

# ***Oconee Nuclear Station Annual Assessment Meeting***

**Reactor Oversight Program - 2009**

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**Nuclear Regulatory Commission - Region II**

**Seneca, SC**

**April 8, 2010**



# ***Purpose of Today's Meeting***

- **A public forum for discussion of the licensee's performance in 2009**
- **Address the performance issues identified in the annual assessment letter**



# ***Agenda***

- **Introduction**
- **Overview of NRC Mission**
- **Review of Reactor Oversight Process**
- **National Summary of Plant Performance**
- **Discussion of Plant Performance Results**
- **NRC Closing Remarks**
- **NRC available to address public questions**

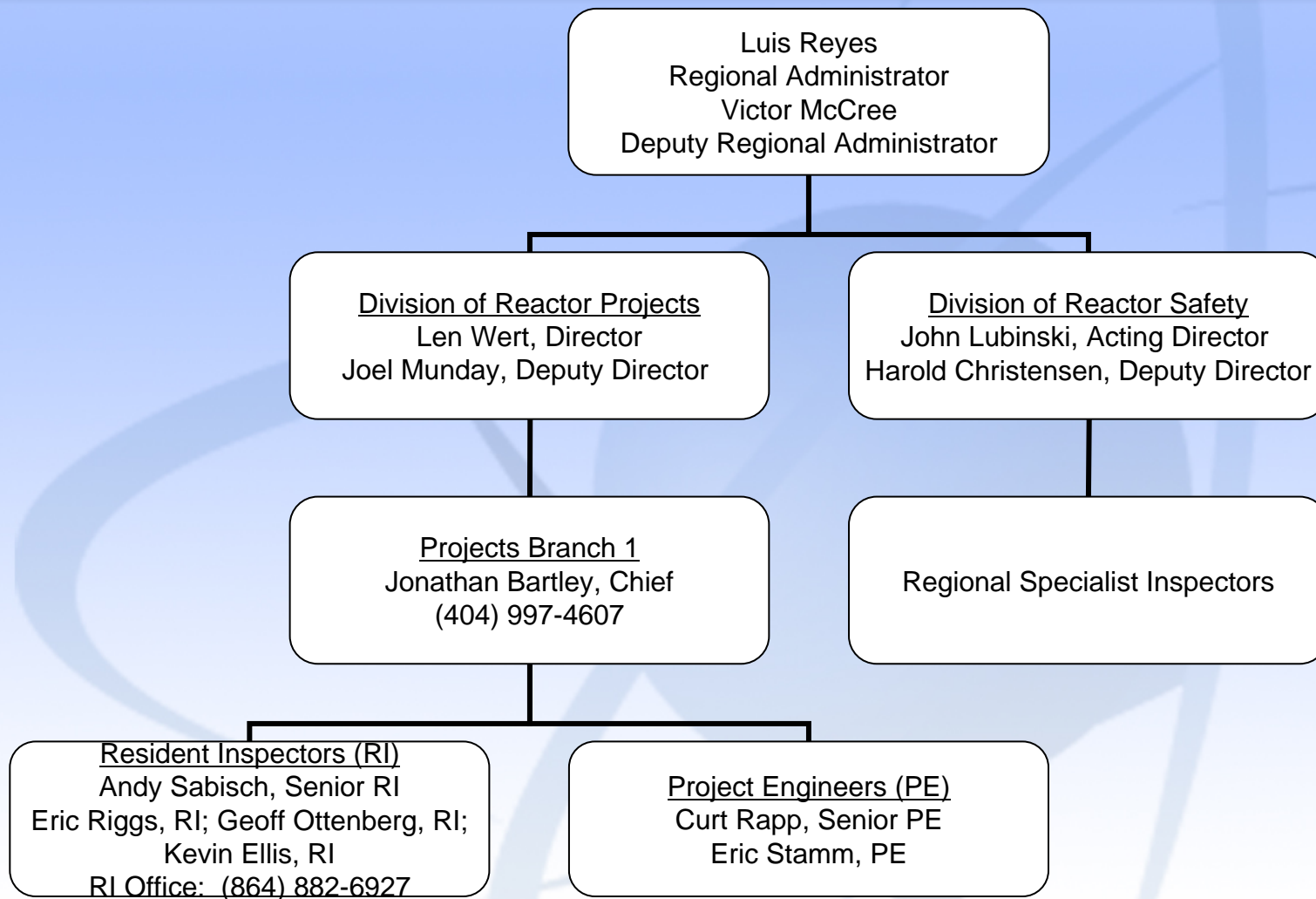


# ***NRC Representatives***

- **Andy Sabisch, Senior Resident Inspector**
- **Jonathan Bartley, Branch Chief**
- **Kevin Ellis, Resident Inspector**
- **Geoff Ottenberg, Resident Inspector**
- **Eric Riggs, Resident Inspector**
- **Roger Hannah, Senior Public Affairs Officer**  
– **(404) 997-4417**



# Region II Organization







# Some Nuclear Facts



- 104 nuclear power plants supply about 20 percent of the electricity in the U.S.



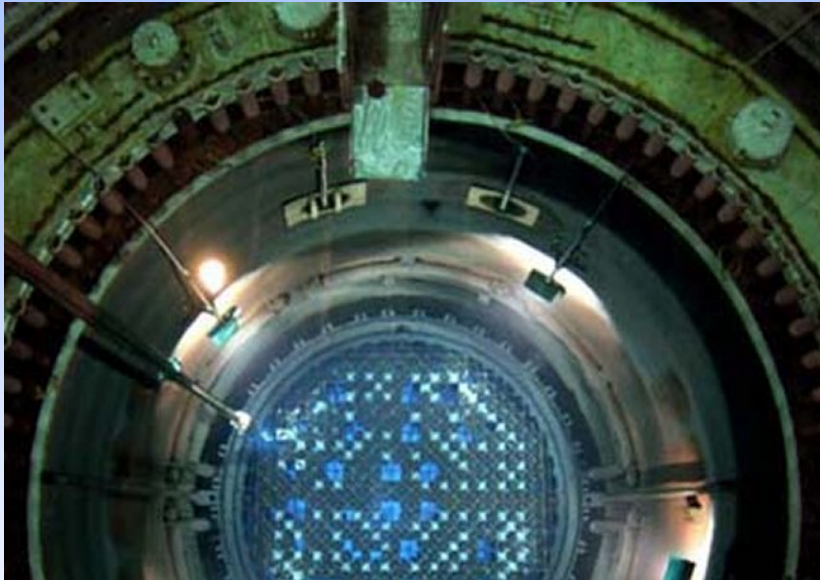
- Nuclear materials are used in medicine for diagnosis and cancer treatment.



- Nuclear materials are widely used in industry, such as in density gauges, flow measurement devices, radiography devices, and irradiators.



# ***Our Mission***



- To license and regulate the nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment.



