiating Event Performance Indicator

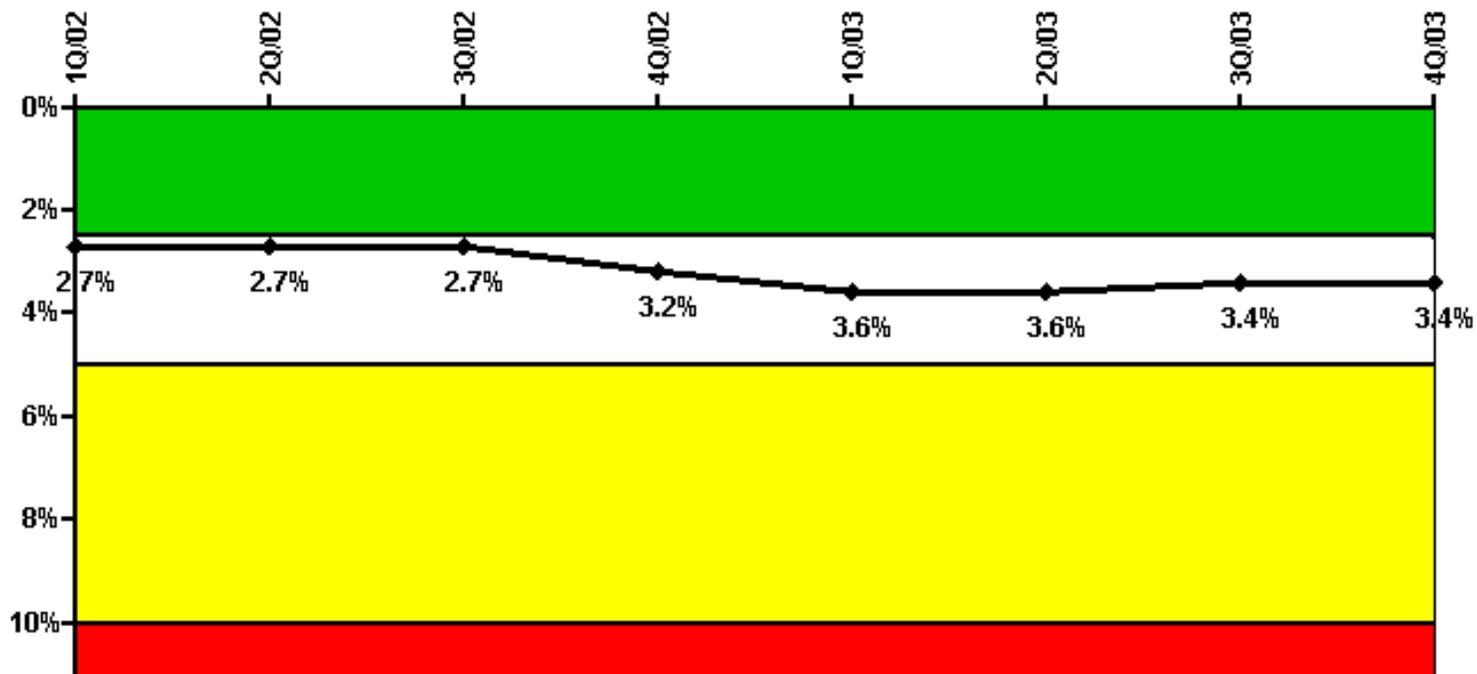
### Unplanned Scrams per 7000 Critical Hrs



