

# End of Cycle Assessment Results Braidwood Nuclear Power Plant



**United States  
Nuclear Regulatory Commission**

# ***AGENDA***

- **Introduction**
  - NRC
  - Reactor Oversight Process
- **Current End of Cycle Assessment Results**
  - Performance Indicators
  - Inspection Results
- Discussion of Current Plant Performance
- Concluding Remarks

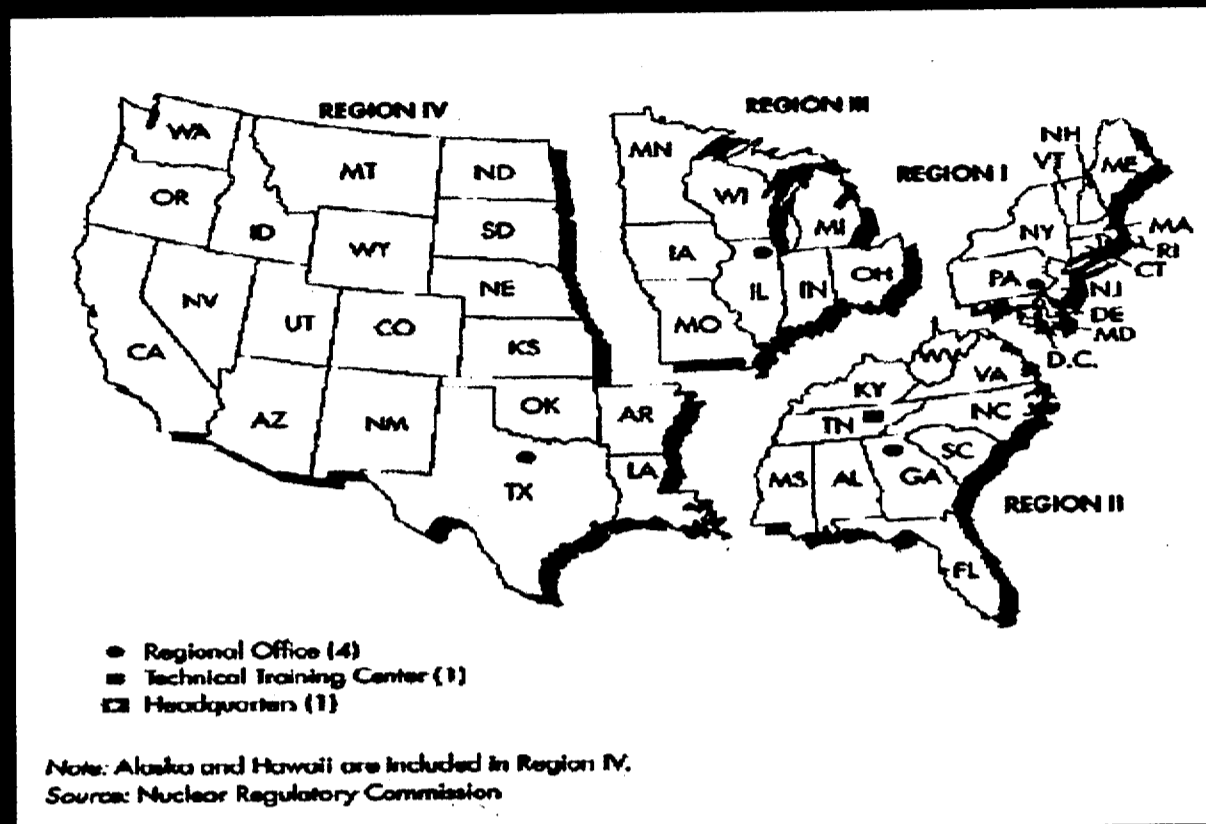
***NRC Staff will be available after the meeting  
to answer any questions***

# **NRC Activities**

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- **Ensure nuclear plants are designed, constructed, and operated safely**
- **Issue licenses for the peaceful use of nuclear materials in the U. S.**
- **Ensure licensees use nuclear materials and operate plants safely, and are prepared to respond to emergencies**