# ***Assurance of Nuclear Plant Safety***

- **Require “defense-in-depth”**
- **Require long-term maintenance of equipment**
- **Require continual training of operators**
- **Verify compliance with regulations**





# ***What NRC Regulates***

- **Nuclear reactors** - commercial power reactors, research and test reactors, new reactor designs
- **Nuclear materials** - nuclear reactor fuel, radioactive materials for medical, industrial, and academic use
- **Nuclear waste** – transportation, storage and disposal of nuclear material and waste, decommissioning of nuclear facilities
- **Nuclear security** – physical security of nuclear facilities and materials from sabotage or attacks

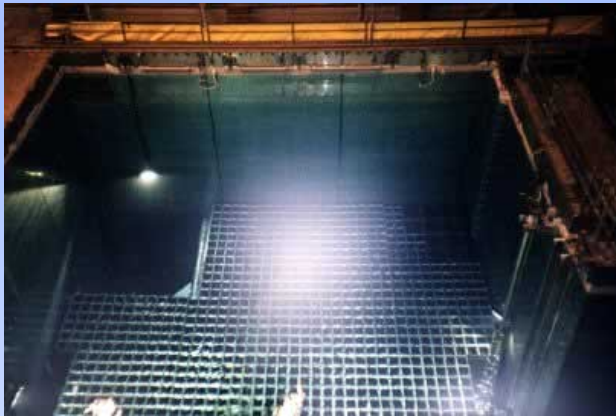


# ***How NRC Regulates***

- **Establish rules and regulations**
- **Issue licenses**
- **Provide oversight through inspection, enforcement, and evaluation of operational experience**
- **Conduct research to provide support for regulatory decisions**
- **Respond to events and emergencies**



# ***What We Do – Nuclear Waste***



## **NRC regulates:**

- Storage of spent reactor fuel in fuel pools or dry storage casks, and**
- Any national spent fuel storage site or reprocessing facility**



# ***What We Do – Nuclear Security***



## **NRC Requires:**

- Well-armed and well-trained security forces,
- Surveillance and perimeter patrols,
- State-of-the-art site access equipment and controls,
- Physical barriers and detection zones, and
- Intrusion detection systems and alarm stations.





