Calvert Cliffs Units 1 & 2
Annual Assessment Meeting

Reactor Oversight Program - CY 2004

Nuclear Regulatory Commission - Region I
King of Prussia, PA
April 14, 2005

Purpose of Today's Meeting

- A public forum for discussion of the licensee's performance
- NRC will address the licensee performance issues identified in the annual assessment letter
- Constellation Generation Group will 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
- Licensee Response and Remarks
- NRC Closing Remarks
- Break
- NRC available to address public questions

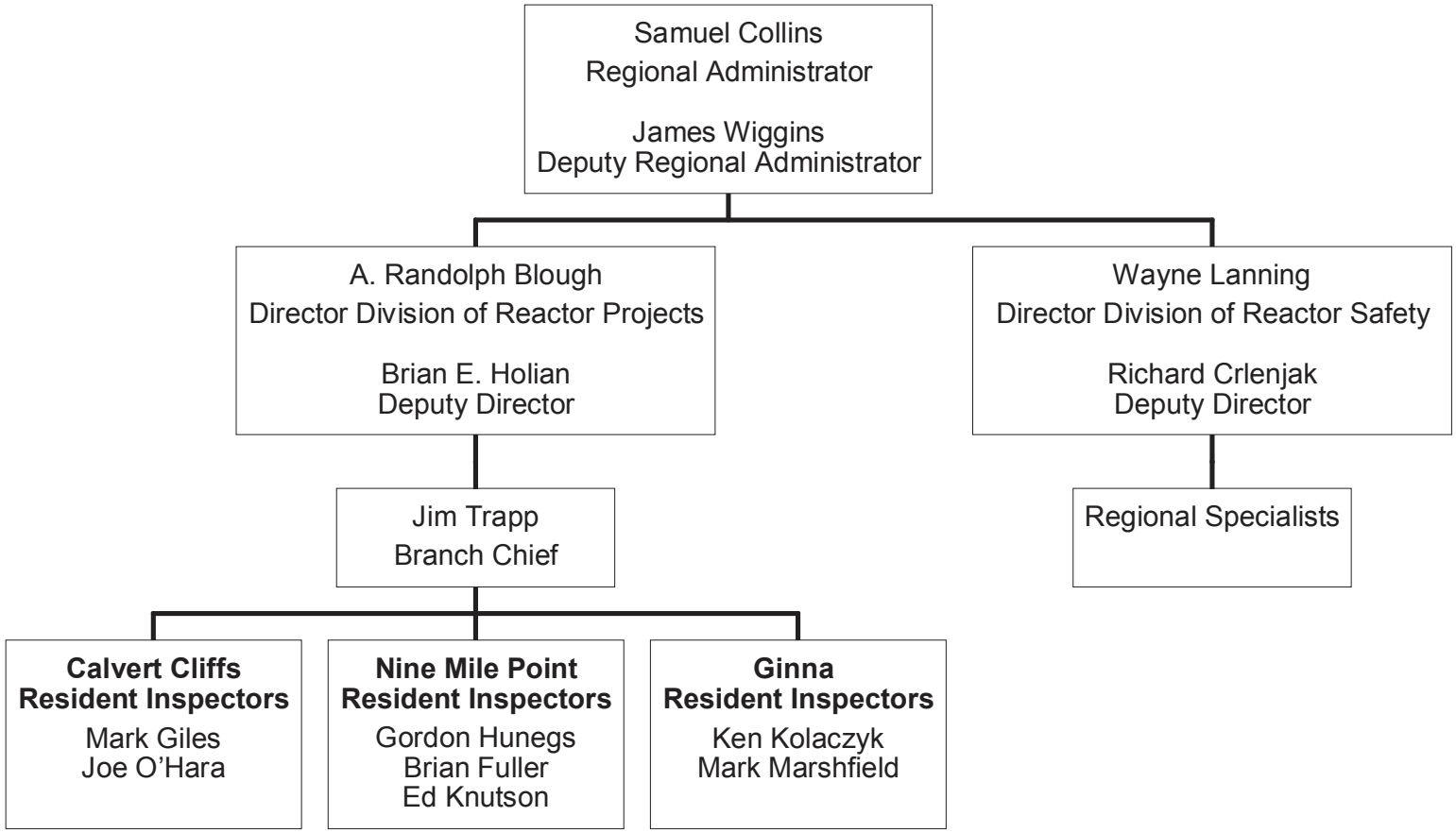
NRC Representatives

- Jim Trapp, Branch Chief
  < (610) 337-5186

- Mark Giles, Senior Resident Inspector
  < (410) 586-2626