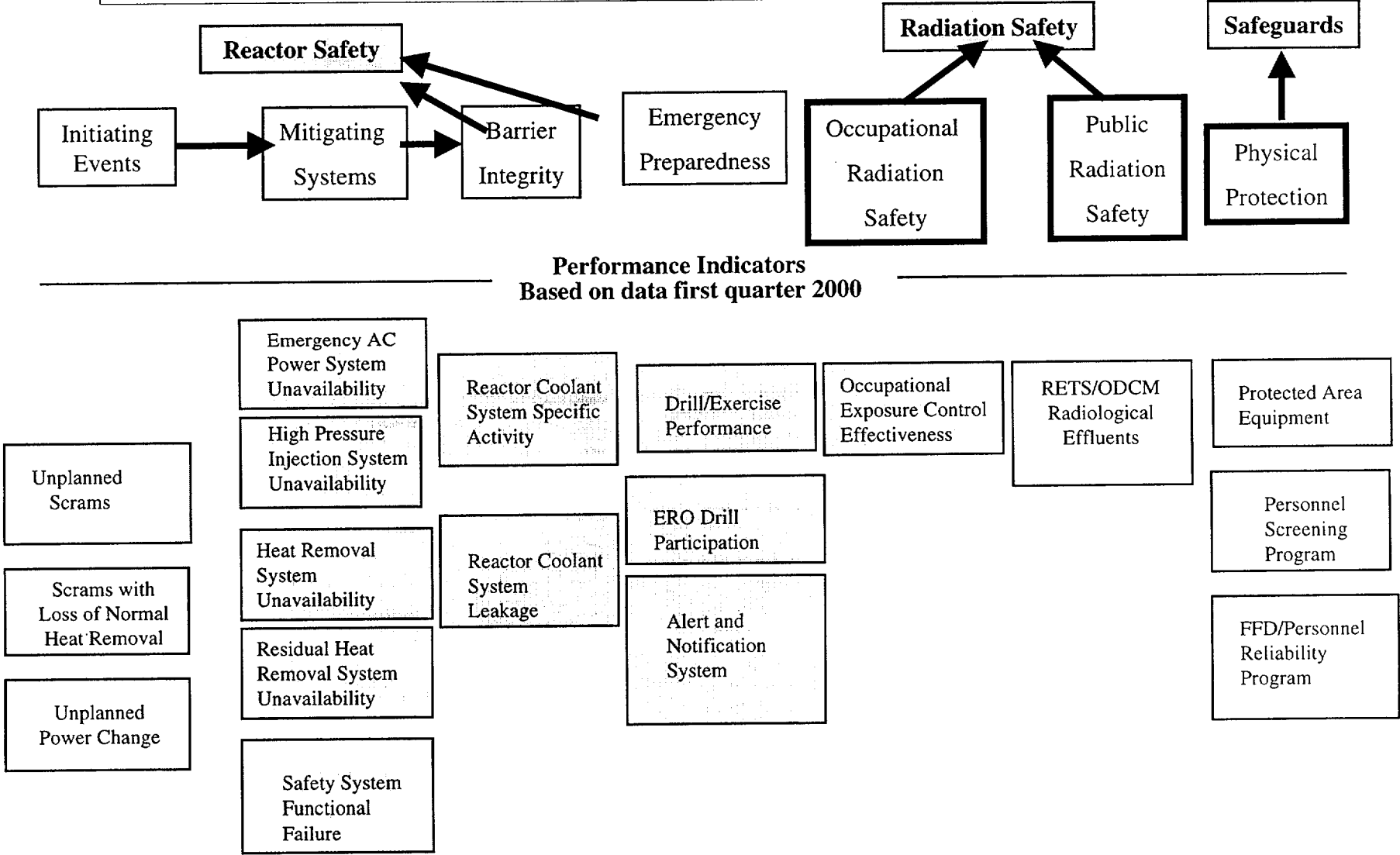
# NRC REGIONAL OFFICES



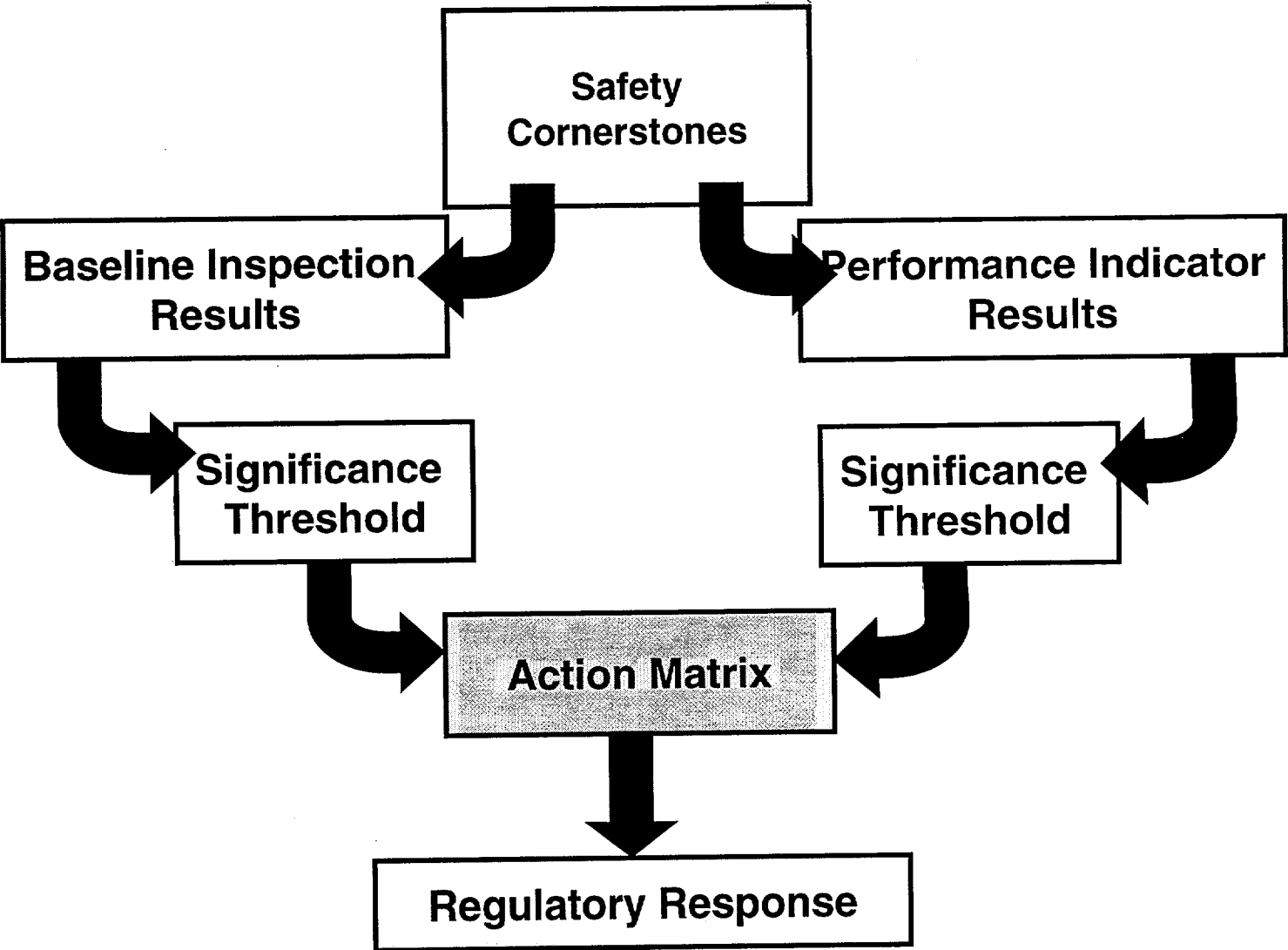
# **FOUR KEY NRC OUTCOME MEASURES**

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

**The three Strategic Performance Areas are subdivided into seven Cornerstones which are subdivided into 18 Performance Indicators**

