

# Three Mile Island Annual Assessment Meeting

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Reactor Oversight Program - CY 2003



Nuclear Regulatory Commission - Region I  
King of Prussia, PA  
May 20, 2004

# Agenda

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

# Purpose of Today's Meeting

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- NRC will address licensee performance issues identified in our annual assessment
- AmerGen will respond to the information in our assessment and inform the NRC of new or existing programs to maintain or improve performance
- NRC comments on security updates and perspectives on nuclear industry deregulation
- NRC will respond to questions from the public after the discussion with AmerGen

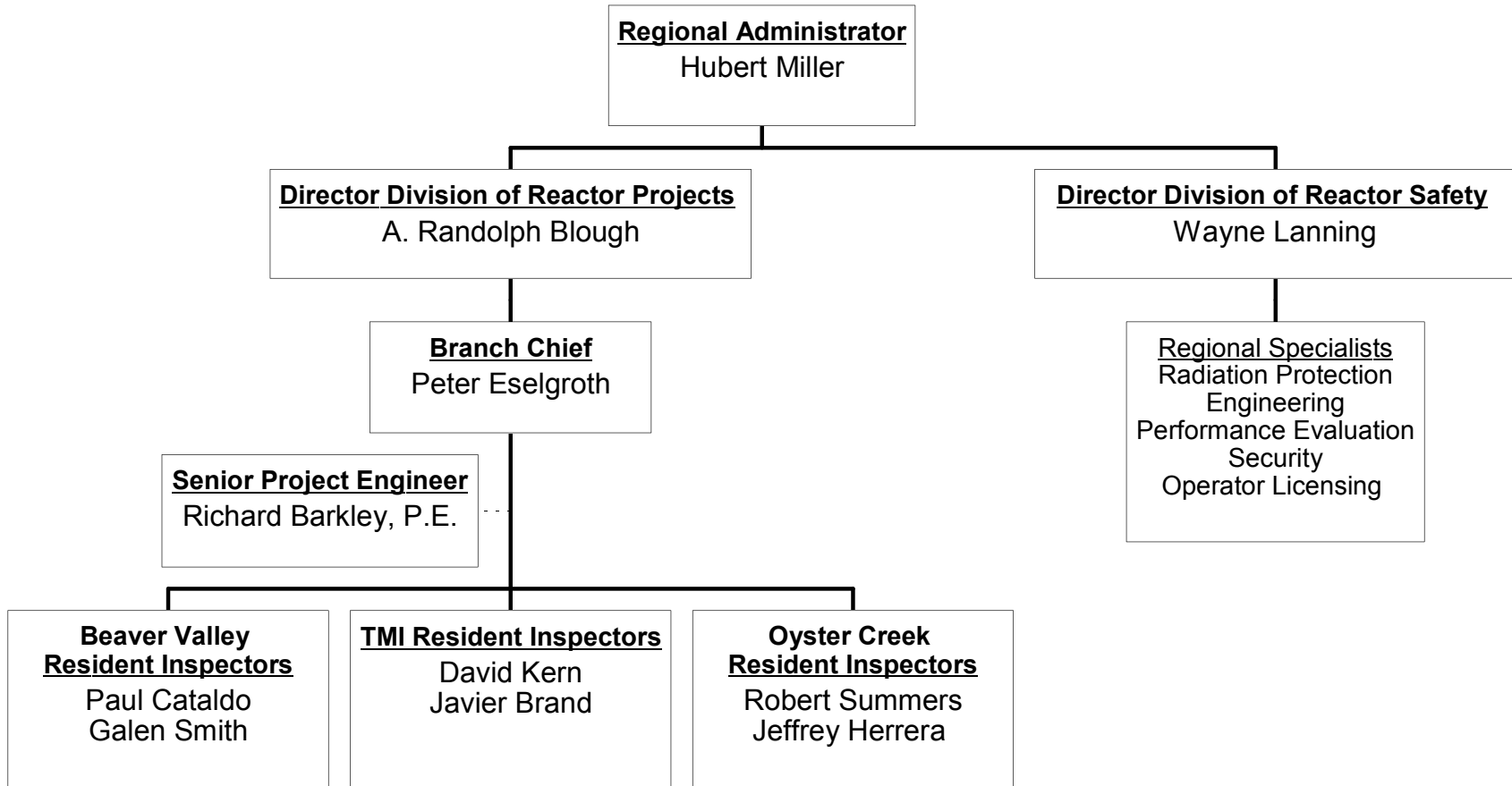
# NRC Representatives

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- James Wiggins, Deputy Regional Administrator
  - (610) 337-5340
- Peter Eselgroth, Branch Chief
  - (610) 337-5234
- David Kern, Senior Resident Inspector
  - (717) 948-1165
- Javier Brand, Resident Inspector
  - (717) 948-1165
- Donna Skay, Senior Project Manager
  - (301) 415-1322
- Patricia Milligan, Senior Emergency Response Coordinator
  - (301) 415-2223

# Region I Organization

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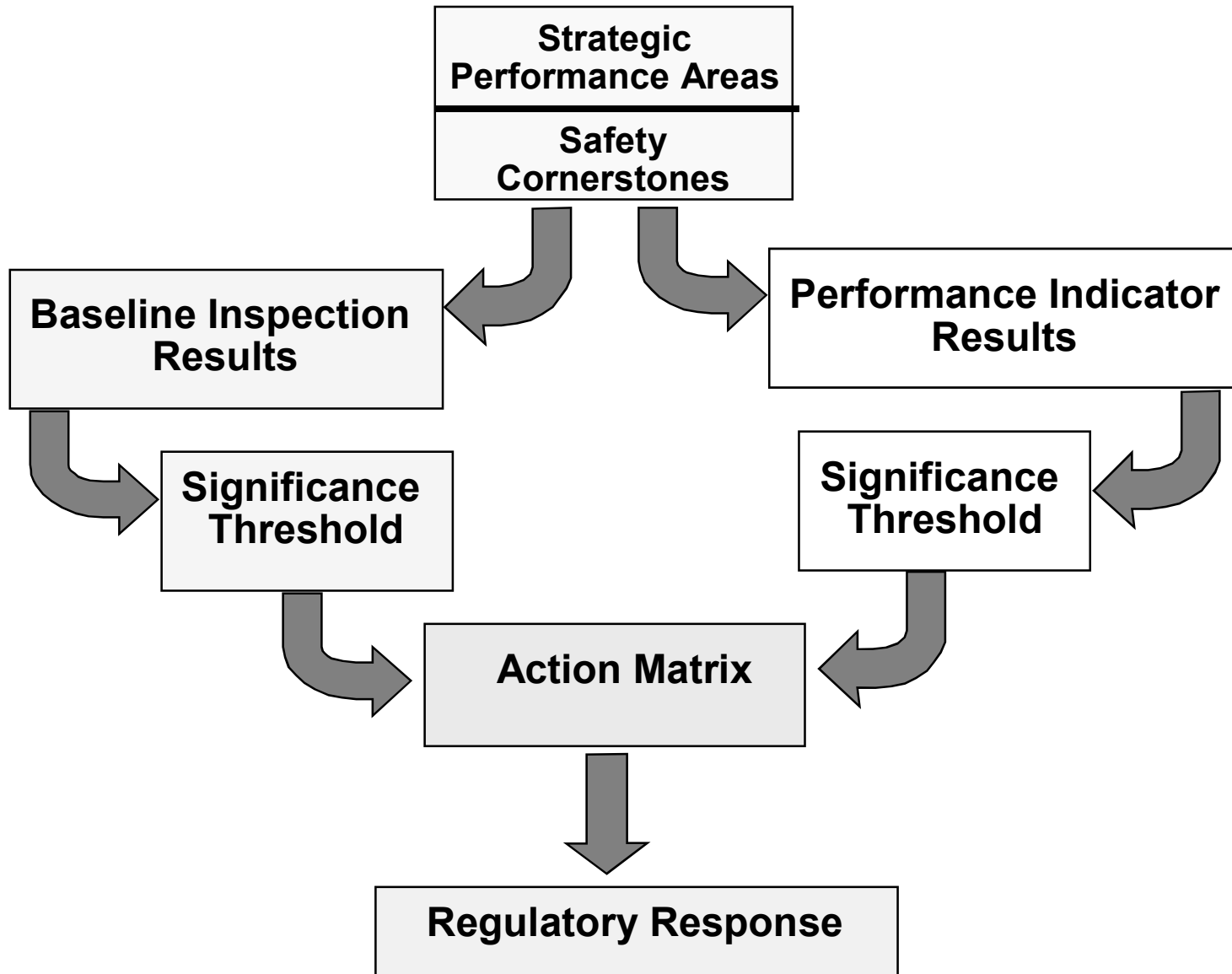
# NRC Performance Goals