- Joe O'Hara, Resident Inspector
  < (410) 586-2626

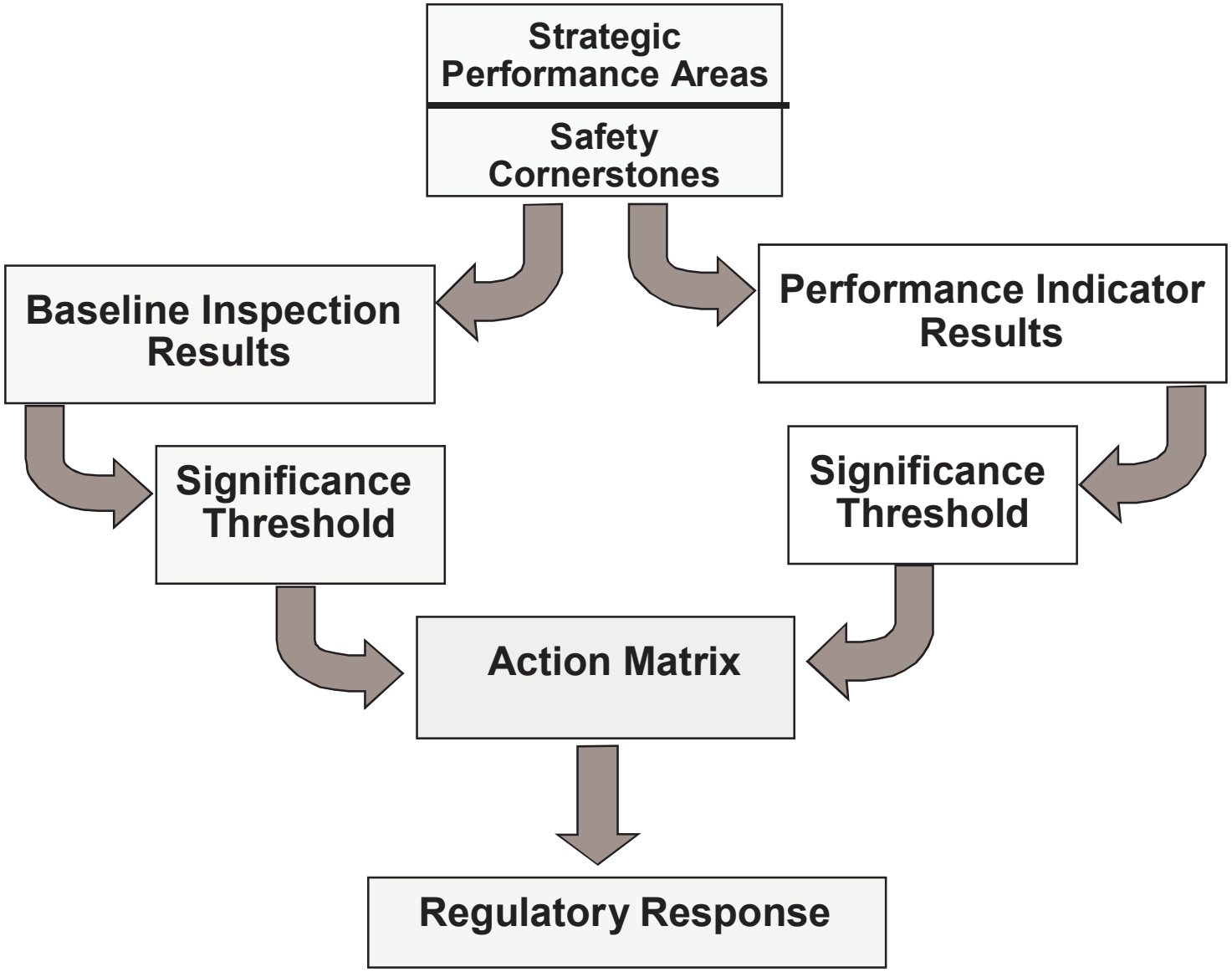
Region I Organization



NRC's 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

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

Significance Threshold

Performance Indicators

Green: Only Baseline Inspection

White: May increase NRC oversight

Yellow: Requires more NRC oversight

Red: Requires more NRC oversight

Inspection Findings

Green: Very Low safety significant issue

White: Low to moderate safety significant issue

Yellow: Substantial safety issue

Red: High safety issue

Action Matrix Concept

Licensee Response	Regulatory Response	Degraded Cornerstone	Multiple/Rep. Degraded Cornerstone	Unacceptable Performance

