

# Annual Assessment Meeting

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Reactor Oversight Program  
Calendar Year 2002



Nuclear Regulatory Commission - Region I  
King of Prussia, PA

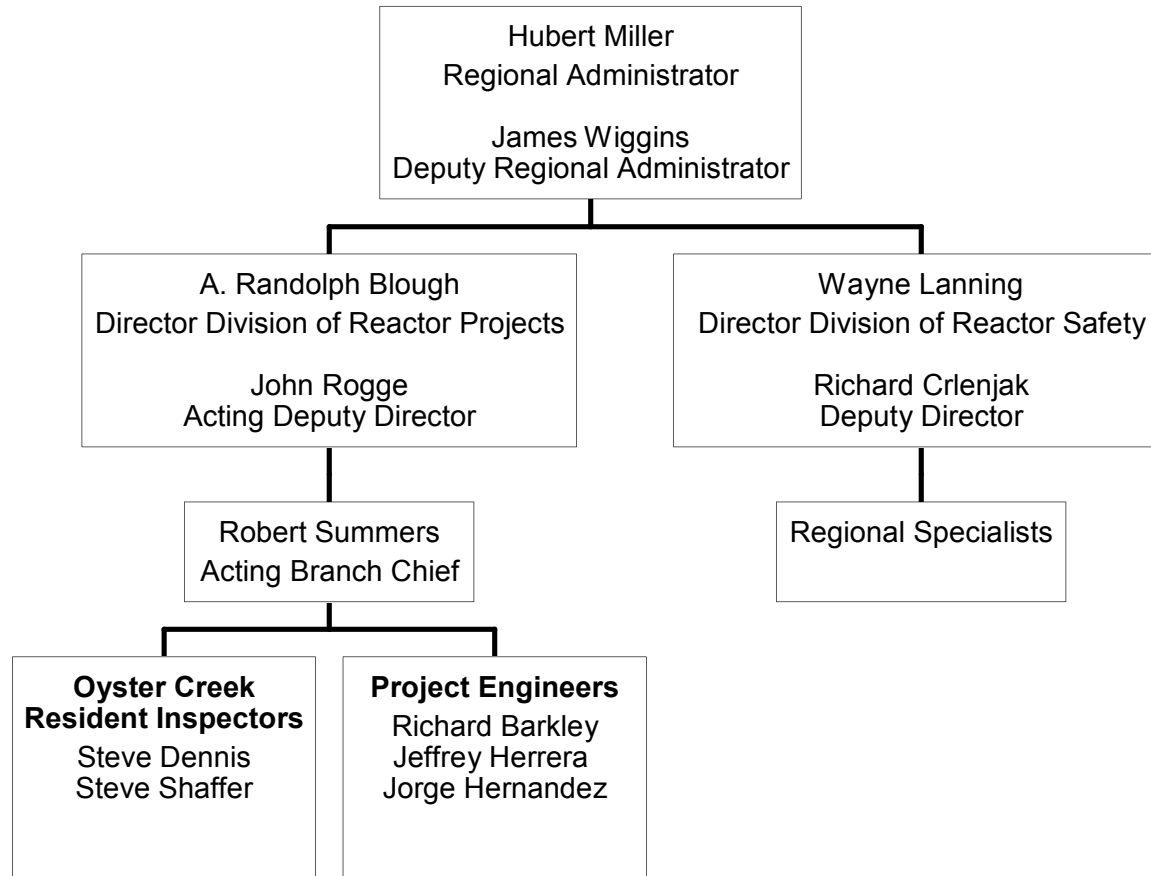
# Agenda

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- Introduction
- Review of Reactor Oversight Process
- National Summary of Plant Performance
- Discussion of Plant Performance Results
- General Topics: Security Update and Self-Improvement Efforts
- Licensee Response and Remarks
- NRC Closing Remarks
- Break
- NRC available to address questions from the public