Thresholds: White > 3.0 Yellow > 6.0 Red > 25.0

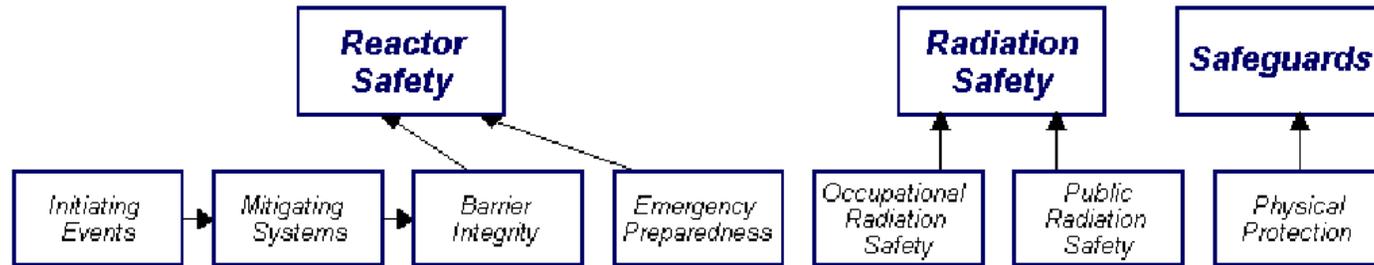
## Unit 1 Mitigating System Performance Indicator