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- Maintain safety and protect the environment
- Enhance public confidence
- Improve effectiveness, efficiency, and realism of processes and decision making
- Reduce unnecessary regulatory burden

# 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 ~250 hrs every 2 yrs
- Corrective Action Case Reviews ~60 hrs/yr



# Significance Threshold

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## 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 issue

**White:** Low to moderate safety issue

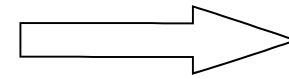
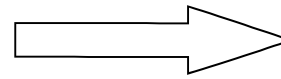
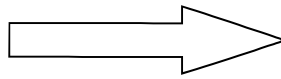
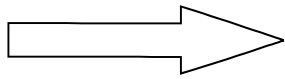
**Yellow:** Substantial safety issue

**Red:** High safety issue

# Action Matrix Concept

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<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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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 CY 2003

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

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Total Units	102*
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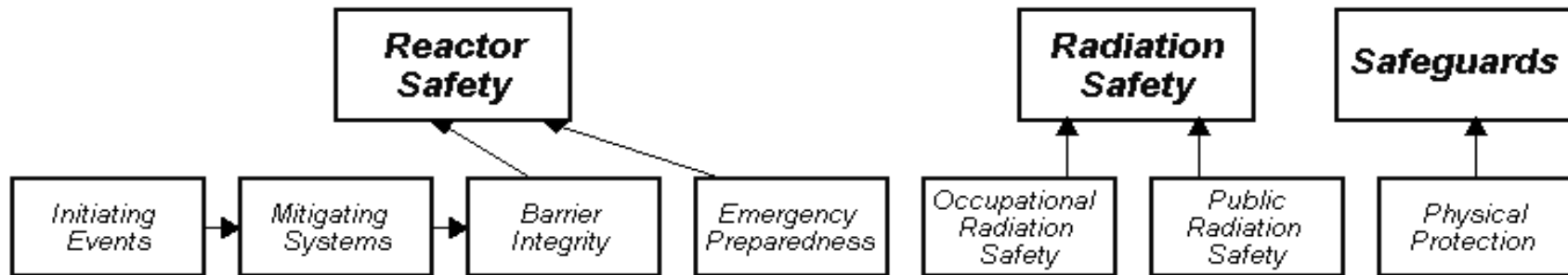
\*Davis-Besse is in IMC 0350 process

# National Summary

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- Performance Indicator Results (at end of CY 2003)
  - ▶ **Green** 1825
  - ▶ **White** 15
  - ▶ **Yellow** 0
  - ▶ **Red** 0
  
- Total Inspection Findings (CY 2003)
  - ▶ **Green** 748
  - ▶ **White** 19
  - ▶ **Yellow** 2
  - ▶ **Red** 4