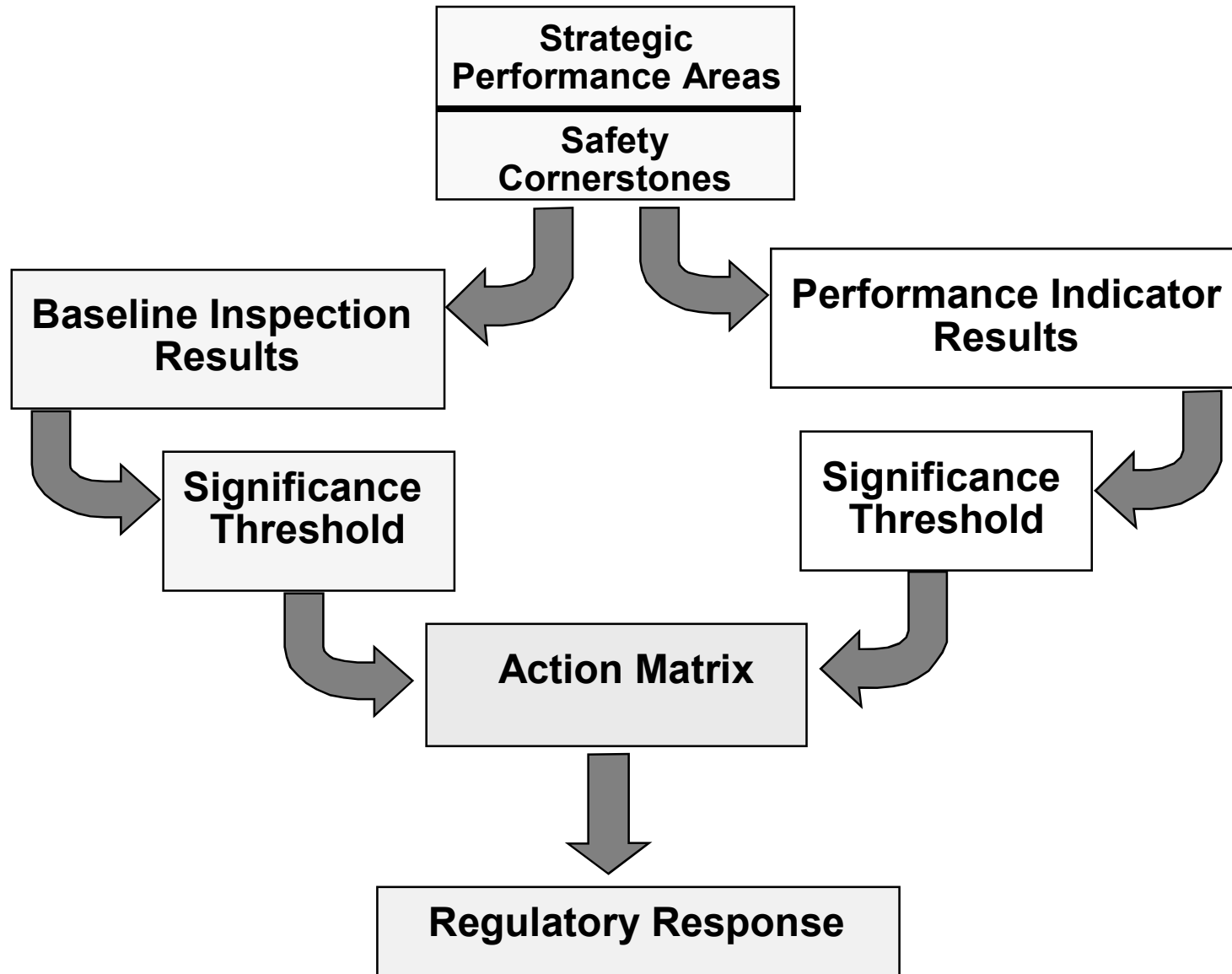
# Region I Organization

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# Reactor Oversight Process

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# Examples of Baseline Inspections

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- 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 Case Reviews ~30 hrs/yr

# Significance Threshold

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## 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 |

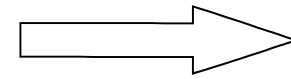
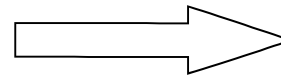
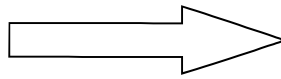
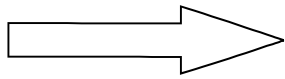
## Inspection Findings

|                |                              |
|----------------|------------------------------|
| <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            |

# Action Matrix Concept

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| <b>Licensee<br/>Response</b> | <b>Regulatory<br/>Response</b> | <b>Degraded<br/>Cornerstone</b> | <b>Multiple/Rep.<br/>Degraded<br/>Cornerstone</b> | <b>Unacceptable<br/>Performance</b> |
|------------------------------|--------------------------------|---------------------------------|---|-------------------------------------|
|------------------------------|--------------------------------|---------------------------------|---|-------------------------------------|



