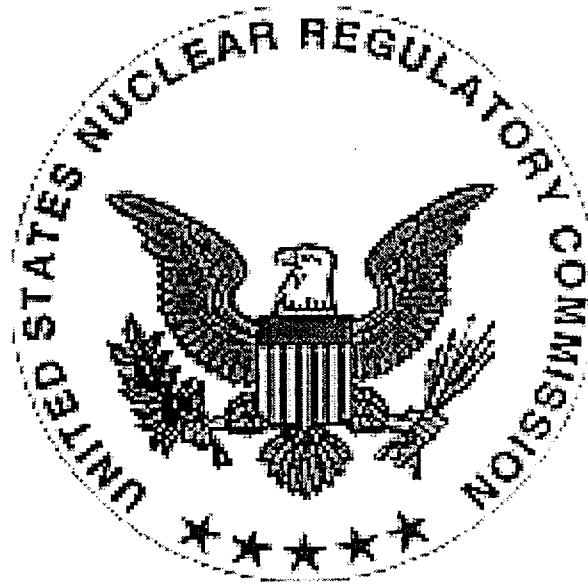


# End of Cycle Assessment Results Kewaunee Nuclear Power Plant



**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**

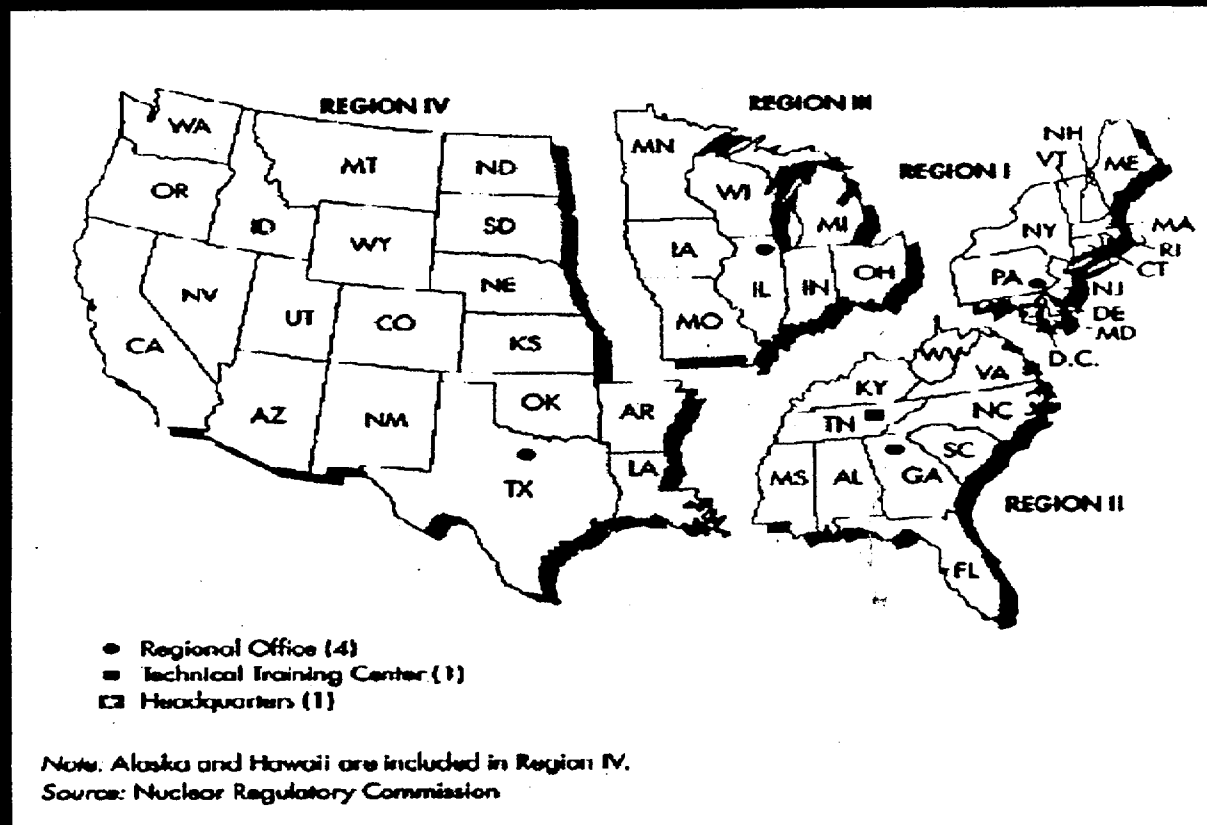
***NRC Staff will be available after the meeting  
to answer any questions***