Increasing Safety Significance

Increasing NRC Inspection Efforts

Increasing NRC/Licensee Management Involvement

Increasing 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 Cornerstone	3
Unacceptable	0
Total Units	102*

*Davis-Besse is in IMC 0350 process

National Summary

- Performance Indicator Results (CY 2004)
  - < **Green** 1834
  - < **White** 6
  - < **Yellow** 0
  - < **Red** 0

- Total Inspection Findings (CY 2004)
  - < **Green** 778
  - < **White** 11
  - < **Yellow** 0
  - < **Red** 0

Calvert Cliffs Inspection Activities

(Jan 1 - Dec 31, 2004)

- 7104 hours of inspection related activities
- 2 resident inspectors assigned to the site
- 17 regional inspector visits
  - < Included three team inspections (SSDI, Special Inspection and Fire Protection Inspection)

Unit 1 - 4Q Performance Indicators

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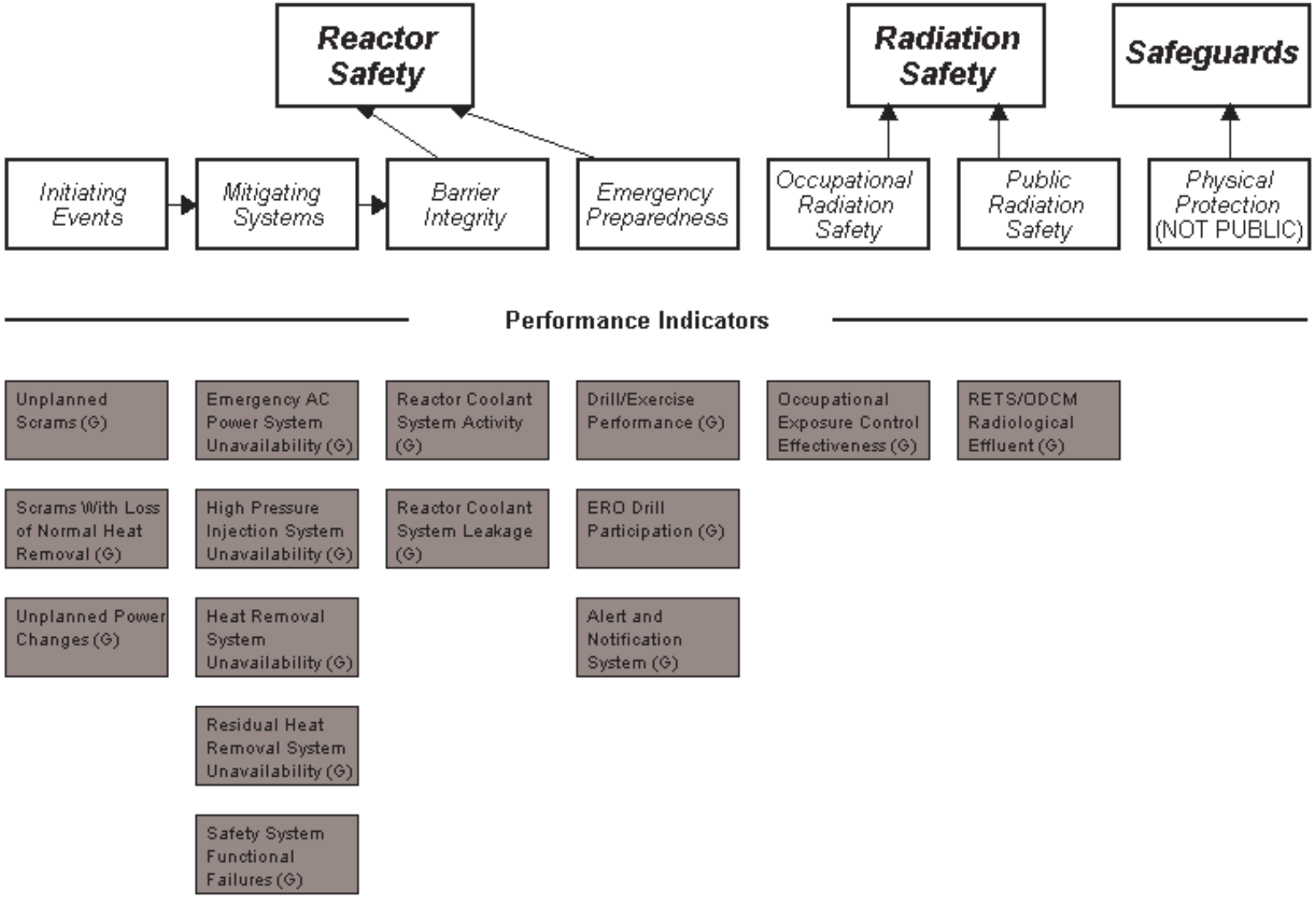