Increasing Safety Significance

Increasing NRC Inspection Efforts

Increasing NRC/Licensee Management Involvement

Increasing Regulatory Actions

# National Summary of Plant Performance

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## Status at End of Calendar Year 2002

|  |     |
|--|-----|
| Licensee Response                        | 75  |
| Regulatory Response                      | 24  |
| Degraded Cornerstone                     | 2   |
| Multiple/Repetitive Degraded Cornerstone | 1   |
| Unacceptable                             | 0   |
| <hr/>                                    |     |
| Total Plants                             | 102 |

\*Davis-Besse is in IMC 0350 process



# National Summary

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- Performance Indicator Results (end of calendar year 2002)
  - **Green** 1835
  - **White** 5
  - **Yellow** 0
  - **Red** 0
- Total Inspection Findings (calendar year 2002)
  - **Green** 783
  - **White** 30
  - **Yellow** 1
  - **Red** 2

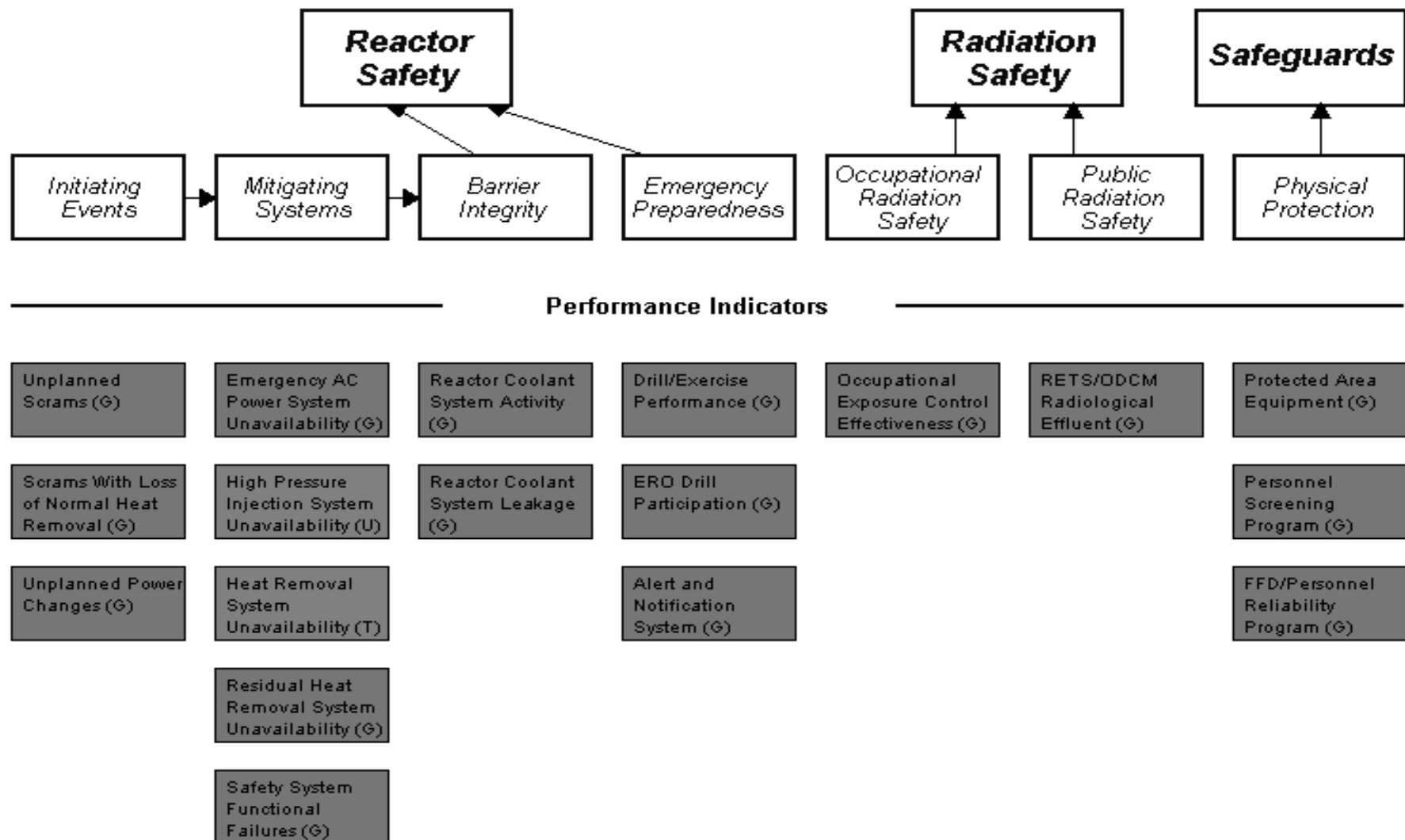
# Oyster Creek Assessment Results

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(Jan 1 - Dec 31, 2002)