# **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**

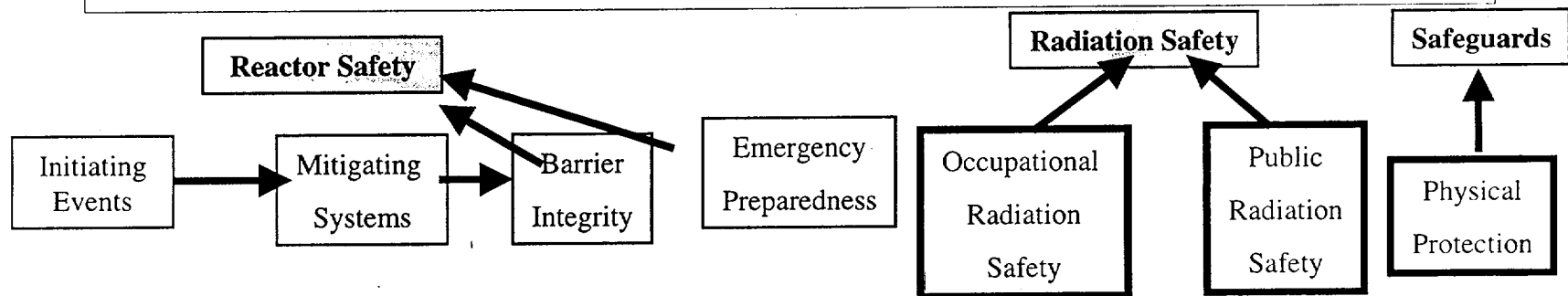
# NRC REGIONAL OFFICES



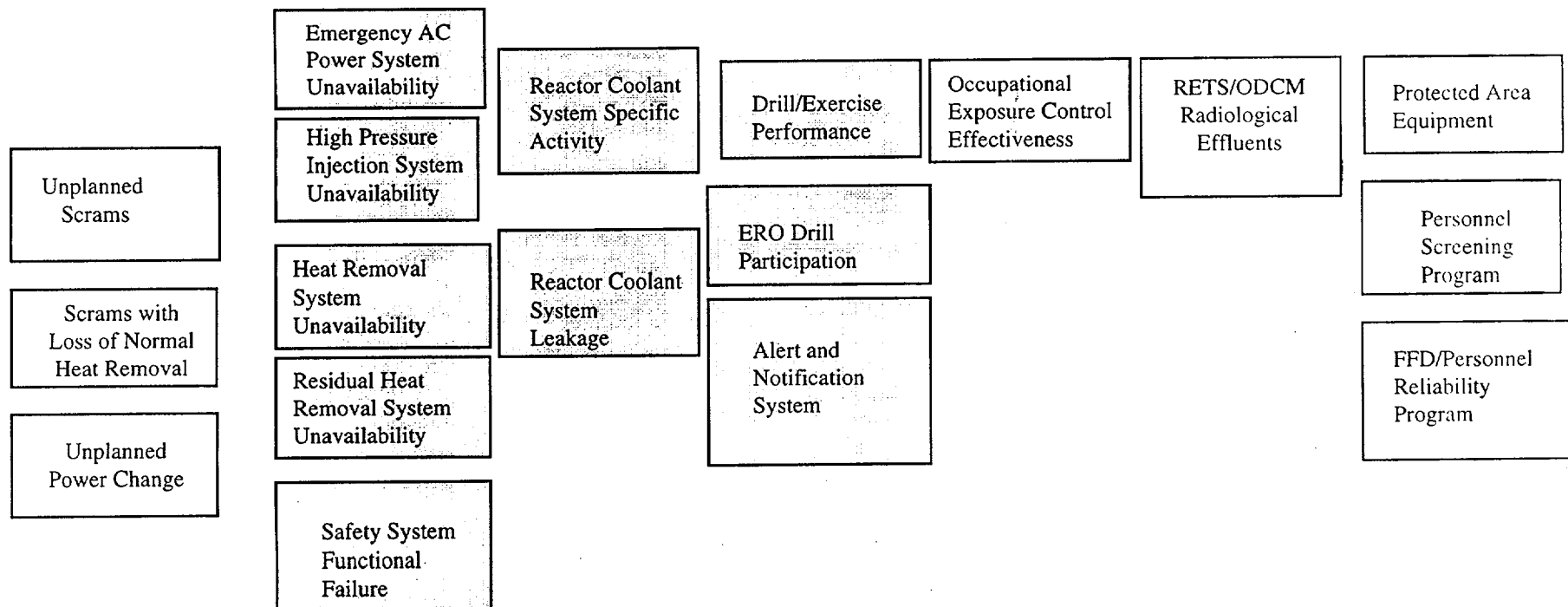
# **FOUR KEY NRC OUTCOME MEASURES**

