



# Salem and Hope Creek Annual Assessment Meeting

Reactor Oversight Process  
2004 Assessment



Nuclear Regulatory Commission - Region I  
King of Prussia, PA  
June 8, 2005



# Agenda

- Opening Remarks
- NRC Presentation
  - ROP Overview
  - National Summary of Plant Performance
  - Salem and Hope Creek Performance Results
- PSEG Presentation
  - Response to Performance Results
  - Update on Progress to Improve Work Environment
- Closing Remarks
- Break
- NRC Available to Address Questions



# NRC Representatives

- S. Collins, Regional Administrator, Region I
- A. Randolph Blough, Director, Division of Reactor Safety
- M. Gamberoni, Deputy Director, Division of Reactor Projects
- E. Cobey, Chief, Projects Branch 3
- M. Gray, Senior Resident Inspector, Hope Creek
- M. Ferdas, Resident Inspector, Hope Creek
- D. Orr, Senior Resident Inspector, Salem
- G. Malone, Resident Inspector, Salem
- S. Bailey, Salem Project Manager, NRR
- D. Collins, Hope Creek Project Manager, NRR
- J. Persensky, Senior Human Factors Specialist, RES
- A. Kock, Assistant Agency Allegations Advisor, OE



# Purpose of Today's Meeting

- ❑ Provide a public forum for discussion of the Salem and Hope Creek stations' performance
- ❑ NRC will address Salem and Hope Creek performance as discussed in the annual assessment letters
- ❑ PSEG will respond to the annual assessment and provide the NRC an update on their actions to improve performance in the following areas:
  - Safety conscious work environment;
  - Problem identification and resolution;
  - Procedure adherence and other elements of human performance; and
  - Quality of engineering products particularly as they relate to evaluation of degraded equipment and associated operational decision making.