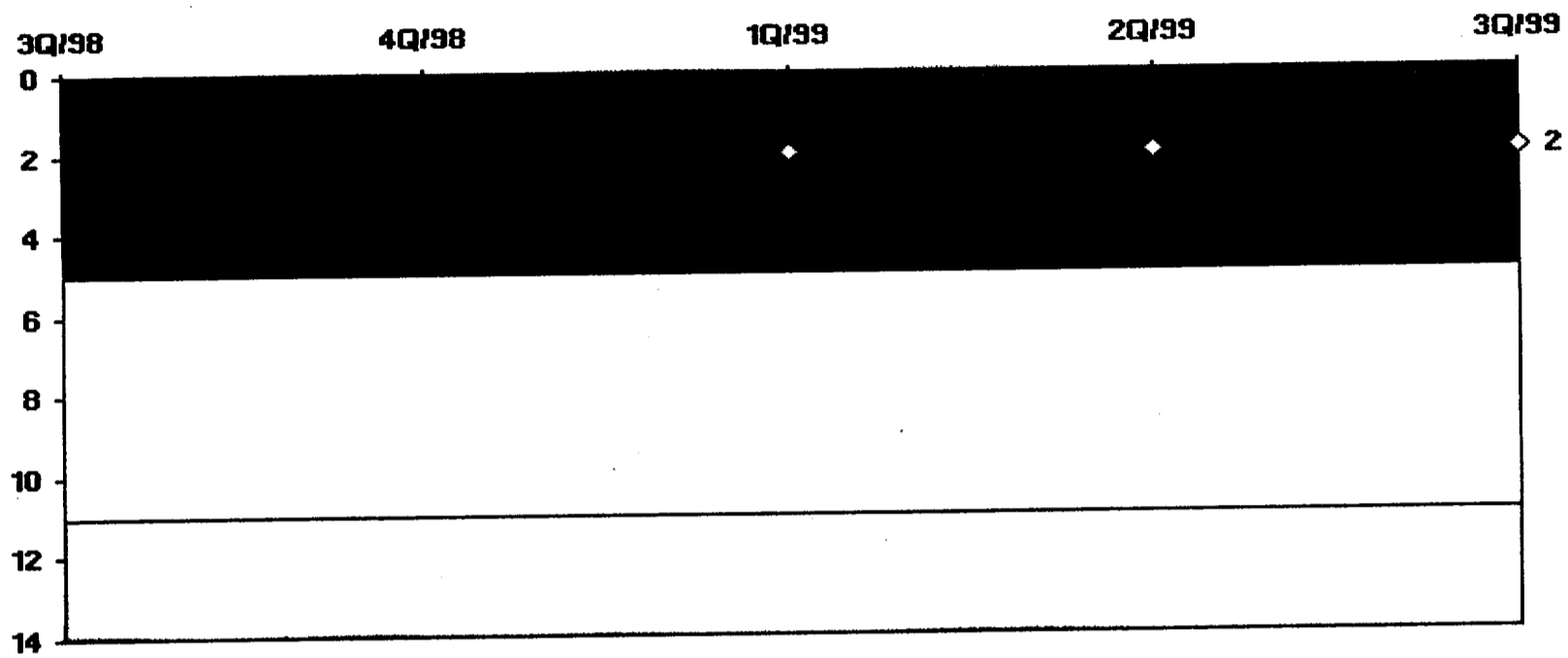


# Reactor Oversight Process



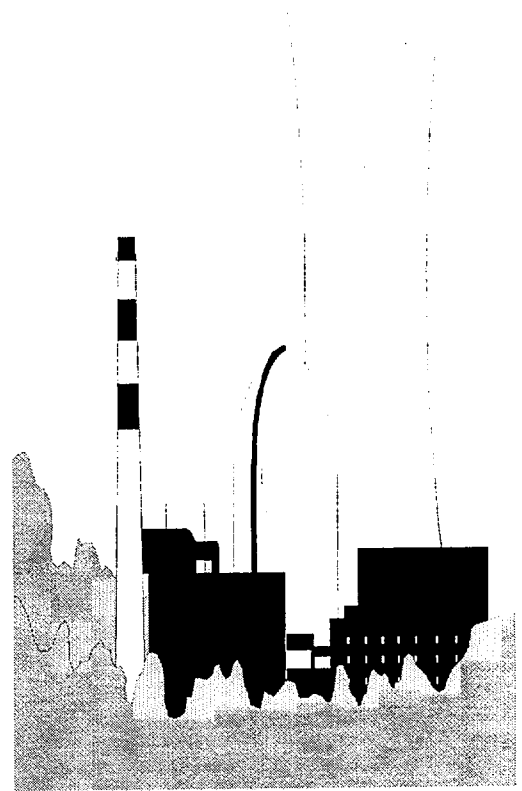
**A Performance Indicator uses  
objective data to monitor performance  
in each Cornerstone area**