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

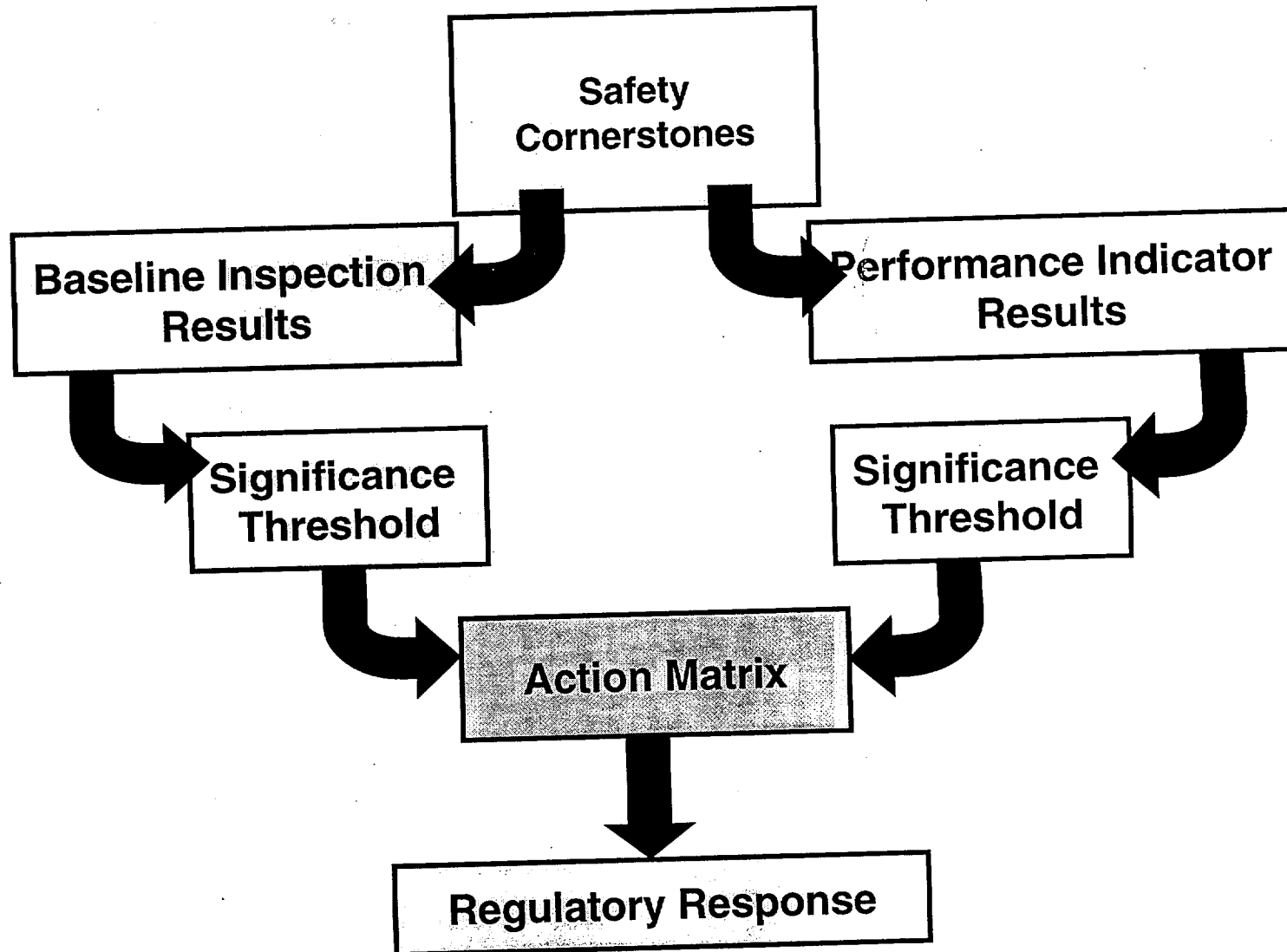
**The three Strategic Performance Areas are subdivided into seven Cornerstones which are subdivided into 18 Performance Indicators**