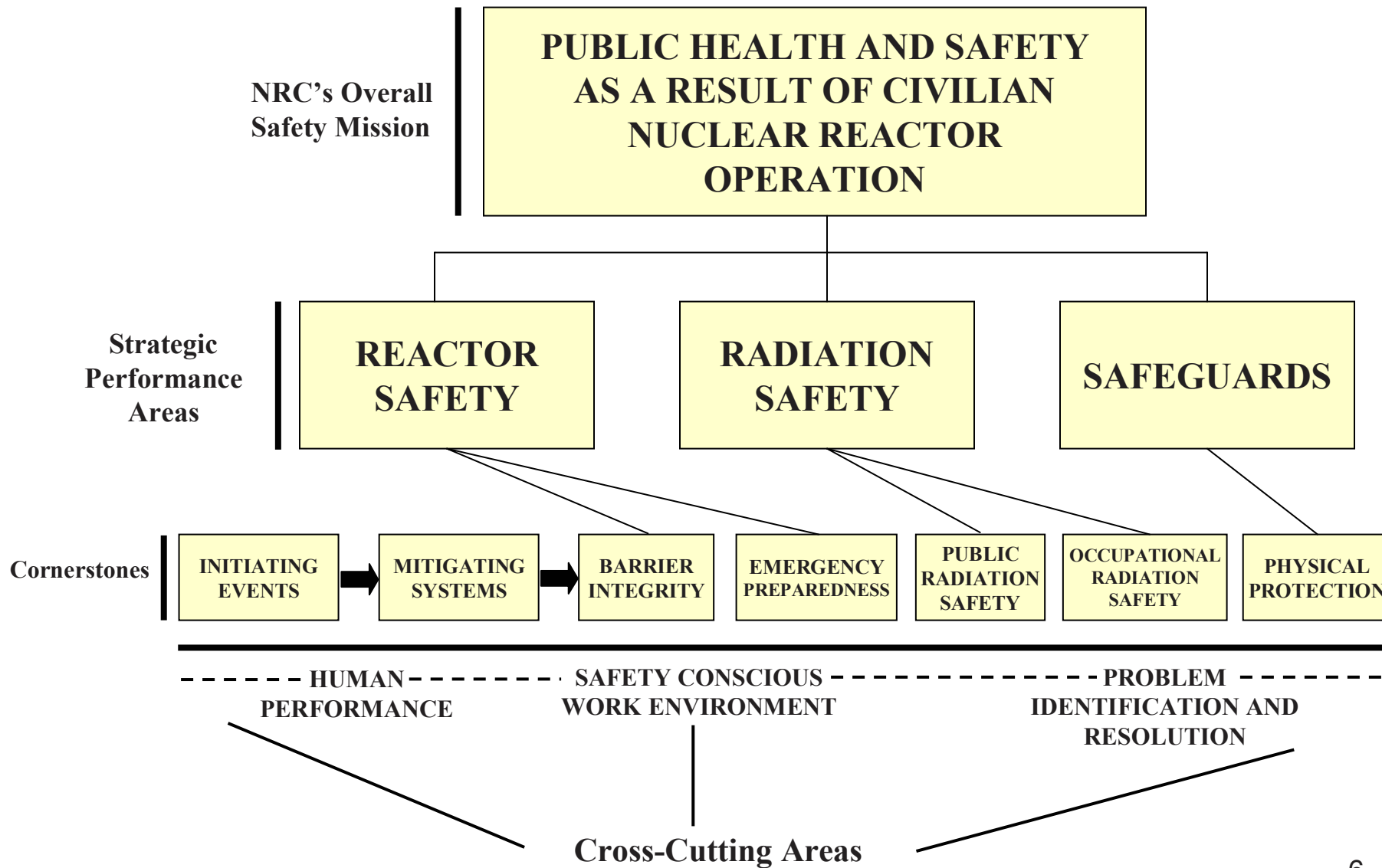


# NRC Performance Goals

- Safety: Ensure protection of public health and safety and the environment
- Security: Ensure the secure use and management of radioactive materials
- Openness: Ensure openness in our regulatory process
- Effectiveness: Ensure that NRC actions are effective, efficient, realistic, and timely
- Management: Ensure excellence in agency management to carry out the NRC's strategic objective