**Occupational Exposure Control Effectiveness**



# **NRC Conducts Safety Inspections**

**NRC resident and regional inspectors utilize a Baseline Inspection Program to monitor plant safety performance in each of the Strategic Performance Areas**



# **Key Aspects of Baseline Inspection Program**

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**Objective evidence of plant safety**

**Determines causes of performance declines**

**Conducted at all plants**

**Emphasizes safety significant systems, components, activities, and events**

**Monitors licensee effectiveness in finding and fixing safety issues**

**Inspection reports describe significant findings and non-compliance**

**Inspection reports to public**

# **Examples of Baseline Inspection**

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- **Daily plant tours**
- **Daily control room tours**
- **Inspect maintenance of important equipment**
- **Inspect controls for radiation protection of plant workers**
- **Inspect controls for radiation releases**
- **Plant security inspections**

# **Supplemental Inspection and Event Follow-up**

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- **Determine causes of performance declines**
- **Review all events for significance**
- **Follow-up all significant inspection findings**
- **Provides for graduated response**

# **Key aspects of assessment program**

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- **Objective assessment of performance**
- **Utilizes “Action Matrix” to determine agency actions in response to performance**
- **Provides plant specific assessment letters**
- **Assessment information on NRC public web site**

**An Action Matrix is used to assess overall plant safety performance and specify thresholds for NRC Enforcement Actions**

	Licensee Response Column		Regulatory Response Column	Degraded Cornerstone Column	Multiple/ Repetitive Degraded Cornerstone Column	Unacceptable Performance Column
RESULTS		All Assessment Inputs (Performance Indicators (PIs) and Inspection Findings) Green; Cornerstone Objectives Fully Met	One or Two White Inputs (in different cornerstones) in a Strategic Performance Area; Cornerstone Objectives Fully Met	One Degraded Cornerstone (2 White Inputs or 1 Yellow Input) or any 3 White Inputs in a Strategic Performance Area; Cornerstone Objectives Met with Minimal Reduction in Safety Margin	Repetitive Degraded Cornerstone, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or 1 Red Input; Cornerstone Objectives Met with Longstanding Issues or Significant Reduction in Safety Margin	Overall Unacceptable Performance; Plants Not Permitted to Operate Within this Band, Unacceptable Margin to Safety
RESPONSE	Regulatory Performance Meeting	None	Branch Chief (BC) or Division Director (DD) Meet with Licensee	DD or Regional Administrator (RA) Meet with Licensee	RA (or EDO) Meet with Senior Licensee Management	Commission meeting with Senior Licensee Management
	Licensee Action	Licensee Corrective Action	Licensee root cause evaluation and corrective action with NRC Oversight	Licensee Self Assessment with NRC Oversight	Licensee Performance Improvement Plan with NRC Oversight	
	NRC Inspection	Risk-Informed Baseline Inspection Program	Baseline and supplemental inspection procedure 95001	Baseline and supplemental inspection procedure 95002	Baseline and supplemental inspection procedure 95003	
	Regulatory Actions	None	Supplemental inspection only	Supplemental inspection only	-10 CFR 2.204 DFI -10 CFR 50.54(f) Letter - CAL/Order	Order to Modify, Suspend, or Revoke Licensed Activities
COMMUNICATION	Assessment Letters	BC or DD review/sign assessment report (w/ inspection plan)	DD review/sign assessment report (w/ inspection plan)	RA review/sign assessment report (w/ inspection plan)	RA review/sign assessment report (w/ inspection plan) Commission Informed	
	Annual Public Meeting	SRI or BC Meet with Licensee	BC or DD Meet with Licensee	RA (or designee) Discuss Performance with Licensee	EDO (or Commission) Discuss Performance with Senior Licensee Management	Commission Meeting with Senior Licensee Management
	INCREASING SAFETY SIGNIFICANCE ----->					