# ***NRC Performance Goals***

- **Safety:** Ensure adequate protection of public health and safety and protect the environment.
- **Security:** Ensure adequate protection in the secure use and management of radioactive materials.



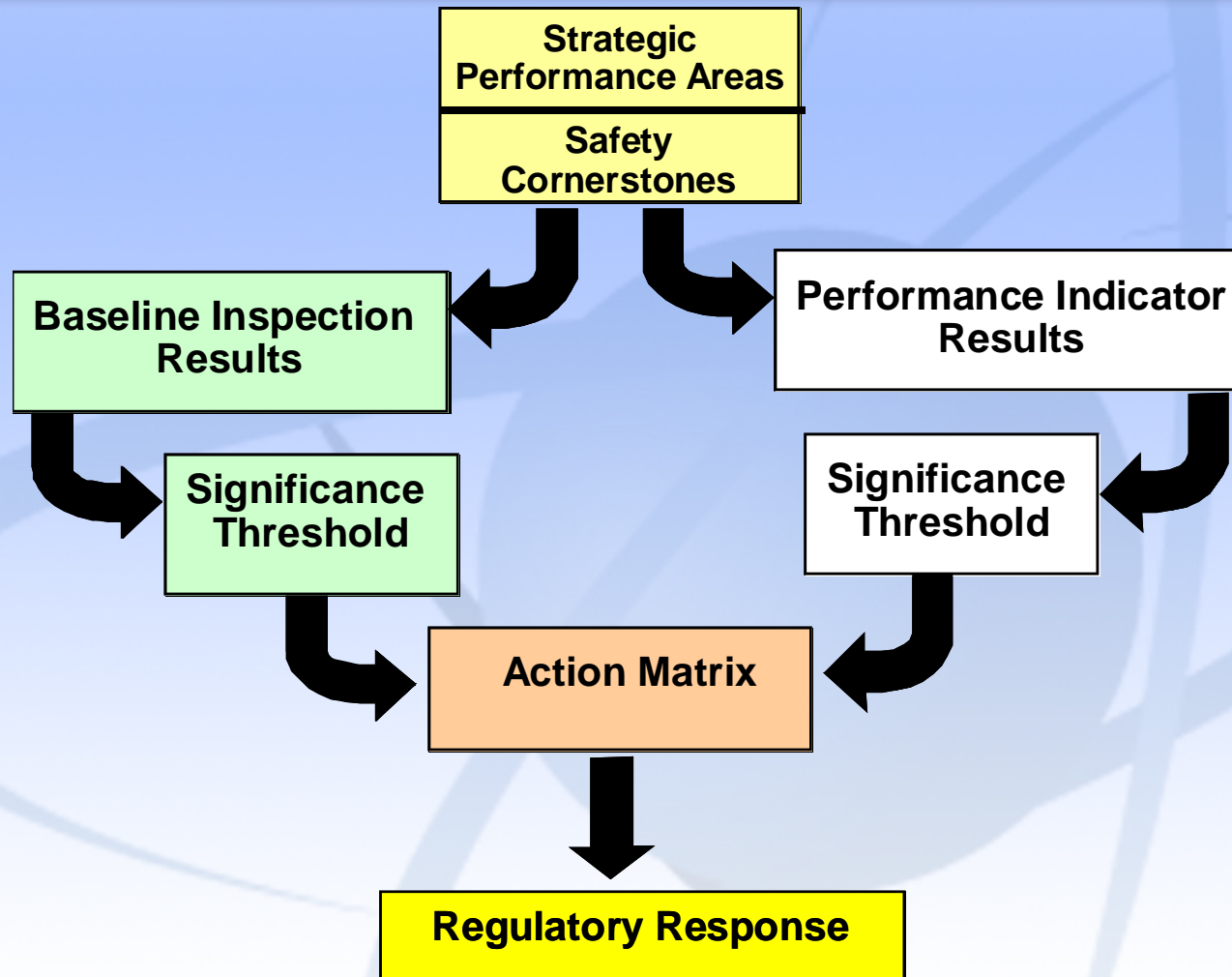


## ***What NRC Doesn't Do***

- **Regulate nuclear weapons, military reactors, or space vehicle reactors**
- **Own or operate nuclear power plants**
- **Regulate some radioactive materials, such as X-rays and naturally occurring radon**