**Performance Indicators  
Based on data first quarter 2000**

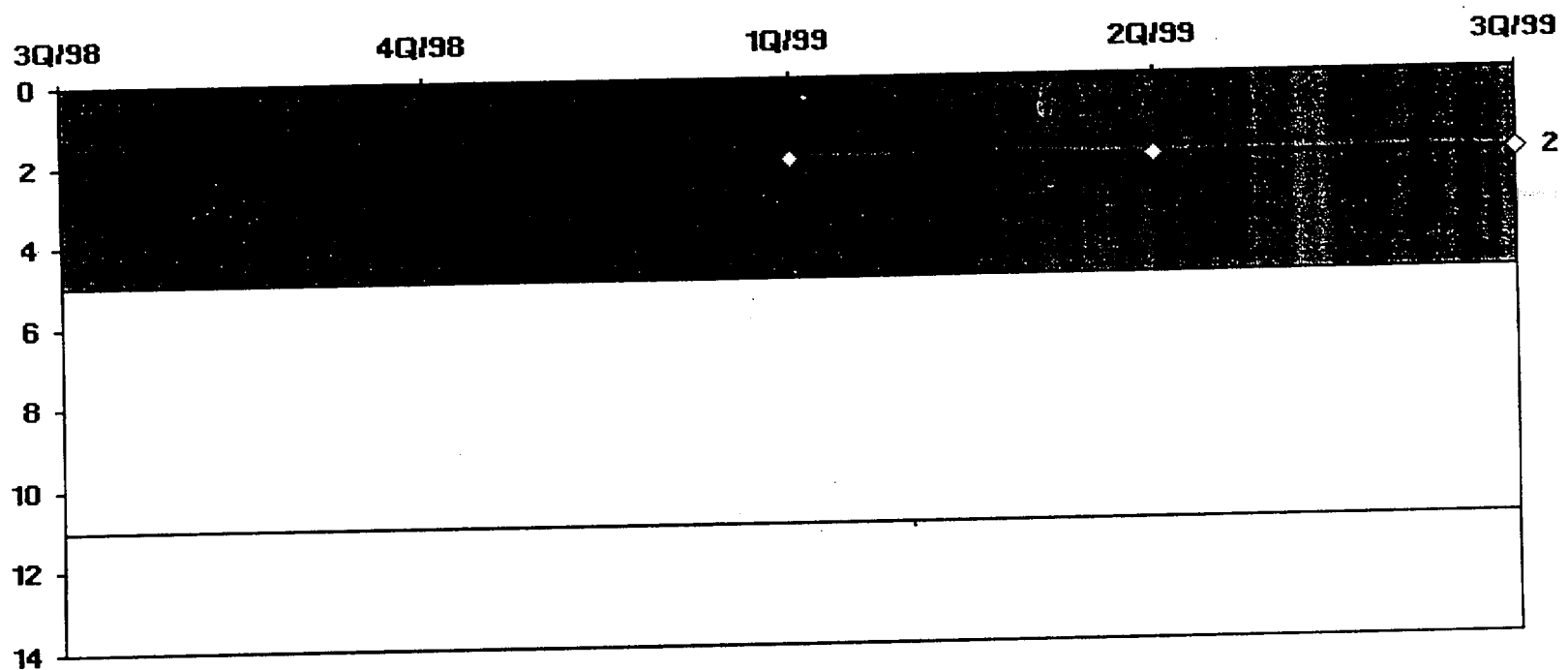


# Reactor Oversight Process



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

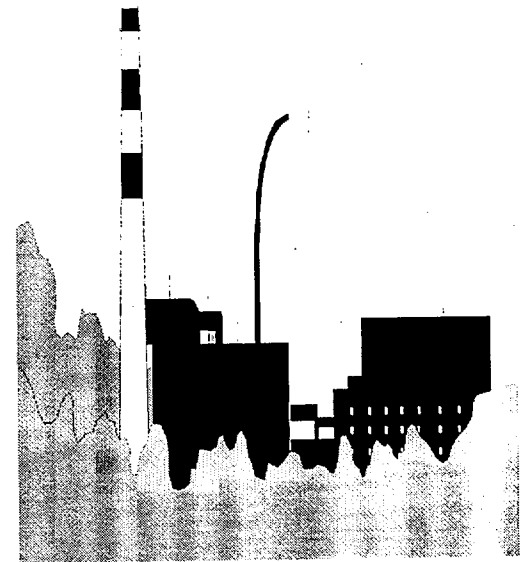
### **Occupational Exposure Control Effectiveness**





# **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**
- **Emphases 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 Kewaunee End of Cycle Performance Assessment Results*

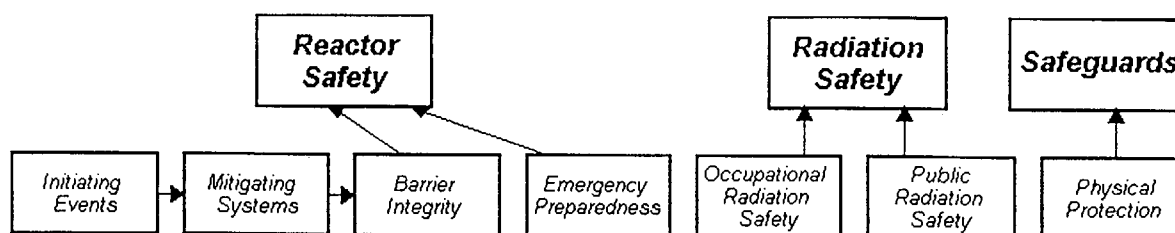
- **Safe Plant Operation**
- **Started Assessment Period With a Yellow Alert and Notification System Performance Indicator**
- **White Finding for Emergency Preparedness Staff Augmentation**
- **Significant Corrective Action Program Problems Identified**
  - **Results of Supplemental Inspections**
  - **Results of Problem Identification and Resolution Inspection**
- **Last Quarter of Assessment Period in the Degraded Cornerstone Column of the Action Matrix**
  - **Based on one Yellow and one White Inspection Findings (Emergency Preparedness Cornerstone)**
- **All Performance Indicators Green at End of Assessment Period and No Findings in Last Six Months of more than Very Low Safety Significance**



## Current Action Matrix Column: Degraded Cornerstone Column

# Kewaunee

## 1Q/2001 Performance Summary



## Performance Indicators

Unplanned Scrams (G)	Emergency At- tency System Unavailability (G)	Reactor Control System Alarms (G)	Offsite Performance (G)	Occupational Exposure Control Effectiveness (G)	REASON Radiation Education (G)	Physical Area Equipment (G)