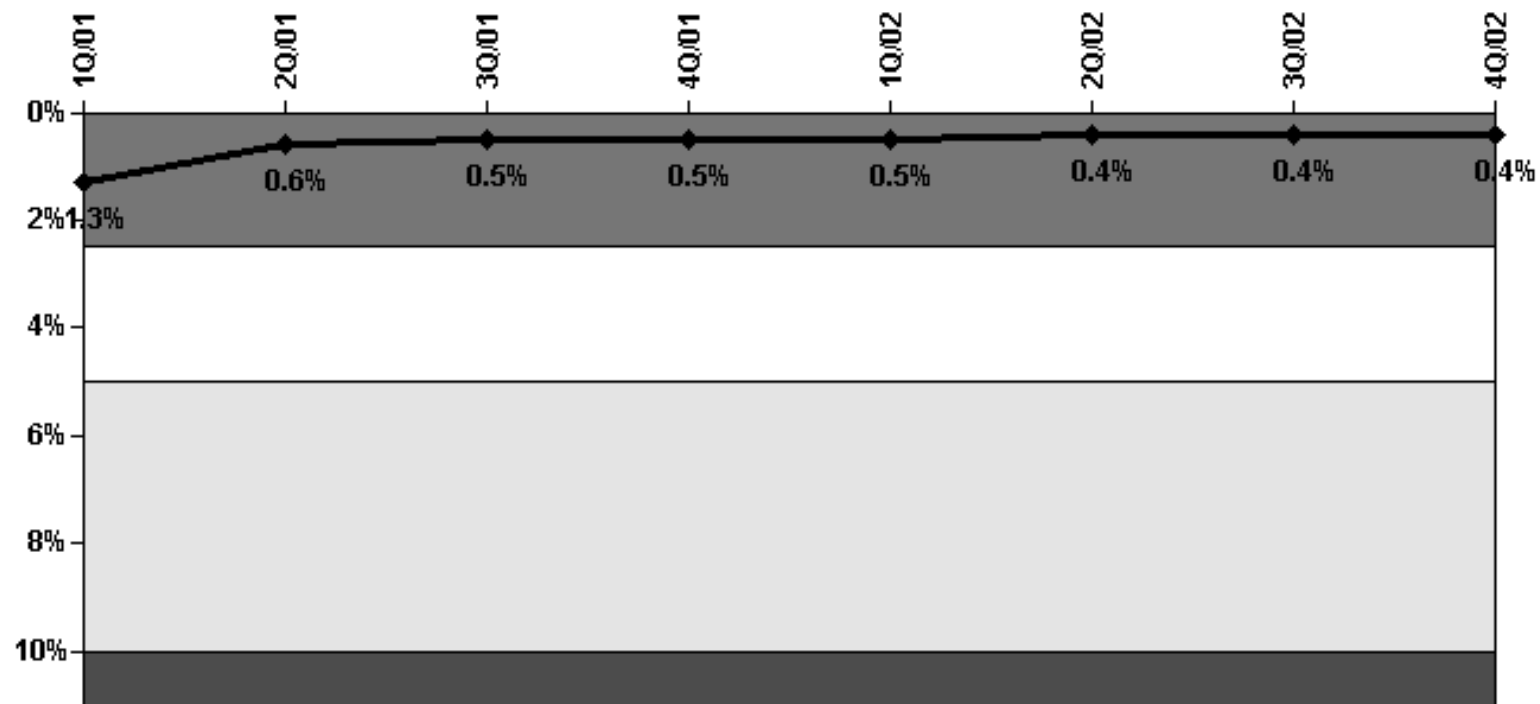
- Operated safely
- Regulatory Response column of the Action Matrix for the first and second quarters of 2002 (cornerstone objectives fully met)
- Licensee Response column of the Action Matrix for the third and fourth quarters of 2002 (cornerstone objectives fully met)
- NRC will conduct baseline inspections during the next cycle