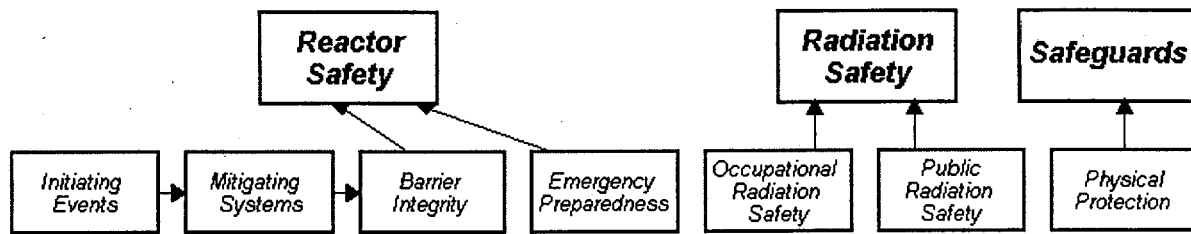
*May 2001  
Braidwood End of Cycle  
Performance Assessment Results*

- **All Performance Indicators Green**
- **All Inspection Findings were determined to be Green**
- **Safe Plant Operation**
- **Licensee Response Column**

Inspection Findings  
& Additional  
Information

Current Action Matrix Column: Licensee Response Column

## Braidwood 1 1Q/2001 Performance Summary



### Performance Indicators

Reactor Safety Initiating Events R	Reactor Safety Mitigating Systems W	Reactor Safety Barrier Integrity W	Reactor Safety Emergency Preparedness W	Radiation Safety Occupational Radiation Safety W	Radiation Safety Public Radiation Safety W	Safeguards Physical Protection W
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	Reactor Safety Mitigating Systems W					
	Reactor Safety Mitigating Systems W					

Legend: R=Red    W=White    T=Thresholds under development    N=Not Applicable  
 Y=Yellow    G=Green    I=Insufficient data to calculate PI    U=Unique Design

	<i>Initiating Events</i>	<i>Mitigating Systems</i>	<i>Barrier Integrity</i>	<i>Emergency Preparedness</i>	<i>Occupational Radiation Safety</i>	<i>Public Radiation Safety</i>	<i>Physical Protection</i>
	<b>Most Significant Inspection Findings</b>						
1Q/2001	No findings this quarter	G	Findings without color designation	Findings this quarter	Findings this quarter	No findings this quarter	No findings this quarter
4Q/2000	Findings without color designation	Findings without color designation	No findings this quarter	Findings this quarter	Findings this quarter	No findings this quarter	G
3Q/2000	G	G	No findings this quarter	No findings this quarter	Findings this quarter	No findings this quarter	No findings this quarter
2Q/2000	G	G	No findings this quarter	Findings this quarter	Findings this quarter	No findings this quarter	No findings this quarter
				Miscellaneous findings			

**Additional Inspection & Assessment Information****Assessment Reports/Inspection Plans:**

- 1Q/2001
- 4Q/2000
- 3Q/2000
- 2Q/2000

**List of Inspection Reports**

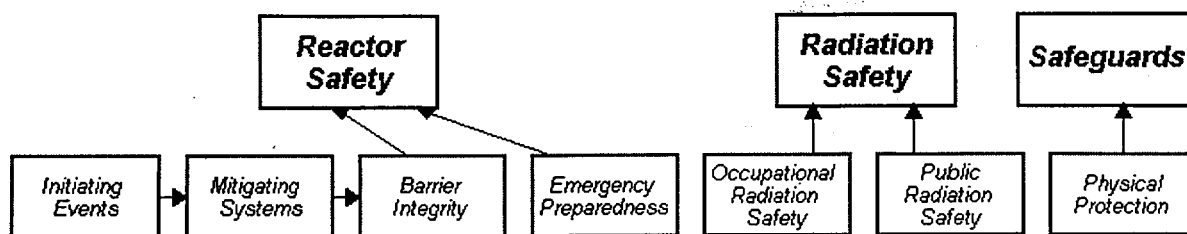
[PI Summary](#) | [Inspection Findings Summary](#) | [Action Matrix Summary](#) | [Plant Assessment Results](#)

