Byron Station
Annual Assessment Meeting

Reactor Oversight Program - 2008

Nuclear Regulatory Commission - Region III

Lisle, Illinois

April 2, 2009

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Purpose of Today's Meeting

- A public forum for discussion of the licensee's performance in 2008
- NRC will address the performance issues identified in the annual assessment letter
- Licensee will be given the opportunity to respond and inform the NRC of new or existing programs to maintain or improve 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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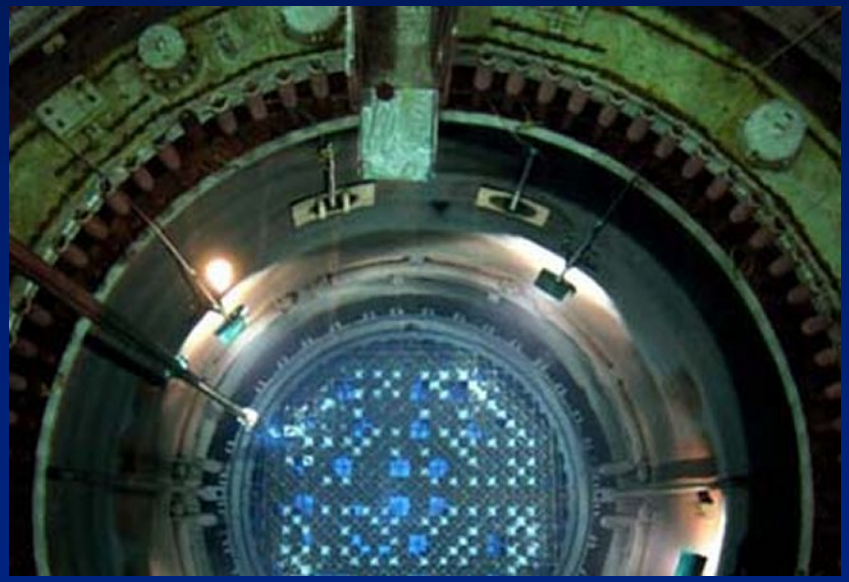
Our Mission



- 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 diagnosis and cancer treatment.
- 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
- 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
- Own or operate nuclear power plants
- Regulate some radioactive materials, such as X-rays and naturally occurring radon

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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 provide support for regulatory decisions
- Respond to events and emergencies

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Assurance of Plant Safety

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

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What We Do – Nuclear Waste

- The NRC regulates:
  - Storage of spent reactor fuel in fuel pools or dry storage casks, and
  - A national spent fuel storage site--Yucca Mountain.