Unit 2 - 4Q Performance Indicators

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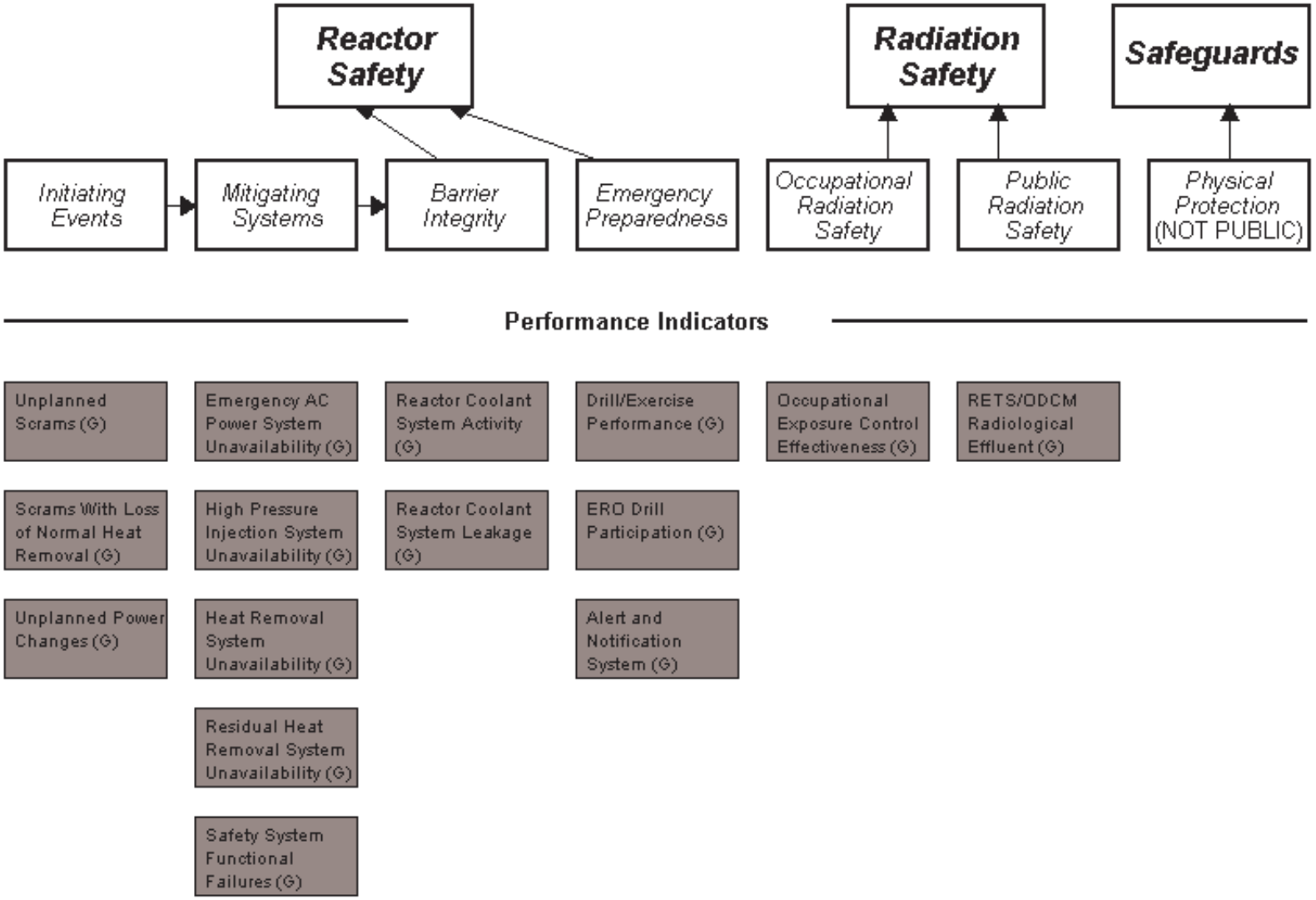

