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United States Nuclear Regulatory Commission

Protecting People and the Environment

Clinton Annual Assessment Meeting

Reactor Oversight Program - CY 2007

Clinton Power Station

Clinton, IL

May 15, 2008

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Purpose of Today's Meeting

- A public forum for discussion of the licensee's performance
- NRC will address the licensee performance issues identified in the annual assessment letter
- Licensee will be given the opportunity to respond to the information in the letter and inform the NRC of new or existing programs to maintain or improve their performance

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Agenda

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

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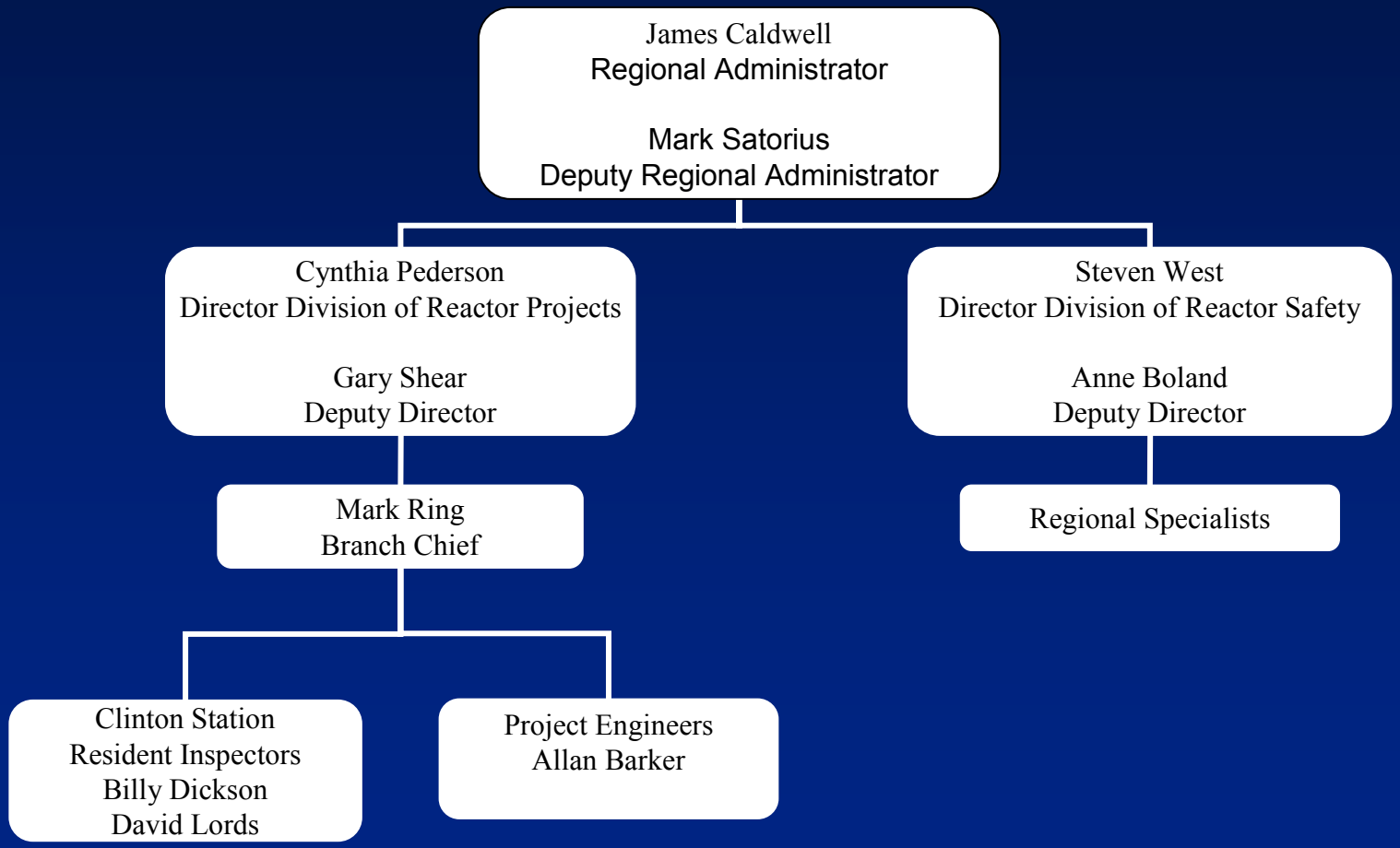
Region III Organization