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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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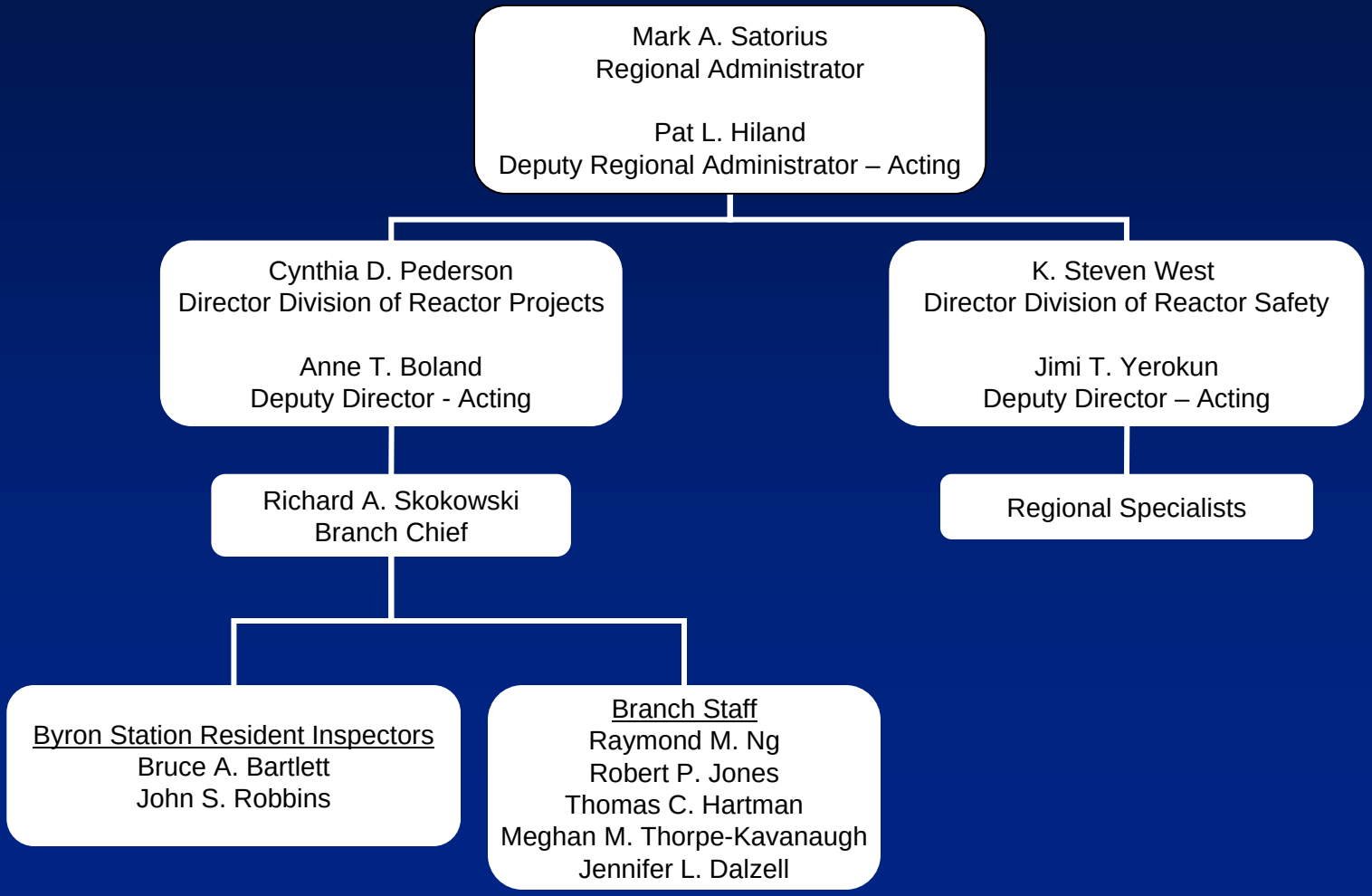
Region III Organization



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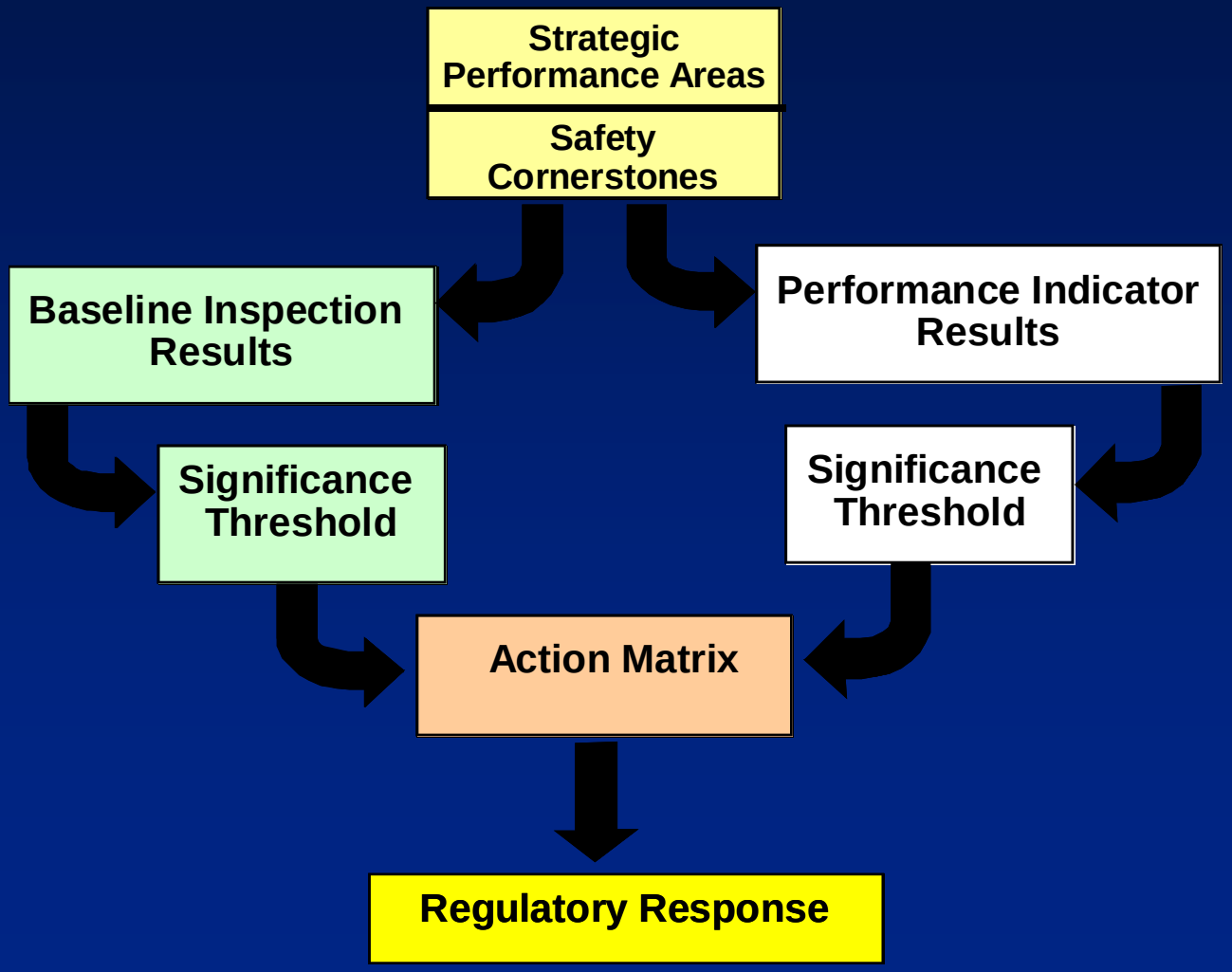
Reactor Oversight Process