# TMI Performance Indicators

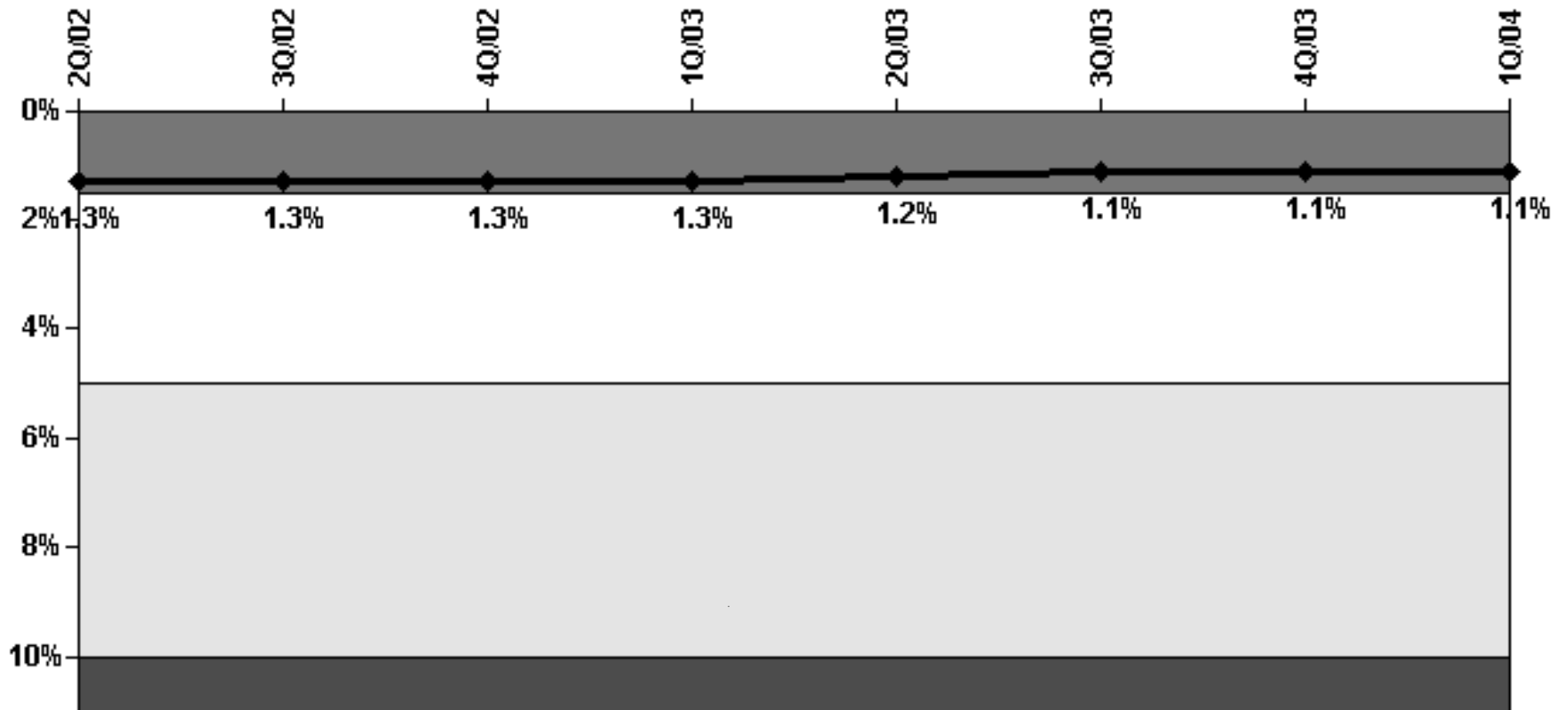


## Performance Indicators

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)	Protected Area Equipment (G)
Scrams 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)					