# Oyster Creek -Performance Indicators



# Performance Indicator (Example)

**Safety System Unavailability, Emergency AC Power**



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

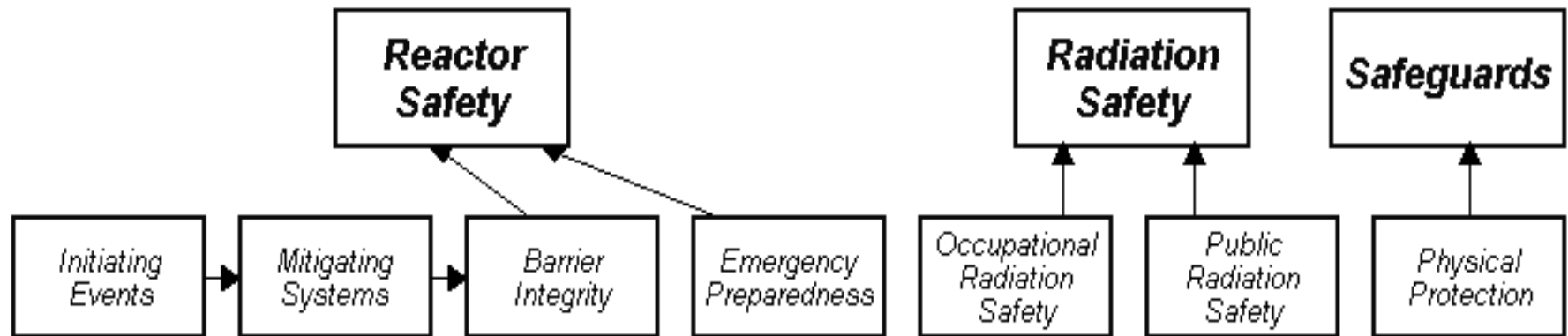
# Oyster Creek Inspection Activities

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(Jan 1 - Dec 31, 2002)

- Approximately 5280 hours of inspection related activities
- 2 resident inspectors assigned to the site
- 15 regional inspector visits
  - ▶ Included 3 team inspections
- Inspection Findings
  - ▶ 12 findings of very low safety significance (GREEN)

# Oyster Creek - Inspection Results



## Most Significant Inspection Findings

|         | Initiating Events        | Mitigating Systems       | Barrier Integrity        | Emergency Preparedness   | Occupational Radiation Safety | Public Radiation Safety  | Physical Protection      |
|---------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|--------------------------|--------------------------|
| 4Q/2002 | G                        | G                        | G                        | No findings this quarter | G                             | No findings this quarter | No findings this quarter |
| 3Q/2002 | No findings this quarter | No findings this quarter | No findings this quarter | No findings this quarter | No findings this quarter      | No findings this quarter | No findings this quarter |
| 2Q/2002 | No findings this quarter | G                        | No findings this quarter | No findings this quarter | No findings this quarter      | No findings this quarter | No findings this quarter |
| 1Q/2002 | No findings this quarter | G                        | No findings this quarter | No findings this quarter | No findings this quarter      | No findings this quarter | No findings this quarter |

# Oyster Creek Annual Assessment

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Substantive Cross Cutting Issue  
Human Performance

Common Theme  
Procedure Adherence Inadequacies

Cornerstones Affected  
Initiating Events, Mitigating Systems, Barrier  
Integrity, and Occupational Radiation Safety

# Several Green Findings

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- ▶ Procedures controlling test activities
- ▶ Procedures controlling modification activities
- ▶ Alignment of plant components
- ▶ Equipment performance monitoring
- ▶ Repeat errors involving personnel not responding to alarming electronic dosimetry while working in high radiation areas

This substantive cross cutting issue will be inspected through the baseline inspection program.



# NRC Security Program Update

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- NRC has issued Orders which:
  - ▶ 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)
- Threat Advisory and Protective Measure System (August 2002):
  - ▶ NRC established five level threat advisory and protective measure system based on Homeland Security Advisory System

# **NRC Security Program Update** (continued)

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- Access Authorization Order (January 7, 2003)
- Force-on-Force Exercises (February 2003)
- Training Order (TBD)
- Fatigue Order (TBD)
- Design Basis Threat (TBD)

# Emergency Response

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- Office of Nuclear Security and Incident Response has primary responsibility
  
- Typical other federal agencies involved:
  - Federal Emergency Management Agency
  - Department of Energy
  - Environmental Protection Agency
  - Federal Bureau of Investigation

# **NRC Self-Improvement Efforts**

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- Security Enhancements
- Significance Determination Process Task Group
- Performance Indicator Program
- Davis-Besse Lessons Learned Task Force