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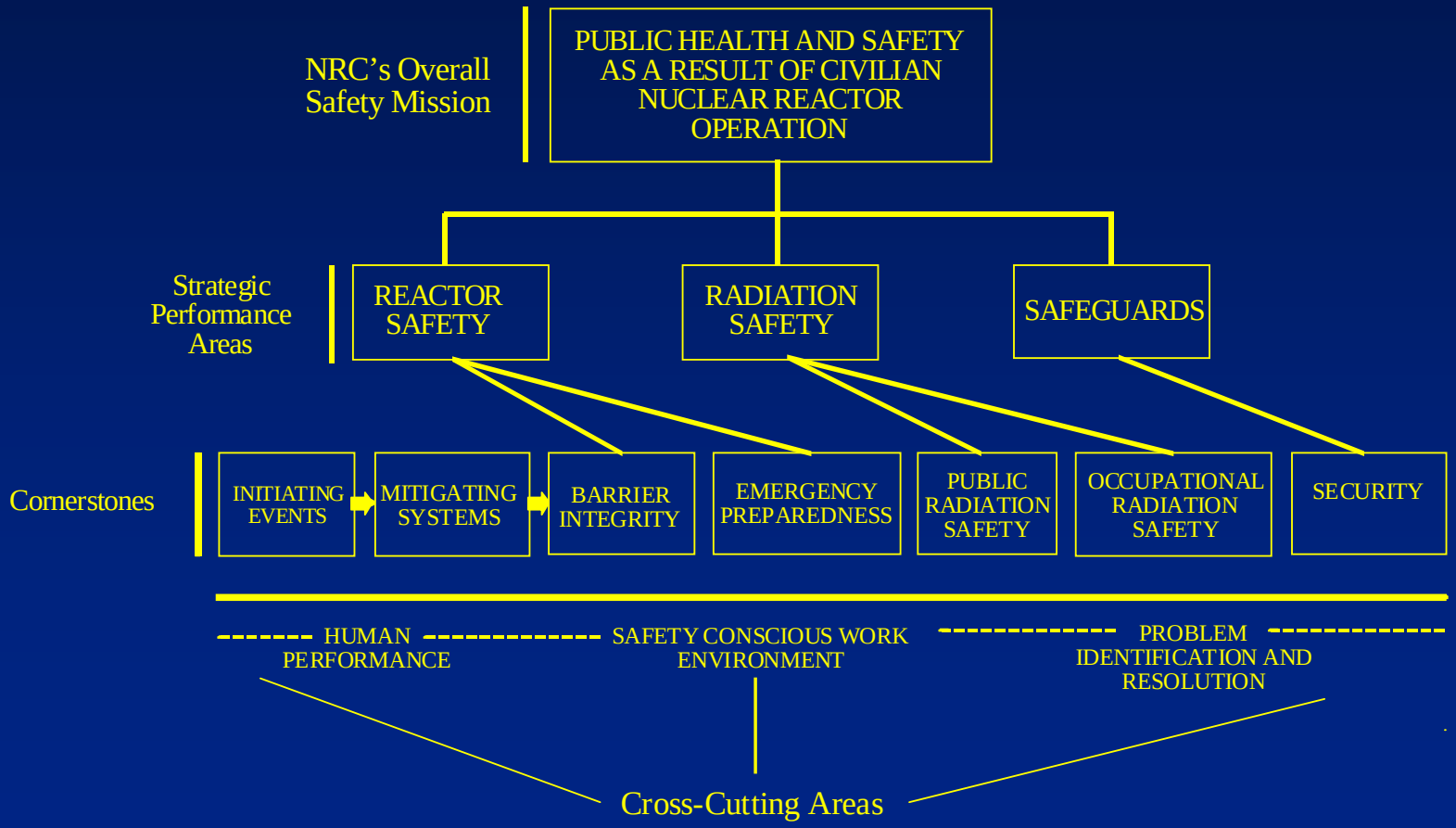
Regulatory Framework