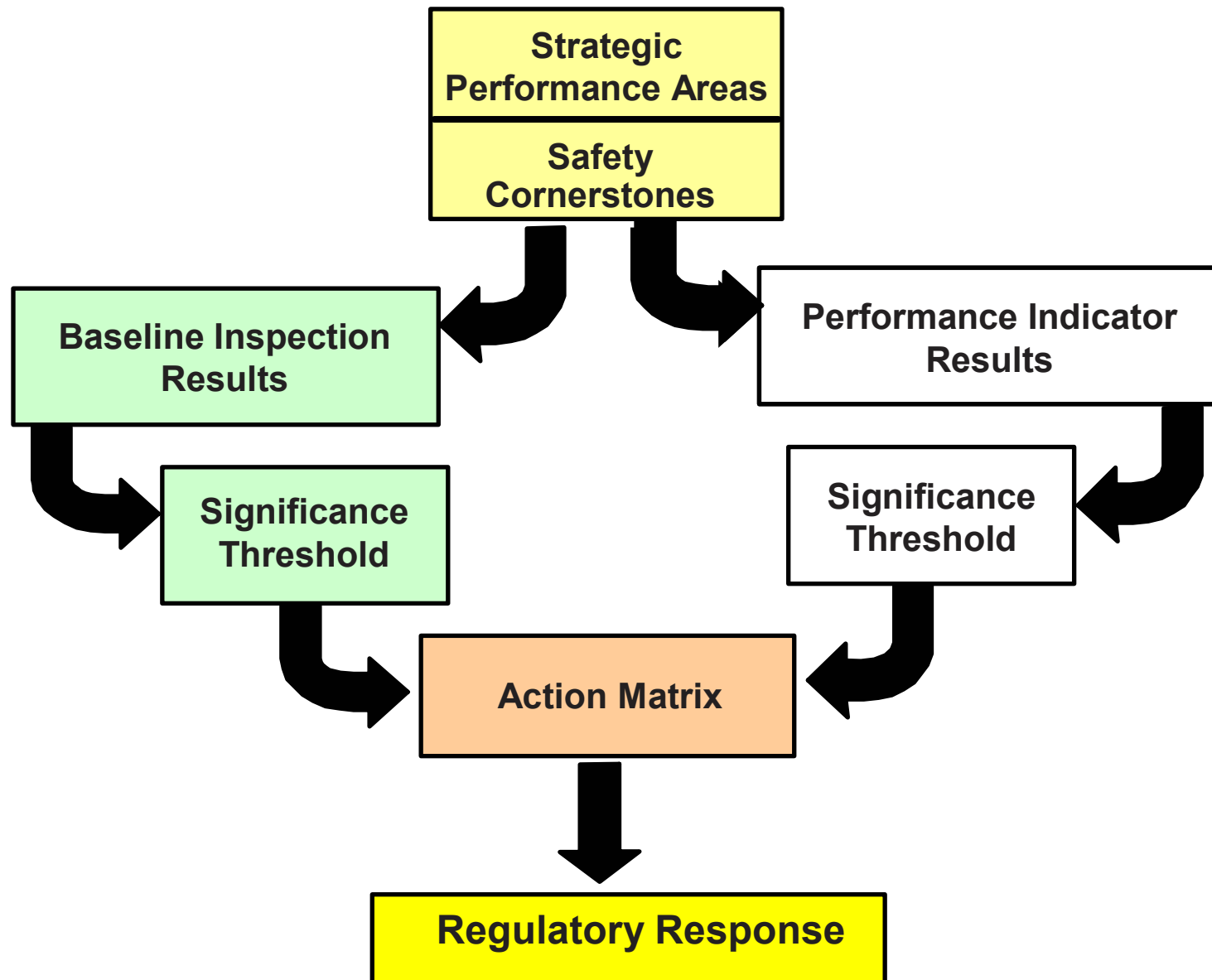


# Regulatory Framework





# 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 ~250 hrs every 2 yrs
- Corrective Action Reviews ~60 hrs/yr
- Safety System Design ~420 hrs every 2 yrs





# Significance Threshold

## Performance Indicators

<b>Green:</b>	Only Baseline Inspection
<b>White:</b>	May increase NRC oversight
<b>Yellow:</b>	Requires more NRC oversight
<b>Red:</b>	Requires more NRC oversight

## Inspection Findings

<b>Green:</b>	Very low safety issue
<b>White:</b>	Low to moderate safety issue
<b>Yellow:</b>	Substantial safety issue
<b>Red:</b>	High safety issue



# NRC Response Plan or "Action Matrix"

<b>Licensee Response</b>	<b>Regulatory Response</b>	<b>Degraded Cornerstone</b>	<b>Multiple/Rep. Degraded Cornerstone</b>	<b>Unacceptable Performance</b>
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- Increased Safety Significance
- Increased NRC Inspection Efforts
- Increased NRC/Licensee Management Involvement
- Increased Regulatory Actions



# National Summary of Plant Performance

## Status at End of CY 2004

Licensee Response	78
Regulatory Response	21
Degraded Cornerstone	0
Multiple/Repetitive Degraded Cornerstones	3
Unacceptable	0
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<b>TOTAL UNITS</b>	<b>102*</b>

\* Davis-Besse was in Shutdown with Enhanced Oversight in 2004



# National Summary

## Performance Indicator Results (at end of 2004)

<b>Green:</b>	1834
<b>White:</b>	6
<b>Yellow:</b>	0
<b>Red:</b>	0

## Total Inspection Findings (2004)

<b>Green:</b>	778
<b>White:</b>	11
<b>Yellow:</b>	0
<b>Red:</b>	0



# Salem Inspection Activities

(January 1 – December 31, 2004)

- 7290 Hours of Inspection Related Activities
- Baseline Inspections and Performance Indicator Verifications Completed
- 2 Full-Time Resident Inspectors at Salem Station
- 18 Regional Specialist Inspection Activities
- 2 Team Inspections



# Salem 1 Assessment Inputs

- Inspection Findings
  - 16 Findings of Very Low Safety Significance (Green)
  - 1 Finding of Low to Moderate Safety Significance (White)
  - Individual Findings Evaluated for Common Themes (Cross-Cutting Issues)
- Performance Indicators
  - All Indicators Green



# Salem 2 Assessment Inputs

- Inspection Findings
  - 14 Findings of Very Low Safety Significance (Green)
  - Individual Findings Evaluated for Common Themes (Cross-Cutting Issues)
- Performance Indicators
  - All Indicators Green