Scram Failures of Normal Heat Removal (G)	High Pressure Injection System Unavailability (G)	Reactor Control System Alarms (G)	Emergency Preparedness (G)			Physical Security Program (G)
Unplanned Heat Removal (G)	Heat Removal System Unavailability (G)		Advanced Monitoring System (G)			Physical Security Program (G)
	Residual Heat Removal System Unavailability (G)					
	Safety System Functional Failure (G)					

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



	Initiating Events	Mitigating Systems	Barrier Integrity	Emergency Preparedness	Occupational Radiation Safety	Public Radiation Safety	Physical Protection
Most Significant Inspection Findings							
1Q/2001	No findings this quarter	G	No findings this quarter	W (1)	No findings this quarter	No findings this quarter	No findings this quarter
4Q/2000	No findings this quarter	Findings without color designation	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter
3Q/2000	No findings this quarter	G	No findings this quarter	Y (1)	No findings this quarter	No findings this quarter	G
2Q/2000	No findings this quarter	G	G	Findings without color designation	G	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

# *Conclusions*

- Kewaunee continues to be operated in a safe manner that preserves public health and safety.
- ***Challenges***
  - improve identification and resolution of issues

## **NRC INTERNET ADDRESS**

<http://www.nrc.gov/nrc.html>

## **PERFORMANCE ASSESSMENT INTERNET ADDRESS**

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