### Safety System Unavailability, Emergency AC Power



Thresholds: White > 2.5% Yellow > 5.0% Red > 10.0%

# Unit 2 Performance Indicator Summary



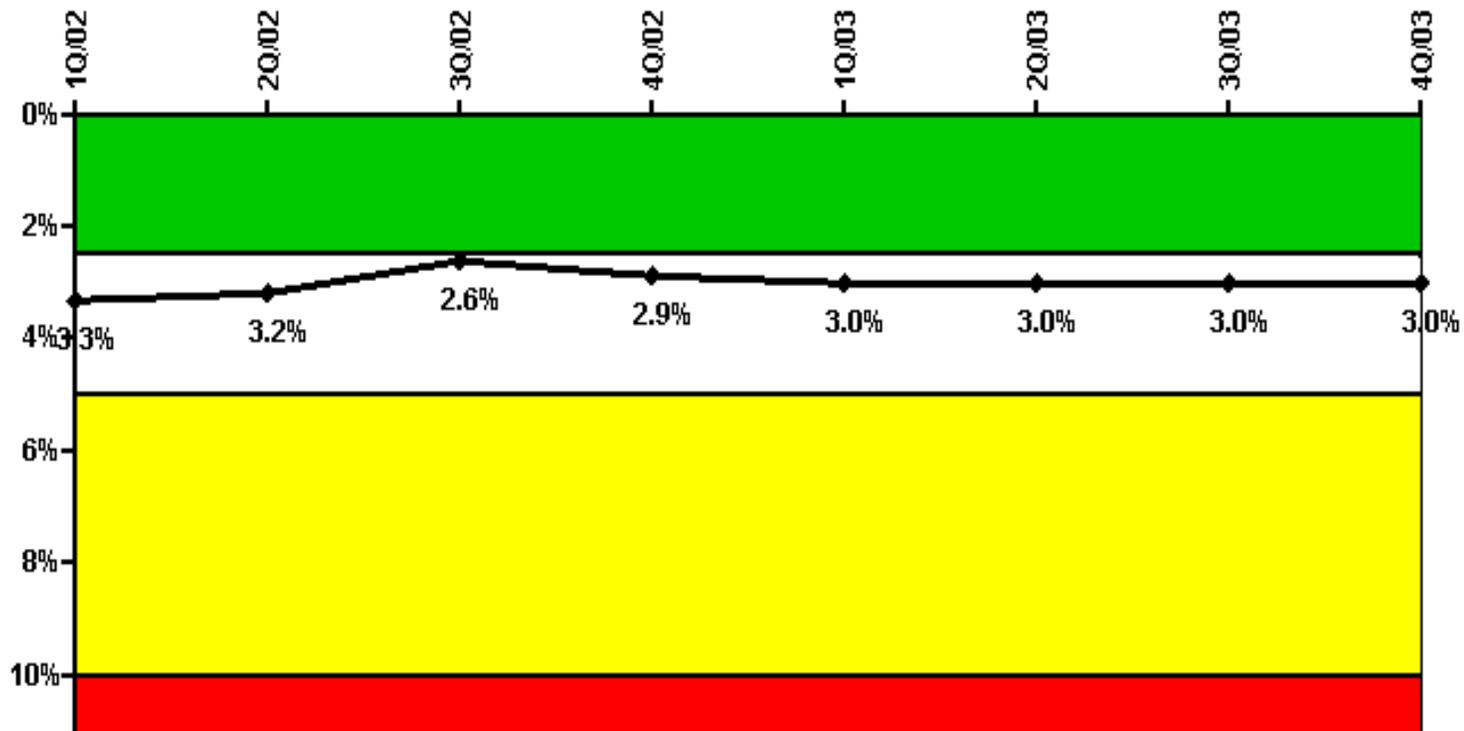
## Performance Indicators

Unplanned Serams (G)	Emergency AC Power System Unavailability (W)	Reactor Coolant System Activity (G)	Drill/Exercise Performance (G)	Occupational Exposure Control Effectiveness (G)	RETS/ODCM Radiological Effluent (G)	Protected Area Equipment (G)
Serams With Loss of Normal Heat Removal (G)	High Pressure Injection System Unavailability (G)	Reactor Coolant System Leakage (G)	ERO Drill Participation (G)			Personnel Screening Program (G)
Unplanned Power Changes (G)	Heat Removal System Unavailability (G)		Alert and Notification System (G)			FFD/Personnel Reliability Program (G)
	Residual Heat Removal System Unavailability (G)					
	Safety System Functional Failures (G)					

Last Modified: January 23, 2004

## Unit 2 Mitigating System Performance Indicator

### Safety System Unavailability, Emergency AC Power



Thresholds: White > 2.5% Yellow > 5.0% Red > 10.0%

# Findings and PIs

## PI---Unplanned Reactor Scrams---White

- Four Unit 1 reactor trips in CY 2003
- NRC Supplemental Inspection completed and expect report to be issued by the end of April 2004

## PI---Emergency AC unavailability

- Supplemental Inspection report issued in April 2002 which concluded that evaluation and corrective actions for EDG related issues were appropriately prioritized and consistent with the identified root cause

## Potential Findings

- Preliminary White finding for Unit 1 and a potential non-Green issue for Unit 2 associated with fire protection issues are under review by the NRC – Regulatory Conference held on April 1, 2004

# Surry

## Annual Assessment Summary

January 1 – December 31, 2003

- VEPCO operated Surry in a manner that preserved public health and safety
- All cornerstone objectives were met with two White PIs identified
- A Supplemental Inspection on the Unplanned Reactor Scrams PI was completed during first quarter of CY 2004

# Surry Power Station CY 2004 Inspection Activities

- Resident inspector daily inspections
- Reactor containment sump blockage inspection
- Reactor operator initial exam
- Emergency preparedness inspection
- Safety System Design and Performance Capability inspection
- Security inspection
- Maintenance inspection
- Reactor vessel lower head inspection
- Radiation protection inspection

# Licensee Response and Remarks

Mr. Richard Blount, II  
Site Vice President, Surry Power Station

# Contacting the NRC

- Report an emergency
  - ▶ (301) 816-5100 (call collect)
- Report a safety concern:
  - ▶ (800) 695-7403
  - ▶ Allegation@nrc.gov
- General information or questions
  - ▶ [www.nrc.gov](http://www.nrc.gov)
  - ▶ Select “What We Do” for Public Affairs

# Reference Sources

- Reactor Oversight Process

- ▶ <http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html>

- Public Electronic Reading Room

- ▶ <http://www.nrc.gov/reading-rm.html>

- Public Document Room

- ▶ 1-800-397-4209 (Toll Free)

## Exhibit 2: REACTOR OVERSIGHT PROCESS