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NRC Representatives

- Mark Ring, Branch Chief
  - (630) 829-9703
- Billy Dickson, Senior Resident Inspector
  - (217) 935-9521
- Brian Kemker, incoming SRI
  - (217) 935-9521
- David Lords, Resident Inspector
  - (217) 935-9521

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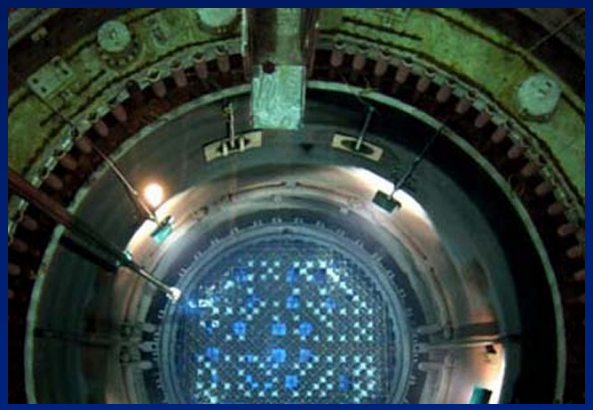
Our Mission



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.

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Some Nuclear Facts

- More than 100 nuclear power plants supply about 20 percent of the electricity in the U.S.
- Nuclear materials are used in medicine for cancer treatment and diagnosis.
- Nuclear materials are widely used in industry, such as in density gauges, flow measurement devices, radiography devices and irradiators.

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The 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; and
- Nuclear security – physical security of nuclear facilities and materials from sabotage or attacks.

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What we don't do:

- Regulate nuclear weapons, military reactors or space vehicle reactors. (These are regulated by other federal agencies.)
- Own or operate nuclear power plants.
- Regulate some radioactive materials, such as naturally occurring radon and X-rays. (These are regulated by states or other federal agencies.)

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How We Regulate

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

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Assurance of Plant Safety

- Requiring a “defense-in-depth” design philosophy
- Requiring long-term maintenance of equipment
- Requiring continual training and qualification of nuclear plant operators.
- Verifying compliance with regulations

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What We Do – Nuclear Waste

The NRC regulates:

- Spent fuel storage installations for the interim storage of spent nuclear reactor fuel in fuel pools or dry storage casks.
- A high-level radioactive waste repository at Yucca Mountain, Nev., if proposed by the DOE.

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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