# NRC Representatives

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- A. Randolph Blough, Director, Division Reactor Projects
  - (610) 337-5230
- Robert Summers, Branch Chief
  - (610) 337-5227
- Peter Tam, Project Manager, NRR
  - (301) 415-3016
- Steven Dennis, Senior Resident Inspector
  - (609) 693-0702
- Steven Shaffer, Resident Inspector
  - (609) 693-0702
- Richard Barkley, Senior Project Engineer
  - (610) 337-5065

# Reference Sources

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- Reactor Oversight Process

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

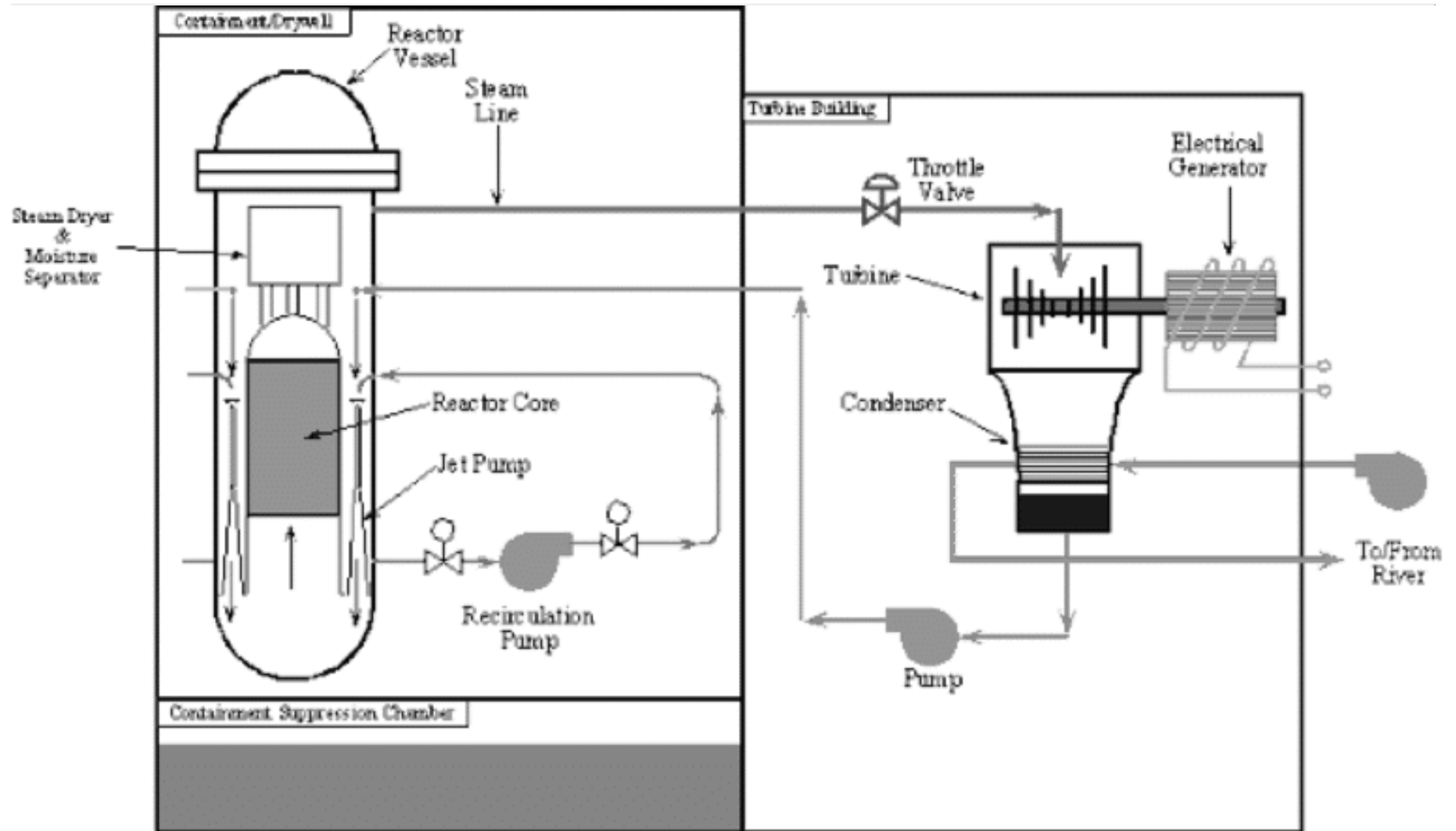
- Public Electronic Reading Room

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

- Public Document Room

- ▶ 1-800-397-4209 (Toll Free)

# Simplified Boiling Water Reactor



# Simplified Pressurized Water Reactor