Performance Indicator Example

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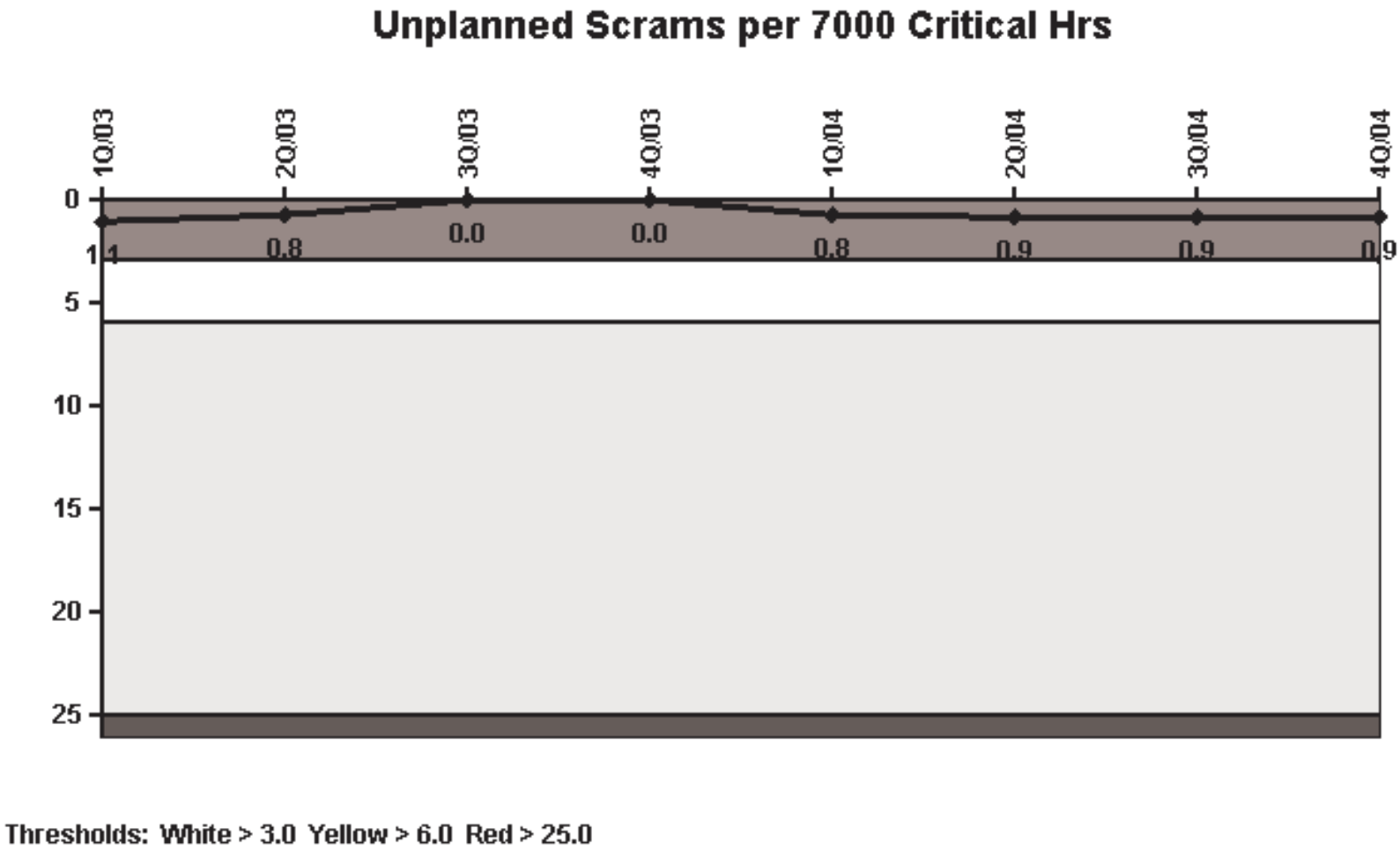