# TMI Performance Indicator

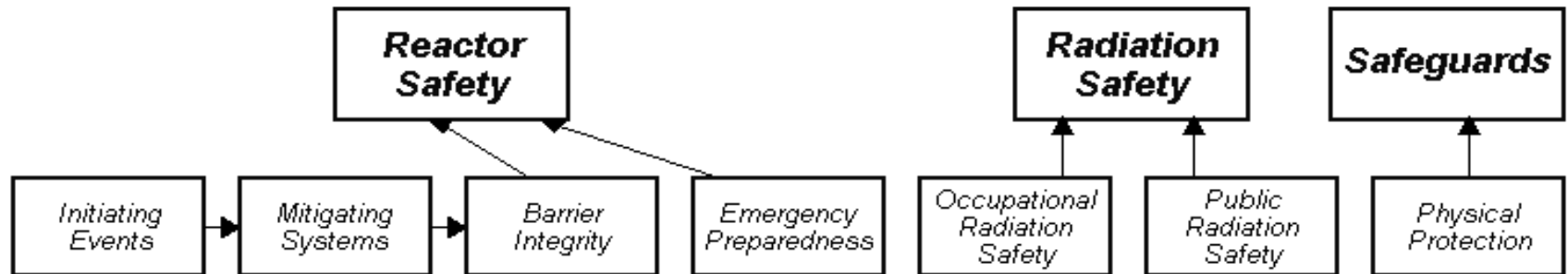
## Safety System Unavailability, Residual Heat Removal System



Thresholds: White > 1.5% Yellow > 5.0% Red > 10.0%

# TMI - Inspection Findings

[www.nrc.gov/NRR/OVERSIGHT/ASSESS/](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/) then click TMI



## Most Significant Inspection Findings

	Initiating Events	Mitigating Systems	Barrier Integrity	Emergency Preparedness	Occupational Radiation Safety	Public Radiation Safety	Physical Protection
1Q/2004	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
4Q/2003	No findings this quarter	G	G	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter
3Q/2003	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
2Q/2003	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

Miscellaneous findings

# TMI Inspection Activities

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(Jan 1 - Dec 31, 2003)

- 5,600 hours of inspection related activities
- 2 resident inspectors assigned to the site
- 14 regional inspections
- 2 team inspections - Safety System Design Inspection and the Review of the Reactor Vessel Head Replacement Project
- Inspection Findings
  - ▶ Eight findings of very low safety significance (Green)



# TMI - Examples of Inspection Findings

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- Untimely Identification & Correction of Reactor Coolant System Pressure Boundary Leak
- Degraded Containment Sump and Containment Coatings
- Containment Liner Corrosion and Insufficient Structural Clearances
- Configuration Control Deficiencies Affected Intake Pump House Flood Penetration and Partial Borated Water Storage Tank Drain Down

# TMI Plant Assessment

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(Jan 1 - Dec 31, 2003)

- Operated safely
- Licensee Response Column of the Action Matrix for all four quarters of 2003
- Substantive Cross-Cutting issue in problem identification and resolution based on performance issues noted in the latter half of 2003

# TMI Planned Inspections

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(Jan 1 - Dec 31, 2004)

- 14 regional inspector visits scheduled
- 1 team inspection scheduled
  - Problem Identification & Resolution - Conducted in March 2004

# AmerGen Response and Remarks

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Three Mile Island  
Nuclear Generating Station  
AmerGen Energy Company

# NRC Security Program Update

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- NRC has issued Orders (February 2002):
  - ▶ 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)

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- 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(in progress)
- New NRC Baseline Inspection Program initiated (February 2004)

# Nuclear Industry Deregulation

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- Economic Deregulation throughout Region I
- Competition can spur some improvements
  - ▶ Work control, planning, coordination
- NRC must watch for any negative impacts
- NRC Activities:
  - ▶ Performance Indicators
  - ▶ Corrective Action program Inspections
  - ▶ Maintenance Inspections
  - ▶ Modification Inspections
  - ▶ Safety Conscious Work Environment Assessment

# Approaches for Continued Performance Success

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## An NRC Perspective

- Strong corrective action program
  - ▶ Continued low threshold for problem identification
- Effective engineering & technical support
- Penetrating internal self-assessments & employee surveys
- Commitment to high standards -- Maintaining a long-term view on resources



# 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)

# Contacting the NRC

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- 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