# Salem Assessment Summary

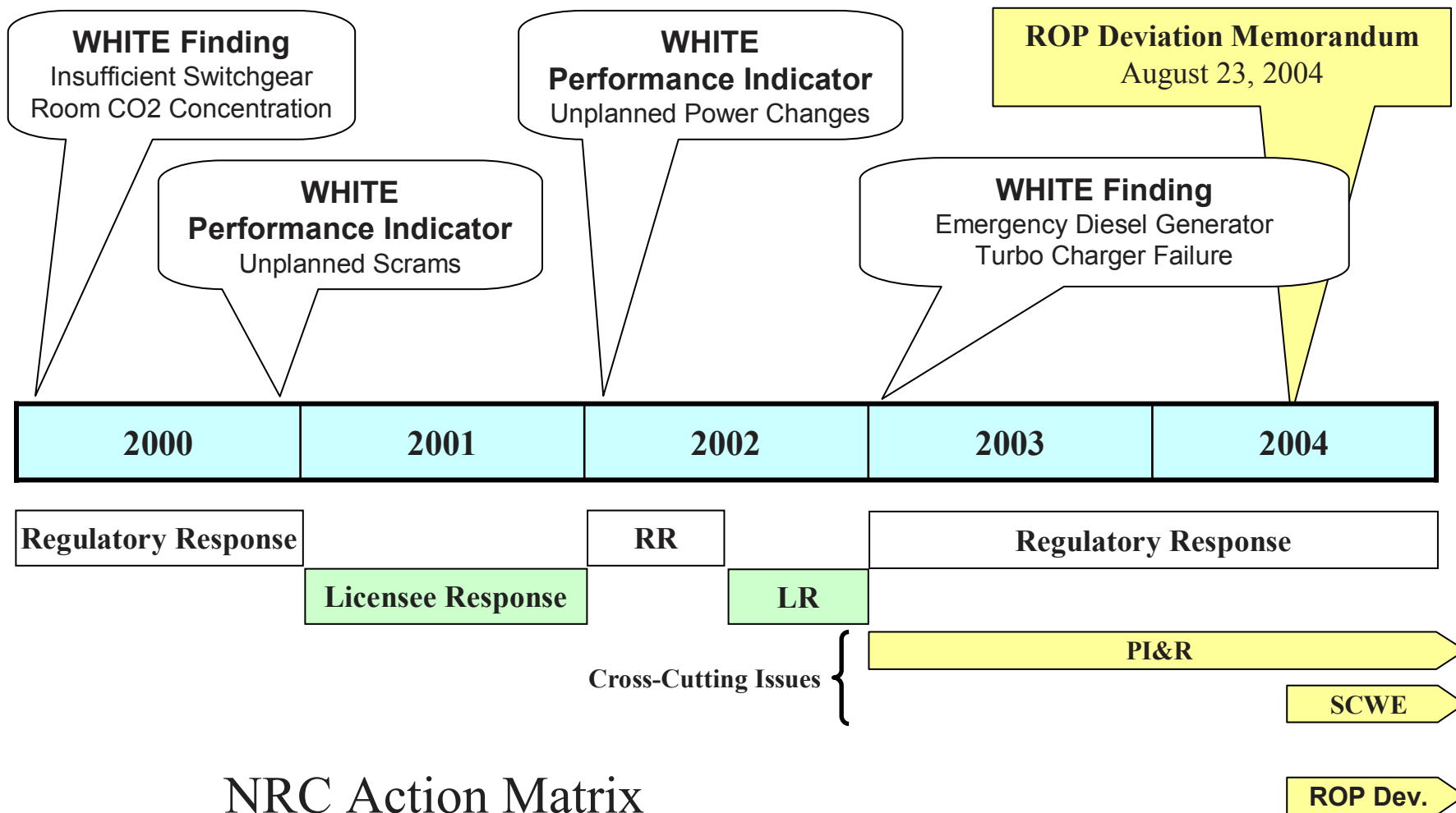
January 1 – December 31, 2004

- Overall, both units operated in a manner that preserved public health and safety
- At the end of CY 2004
  - Salem Unit 1 – Regulatory Response
    - One inspection finding classified as having low to moderate safety significance (White)
  - Salem Unit 2 – Licensee Response
- Substantive cross-cutting issues
  - Problem identification and resolution (PI&R)
  - Safety conscious work environment (SCWE)