Calvert Cliffs Unit 1
Assessment Results

(Jan 1 - Dec 31, 2004)

- Operated safely throughout the Assessment Period
- Licensee Response Column of the Action Matrix for all of 2004 (cornerstone objectives fully met)
- Inspection Findings
  - < 13 findings of very low saftey significance (Green)
  - < 7 of the 13 findings were common to both units
- NRC will conduct baseline inspections during the remainder of the cycle

Calvert Cliffs Unit 2
Assessment Results

(Jan 1 - Dec 31, 2004)

- Operated safely throughout the Assessment Period
- Licensee Response column of the Action Matrix for the first quarter of 2004 (cornerstone objectives fully met)
- Regulatory Response column of the Action Matrix for the last three quarters of 2004(cornerstone objectives met with minimal reduction in safety margin)
- Inspection Findings
  - < 13 findings of very low safety significance (Green)
  - < 7 of the 13 findings were common to both units
  - < 1 finding of low to moderate safety significance (White)
- NRC will conduct baseline inspections during the remainder of the cycle

Unit 2 - Safety Significant Finding

- 1 finding of low to moderate safety significance (White)
  - < Relay failure causing steam dump valves to fail open following reactor trip
- In January of 2005, a supplemental inspection determined the root cause analysis complete and corrective actions appropriately identified
- The finding will no longer be considered in the assessment process after the first quarter of 2005

Unit 1 - Inspection Results

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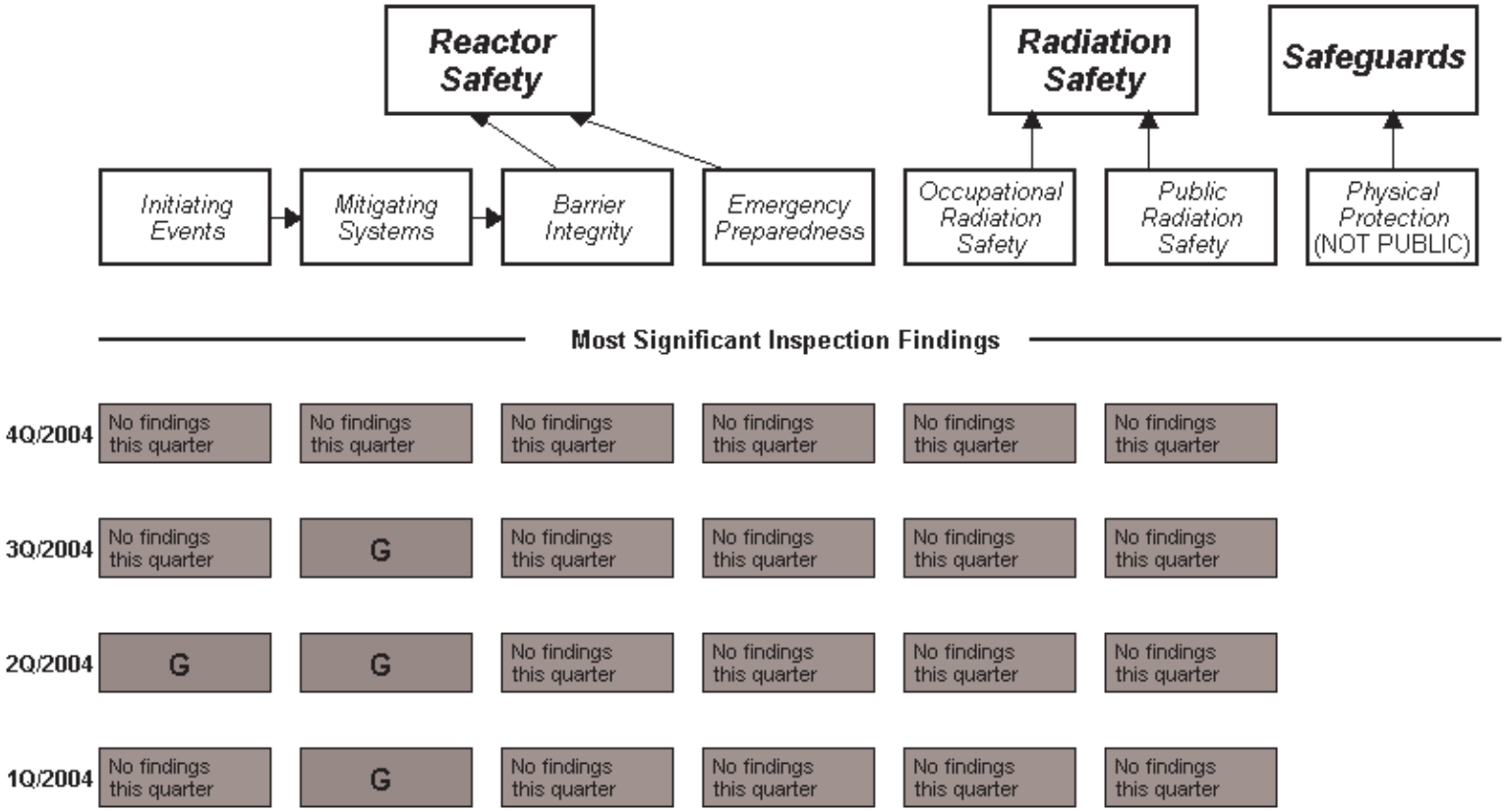