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NRC Performance Goals

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

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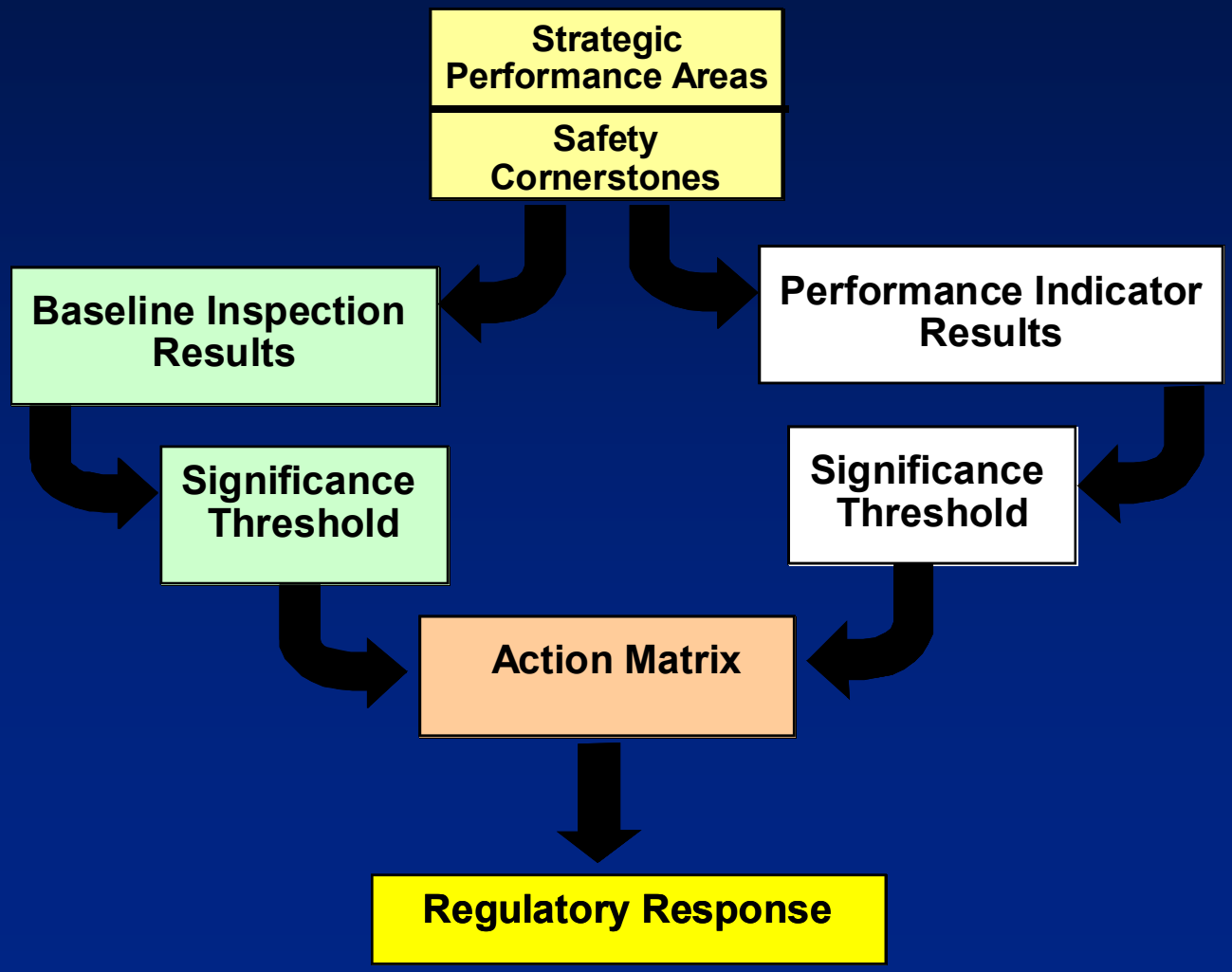
Reactor Oversight Process



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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

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Significance Threshold

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

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Action Matrix Concept

Licensee Response	Regulatory Response	Degraded Cornerstone	Multiple/Rep. Degraded Cornerstone	Unacceptable Performance

→ → → →

Increasing Safety Significance

Increasing NRC Inspection Efforts

Increasing NRC/Licensee Management Involvement

Increasing Regulatory Actions

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National Summary of Plant Performance

Status at End of CY 2007

Licensee Response	87
Regulatory Response	8
Degraded Cornerstone	8
Multiple/Repetitive Degraded Cornerstone	1
Unacceptable	0
Total	104

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National Summary

- Performance Indicator Results (at end of CY 2007)
  - Green 1942
  - White 8
  - Yellow 1
  - Red 0

- Total Inspection Findings (CY 2007)
  - Green 759
  - White 9
  - Yellow 2
  - Red 0

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Clinton Assessment Results

(Jan 1 - Dec 31, 2007)

- Licensee Response column of Action Matrix
- White finding was closed after September 2007 Supplemental Inspection
- Findings with Human Performance cross-cutting aspects

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Safety Significant Findings or PIs

- No greater than Green findings or PI's

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Clinton Inspection Activities

(Jan 1 - Dec 31, 2007)

- 100% Baseline Inspection Completion
  - Resident Inspectors
  - Region-based Inspectors
  - 13 Green Findings (baseline inspections)
- Supplemental Inspections

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Clinton
Annual Assessment Summary

January 1 - December 31, 2007

- Exelon operated the Clinton Station in a manner that preserved public health and safety
- All cornerstone objectives were met with no greater than Green findings or PI's
- Baseline inspections at Clinton for the remainder of the assessment period

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Licensee Response and Remarks

Russ Kearney

Site Vice President

Mark Kanavos

Plant Manager

Exelon Nuclear Generation Company

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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
  - Select “What We Do” for Public Affairs

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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)