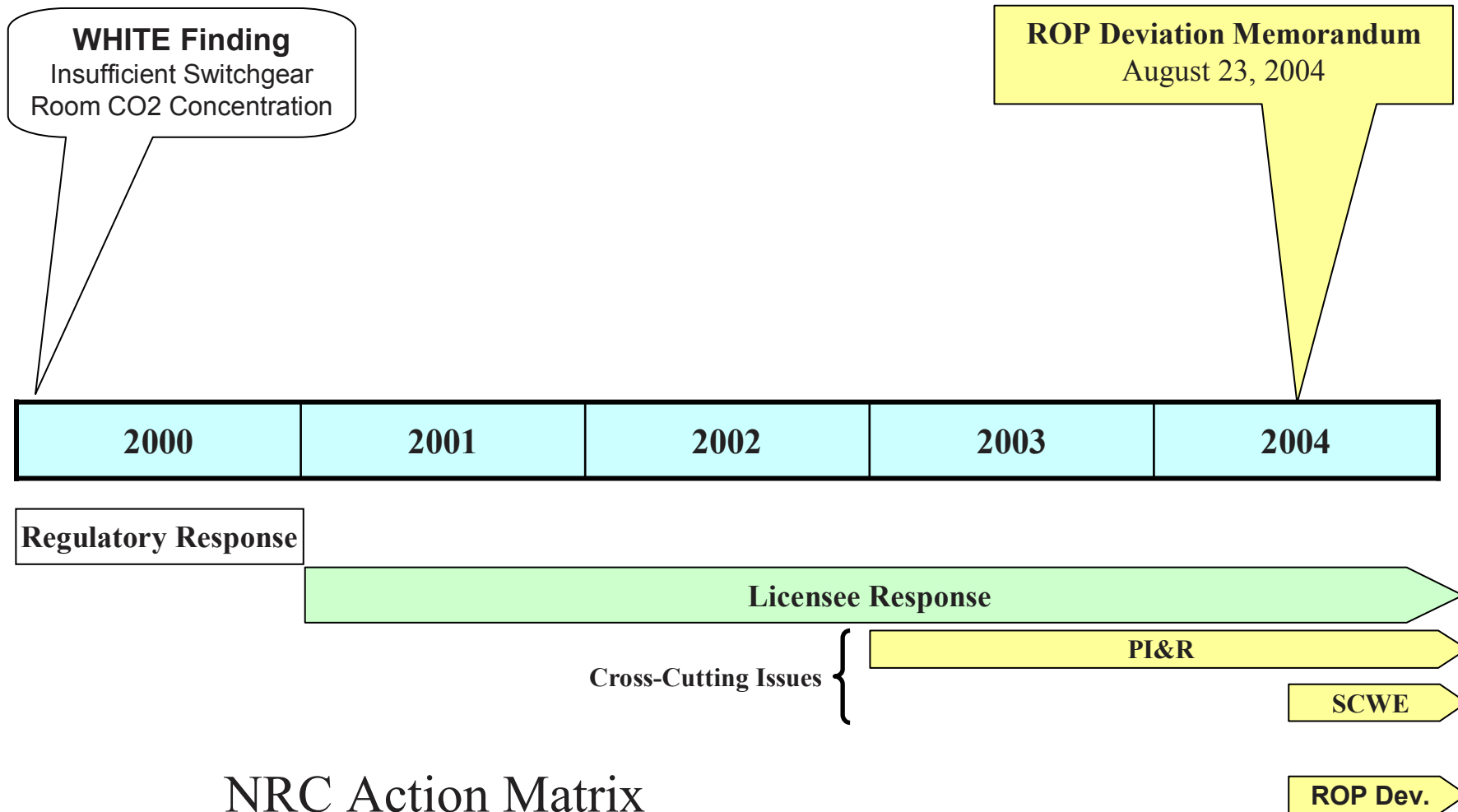
# Salem 1 Performance



NRC Action Matrix  
and Oversight



# Salem 2 Performance



NRC Action Matrix  
and Oversight



# Hope Creek Inspection Activities



(January 1 – December 31, 2004)

- 8088 Hours of Inspection Related Activities
- Baseline Inspections and Performance Indicator Verifications Completed
- 2 Full-Time Resident Inspectors
- 14 Regional Specialist Inspection Activities
- 4 Team Inspections



# Hope Creek Assessment Inputs



## Inspection Findings

- 24 Findings of Very Low Safety Significance (Green)
- 2 Findings of Low to Moderate Safety Significance (White)
- Individual Findings Evaluated for Common Themes (Cross-Cutting Issues)