Unit 2 - Inspection Results

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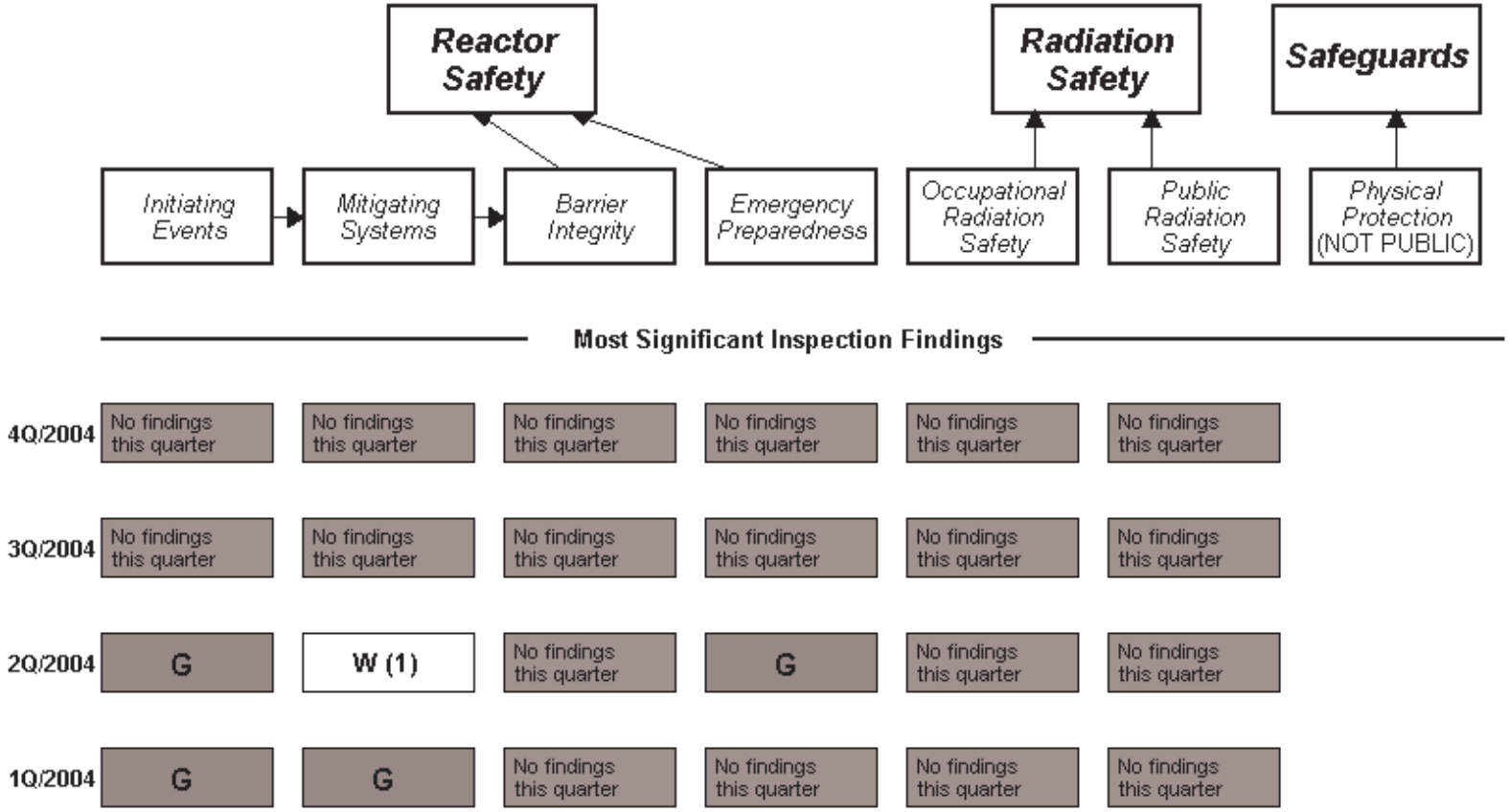