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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 2008

Licensee Response	86
Regulatory Response	14
Degraded Cornerstone	3
Multiple/Repetitive Degraded Cornerstone	1
Unacceptable	0
Total	104

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National Summary

- Performance Indicator Results (end of CY 2008)
  - Green 1762
  - White 6
  - Yellow 0
  - Red 0

- Total Inspection Findings (for 2008)
  - Green 776
  - White 17
  - Yellow 0
  - Red 0

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Byron Station Assessment Results

(January 1 - December 31, 2008)

- Byron Units 1 and 2 were within the Regulatory Response column for 2008 due to a White finding in the Mitigating Systems Cornerstone identified in the 1st quarter of 2008.

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Safety Significant Findings or PIs

- On February 14, 2008, the NRC completed a Special Inspection to evaluate the facts and circumstances surrounding the degradation of the essential service water (SX) system riser piping at the cooling tower basin, and the subsequent dual Unit shutdown on October 19, 2007.
  - One White finding associated with two violations was identified.
  - Three Green Non-Cited Violations were identified.

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Byron Inspection Activities

(January 1 - December 31, 2008)

- Jan 14 – Jan 31: Modification/50.59 Inspection
- March 23 – April 22: Scheduled Unit 1 Refueling Outage
- May 19 – May 30: Initial License Examination
- October 5 – October 23: Scheduled Unit 2 Refueling Outage
- May 21 – Dec 11: ISFSI Inspection

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Byron Inspection Results

(January 1 - December 31, 2008)

- Over 2,000 man-hours of direct inspection
  - 1 White Finding & Associated Violations
  - 19 Green Findings and/or Violations
  - 1 Substantive Cross-Cutting Issue
    - Decision Making in Human Performance Area

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Byron Station
Annual Assessment Summary

(January 1 - December 31, 2008)

- Exelon operated Byron Station Units 1 & 2 in a manner that preserved public health and safety.
- All cornerstone objectives were met.
- One White finding was identified. (Essential Service Water System Piping Degradation)

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Byron Station
Annual Assessment Summary

(January 1 - December 31, 2008)

- Supplement inspection for the White finding related to the Essential Service Water piping degradation was completed in January 2009 with no finding.
- NRC plans baseline inspections at Byron Station for the remainder of 2009.
- Substantive cross-cutting issue
  - Decision Making Component in Human Performance
  - Identified since 2008 Mid-Cycle Assessment

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Licensee Response and Remarks

Daniel Enright
Site Vice President
Byron Station

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Open to the Public

- The NRC places a high priority on keeping the public and stakeholders informed of its activities.

- At 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.

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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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NRC Representatives

- Cynthia Pederson, Director, Division Reactor Projects
  - (630) 829-9600
- Anne Boland, Deputy Division Director, DRP
  - (630) 829-9601
- Marshall David, Project Manager, NRR
  - (301) 415-1547
- Bruce Bartlett, Senior Resident Inspector
  - (815) 234-5451
- John Robbins, Resident Inspector
  - (815) 234-5451
- Raymond Ng, Senior Project Engineer
  - (630) 829-9574
- Richard Skokowski, Branch Chief
  - (630) 829-9620

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NRC Representatives

- Christine Lipa, Chief, Decommissioning Branch (ISFSI)
  - (630) 829-9834
- Viktoria Mitlyng, Public Affairs Officer
  - (630) 829-9662
- Prema Chandrathil, Public Affairs Officer
  - (630) 829-9663
- NRC Region III Office Switchboard
  - (630) 829-9500 (800) 522-3025

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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)