## Performance Indicators

- All Indicators Green



# Hope Creek Assessment Summary

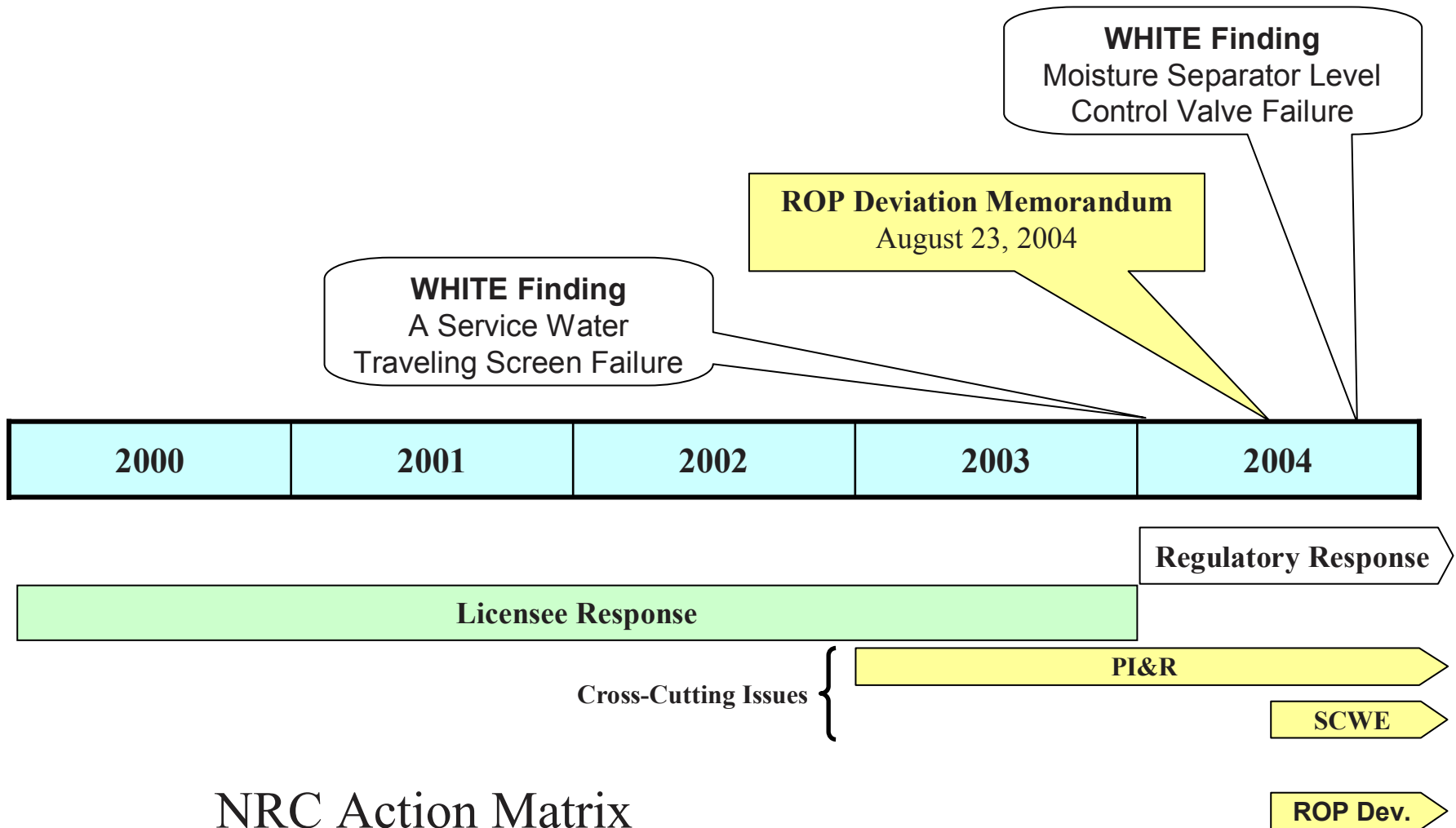


January 1 – December 31, 2004

- Overall, Hope Creek operated in a manner that preserved public health and safety
- At the end of CY 2004
  - Hope Creek – Regulatory Response
    - Two inspection findings classified as having low to moderate safety significance (White)
- Substantive cross-cutting issues
  - Problem identification and resolution (PI&R)
  - Safety conscious work environment (SCWE)