Last Modified: June 12, 2001

Inspection Findings  
& Additional  
Information

Current Action Matrix Column: Licensee Response Column

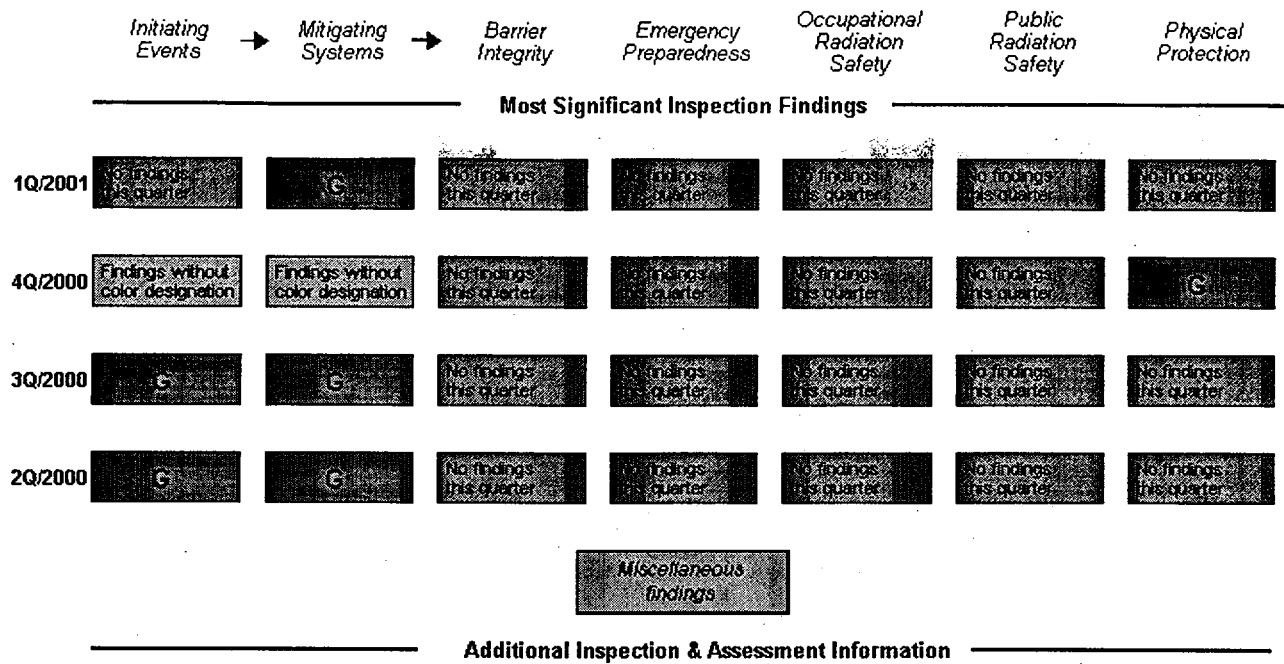
## Braidwood 2 1Q/2001 Performance Summary



### Performance Indicators

Reactor Safety Initiating Events W	Reactor Safety Mitigating Systems W	Reactor Safety Barrier Integrity W	Reactor Safety Emergency Preparedness W	Radiation Safety Occupational Radiation Safety W	Radiation Safety Public Radiation Safety W	Safeguards Physical Protection W
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☒ **Assessment Reports/Inspection Plans:**

- ◊ 1Q/2001
- ◊ 4Q/2000
- ◊ 3Q/2000
- ◊ 2Q/2000

☒ **List of Inspection Reports**

[PI Summary](#) | [Inspection Findings Summary](#) | [Action Matrix Summary](#) | [Plant Assessment Results](#)

Last Modified: June 12, 2001

For more information

NRC Oversight Process:

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

Braidwood Assessment information:

[\(...\) /ASSESS/BRAI1/brai1\\_chart.html](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/BRAI1/brai1_chart.html)

Region III office: U.S. Nuclear Regulatory Commission  
Region III  
801 Warrenville Road  
Lisle, IL 60532-4351

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Public Affairs: Jan Strasma, ext 9663  
Pam Alloway-Mueller, ext. 9662

For more information

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Braidwood Assessment information:

[\(...\)/ASSESS/BRAI1/brai1\\_chart.html](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/BRAI1/brai1_chart.html)

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