Unit 1 - Action Matrix

Cornerstone	Description of Issue	1Q 02	2Q 02	3Q 02	4Q 02	1Q 03	2Q 03	3Q 03	4Q 03	1Q 04	2Q 04	3Q 04	4Q 04
		ROP 3				ROP 4				ROP 5			
Initiating Events	• PI Scrams with a Loss of Normal Heat Removal	WHITE											
Mitigating Systems	• PI Heat Removal System Unavailability due 11 AFW Pump		W										
	• Finding 11 AFW Pump Failure due to turbine bearing housing FME	YELLOW											
Barrier Integrity													
Emergency Preparedness	• Finding Calvert County all 49 sirens not capable activated for 84 days			WHITE									
Public Radiation Safety	• Finding Rad material shipment exceeds transportation limit >200mR/Hr		WHITE										
Occupational Radiation Safety													
Physical Protection													
ACTION MATRIX		DEG CORNER		REGULATORY RESPONSE				LICENCEE RESPONSE					

- **Licensee Resp** - All inputs GREEN
- **Regulatory Resp** - 1 or 2 WHITES in different cornerstones in a Strategic Perform Area
- **Degraded Cornerstone** - 2 WHITE or 1 YELLOW in a single cornerstone **OR** any 3 WHITES in a Strategic Perform Area
- **Multiple/Repetitive** - Repetitive Degraded **OR** Multiple YELLOW or 1 RED

Unit 2 - Action Matrix

Cornerstone	Description of Issue	1Q 02	2Q 02	3Q 02	4Q 02	1Q 03	2Q 03	3Q 03	4Q 03	1Q 04	2Q 04	3Q 04	4Q 04
		ROP 3				ROP 4				ROP 5			
Initiating Events													
Mitigating Systems											WHITE		
Barrier Integrity													
Emergency Preparedness	• Finding Calvert County all 49 sirens not capable activated for 84 days			WHITE									
Public Radiation Safety	• Finding Rad material shipment exceeds transportation limit >200mR/Hr		WHITE										
Occupational Radiation Safety													
Physical Protection													
ACTION MATRIX		LIC RES	REGULATORY RESPONSE					LICENSEE RESPONSE			REGULATORY RESPONSE		

- **Licensee Resp** - All inputs GREEN
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Calvert Cliffs
Annual Assessment Summary

January 1- December 31, 2004

- Constellation operated Calvert Cliffs Units 1 & 2 in a manner that protected public health and safety
- All cornerstone objectives were met.
- Currently the NRC plans baseline inspections for the 2005 assessment period.

NRC Security Program Update

- NRC has issued Orders

(Implementation Completed October 29, 2004):

  < Increased Patrols
  < Augmented Security Capabilities
  < Added Barriers and Posts
  < Enhanced Personnel Screening for Access
  < Enhanced Security Awareness

- Office of Nuclear Security and Incident Response Formed (April 2002)
- Established Threat Advisory and Protective Measure System (August 2002)

NRC Security Program Update (continued)

- Access Authorization Order (January 2003)
- Training Order (April 2003)
- Fatigue Order (April 2003)
- Design Basis Threat (April 2003)
- Changes to Site Security plans to incorporate the requirements of the orders (April 2004)
- Expanded Force-on-Force Exercises
- New NRC Baseline Inspection Program initiated (February 2004)

Reference Sources

- Reactor Oversight Process
  - http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html
- Public Electronic Reading Room
  - http://www.nrc.gov/reading-rm/adams.html
- Public Document Room
  - 1-800-397-4209 (Toll Free)

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
  < Select "What We Do" for Public Affairs

Licensee Response and Remarks

Calvert Cliffs Nuclear Power Plant
Constellation Generation Group