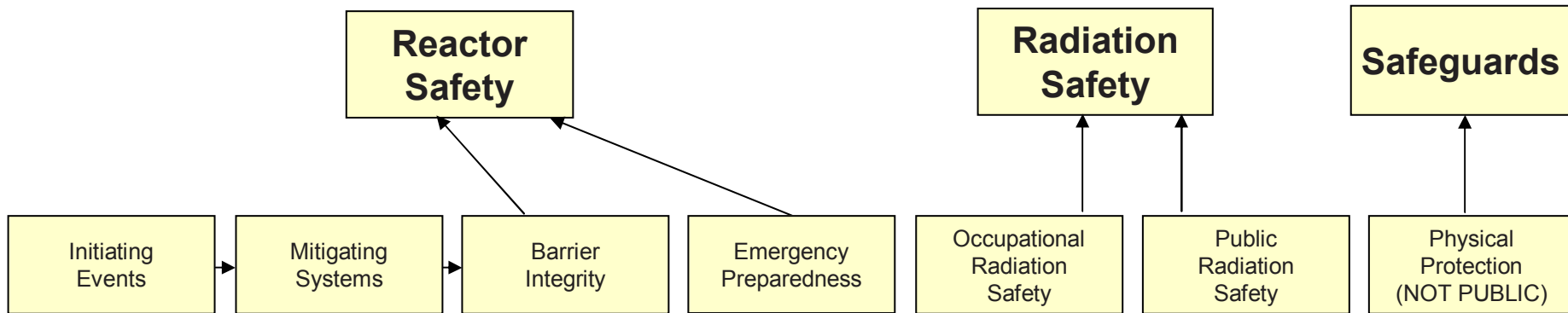
# Hope Creek Performance



NRC Action Matrix  
and Oversight



# Hope Creek Performance Indicators

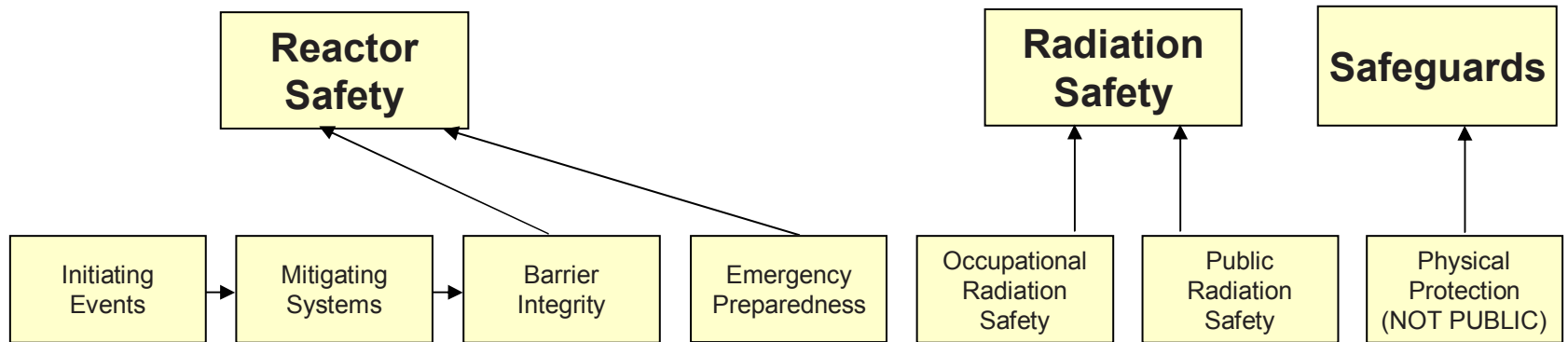


## Performance Indicators

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



# Hope Creek Inspection Findings



## Most Significant Inspection Findings

	Initiating Events	Mitigating Systems	Barrier Integrity	Emergency Preparedness	Occupational Radiation Safety	Public Radiation Safety
4Q/2004	W (1)	G	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter
3Q/2004	No findings this quarter	G	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter
2Q/2004	No findings this quarter	G	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter
1Q/2004	G	W (1)	G	No findings this quarter	No findings this quarter	No findings this quarter