# Reactor Oversight Process





# ***Examples of Baseline Inspections***

- **Equipment Alignment** ~80 hrs/yr
- **Triennial Fire Protection** ~250 hrs (every 3 yrs)
- **Operator Response** ~125 hrs/yr
- **Emergency Preparedness** ~80 hrs/yr
- **Rad Release Controls** ~110 hrs (every 2 yrs)
- **Worker Radiation Protection** ~95 hrs/yr
- **Corrective Action Program** ~250 hrs (every 2 yrs)
- **Corrective Action Case Reviews** ~60 hrs/yr



# ***Significance Threshold***

## **Performance Indicators**

**Green:** Only Baseline Inspection  
**White:** Increases NRC oversight  
**Yellow:** Increases NRC oversight  
**Red:** Increases NRC oversight

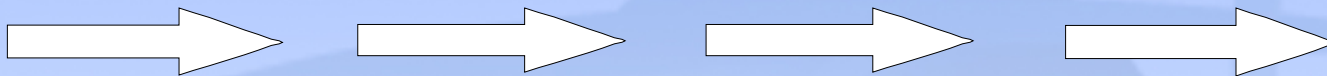
## **Inspection Findings**

**Green:** Very low safety issue  
**White:** Low to moderate safety issue  
**Yellow:** Substantial safety issue  
**Red:** High safety issue



# ***Action Matrix Concept***

<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***

**As of 12/31/2009**

<b>Licensee Response</b>	<b>79</b>
<b>Regulatory Response</b>	<b>24</b>
<b>Degraded Cornerstone</b>	<b>1</b>
<b>Multiple/Repetitive Deg. Cornerstone</b>	<b>0</b>
<b>Unacceptable</b>	<b>0</b>
<b>Total</b>	<b>104</b>



# National Summary

## Totals for 2009

- **Performance Indicator Results**

– Green	7039
– White	18
– Yellow	0
– Red	0

- **Total Inspection Findings**

– Green	879
– White	7
– Yellow	0
– Red	0



# ***Oconee Inspection Activities***

**January 1 - December 31, 2009**

5280 hours of inspection-related activities

- Resident Inspection
- In-service Inspection
- Radiation Protection
- Ground Water Initiative
- Emergency Preparedness Graded Exercise
- Independent Spent Fuel Storage Installation Operational Inspection
- Biennial Problem Identification & Resolution Inspection
- Biennial Licensed Operator Requalification Inspection
- Security
- Component Design Basis Inspection
- Reactor Coolant Dissimilar Butt Metal Weld Inspection



# ***Oconee Annual Assessment Summary***

**January 1 - December 31, 2009**

- **Duke operated Oconee in a manner that preserved public health and safety with moderate degradation in safety performance**
  - **All cornerstone objectives were met**
  - **For the remainder of 2010 NRC plans baseline inspections**



# ***Oconee Assessment Results***

**January 1 - December 31, 2009**

- **Unit 1**
  - **First three quarters in Regulatory Response Column due to a 4th quarter 2008 White Finding related to maintenance on the generator voltage regulator**
  - **White Finding closed based on completing an IP 95001 follow-up inspection**
- **Units 2 and 3**
  - **Licensee Response Column for all 4 quarters**





# ***Open to the Public***

- **NRC places a high priority on keeping the public and stakeholders informed of its activities.**
- **At [www.nrc.gov](http://www.nrc.gov), you can:**
  - **Find public meeting dates and transcripts;**
  - **Read NRC testimony, speeches, press releases, and policy decisions; and**
  - **Access the agency's Electronic Reading Room to find NRC publications and documents.**



# ***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](http://www.nrc.gov)
  - Select “What We Do” for Public Affairs



# Reference Sources

- 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)