Miscellaneous findings





# Cross-Cutting Issues

- Problem Identification and Resolution (PI&R)
  - PI&R cross-cutting issue continued throughout 2004 at Salem and Hope Creek based on a continuation of inspection findings and documented shortcomings within the PI&R area
  - 27 (14 Salem and 13 Hope Creek) inspection findings attributable, at least in part, to weaknesses in problem identification, problem evaluation and effectiveness of corrective actions
  - Fifth consecutive assessment with substantial cross-cutting issue in PI&R



# Cross-Cutting Issues

- ❑ Safety Conscious Work Environment (SCWE)
  - Established during the 2004 mid-cycle performance assessment based on the results of the NRC’s review of the work environment at Salem and Hope Creek.
  - PSEG has taken significant steps to evaluate the station’s work environment and initiated actions to begin addressing deep-seated causes.
  - It is too early to effectively assess whether or not the work environment at the station is significantly improving.
  - The SCWE cross-cutting issue will continue.



# ROP Deviation

- ❑ On August 23, 2004 the NRC Executive Director for Operations approved a deviation from the Action Matrix for Salem and Hope Creek
- ❑ Result of the substantive cross-cutting issue in SCWE and the longstanding cross-cutting issue in PI&R
- ❑ Authorizes a greater level of oversight for the Salem and Hope Creek stations than would typically be called for by the Regulatory Response Column of the Action Matrix including:
  - More frequent and an elevated level of NRC management involvement in meetings, site visits, and correspondence
  - Established an internal NRC coordination team
    - Assist Region I staff in review and evaluation of PSEG efforts
    - Regional and headquarters experts in reactor oversight, SCWE and related performance attributes
  - Review of PSEG's improvement plans with respect to SCWE and related performance attributes
  - Enhanced baseline inspections, as necessary, to verify the effectiveness of PSEG improvement
- ❑ The heightened oversight will continue until PSEG has concluded that substantial, sustainable progress has been made; and the NRC has completed a review, the results of which confirm PSEG's assessment results.



# Ways for the Public To Become Informed & Involved in the Regulatory Process



- Participate in NRC Public Meetings
- Sign up to be on the NRC mailing list
- Visit the NRC website on a regular basis
- Publicly comment on proposed licensing actions or file a Petition for Rulemaking
- Implement 10 CFR 2.206 petition process
- Contact the NRC via E-mail, mail or phone to address questions or areas of concern
- Participate in open NRC/industry symposiums
- Request information through the Freedom of Information Act (FOIA)



# 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)  
Public Comment & Involvement in Rulemaking
  - <http://ruleforum.llnl.gov>



# Contacting the NRC

- Report an emergency
  - (301) 816-5100 (call collect)
- Report a safety concern
  - (800) 695-7403
  - [Allegation@nrc.gov](mailto:Allegation@nrc.gov)
- General information or questions
  - [www.nrc.gov/what-we-do/public-affairs.html](http://www.nrc.gov/what-we-do/public-affairs.html)
  - Diane Screnci, Senior Public Affairs Officer
    - (610) 337-5330
  - Neil Sheehan, Public Affairs Officer
    - (610) 337-5331
- Main Contact
  - Eugene Cobey, Branch Chief, Division of Reactor Projects
  - (610) 337-5171
  - Email at: [EWC@nrc.gov](mailto:EWC@nrc.gov)



# PSEEG Response/Remarks

- PSEEG response to annual assessment and remarks regarding their actions to improve performance in the following areas:
  - Safety conscious work environment;
  - Problem identification and resolution;
  - Procedure adherence and other elements of human performance; and
  - Quality of engineering products particularly as they relate to evaluation of degraded equipment and associated operational decision making.



# NRC Closing Remarks







# BREAK

- Following a 10 minute break, the NRC will take questions/comments from the public.



# Public Questions/Comments

## □ CONTACTING THE NRC

- Report an emergency
  - (301) 816-5100 (call collect)
- Report a safety concern
  - (800) 695-7403
  - [Allegation@nrc.gov](mailto:Allegation@nrc.gov)
- General information or questions
  - [www.nrc.gov/what-we-do/public-affairs.html](http://www.nrc.gov/what-we-do/public-affairs.html)
  - Diane Scenci, Senior Public Affairs Officer
    - (610) 337-5330
  - Neil Sheehan, Public Affairs Officer
    - (610) 337-5331
- Main Contact
  - Eugene Cobey, Branch Chief, Division of Reactor Projects
  - (610) 337-5171
  - Email at: [EWC@nrc.gov](mailto:EWC@nrc.gov)