

Byron Station Annual Assessment Meeting

Reactor Oversight Process – 2011

Nuclear Regulatory Commission – Region III

Lisle, Illinois

July 18, 2012



Purpose of Today's Meeting

- **A public forum for discussion of the licensee's performance in 2011**
- **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**

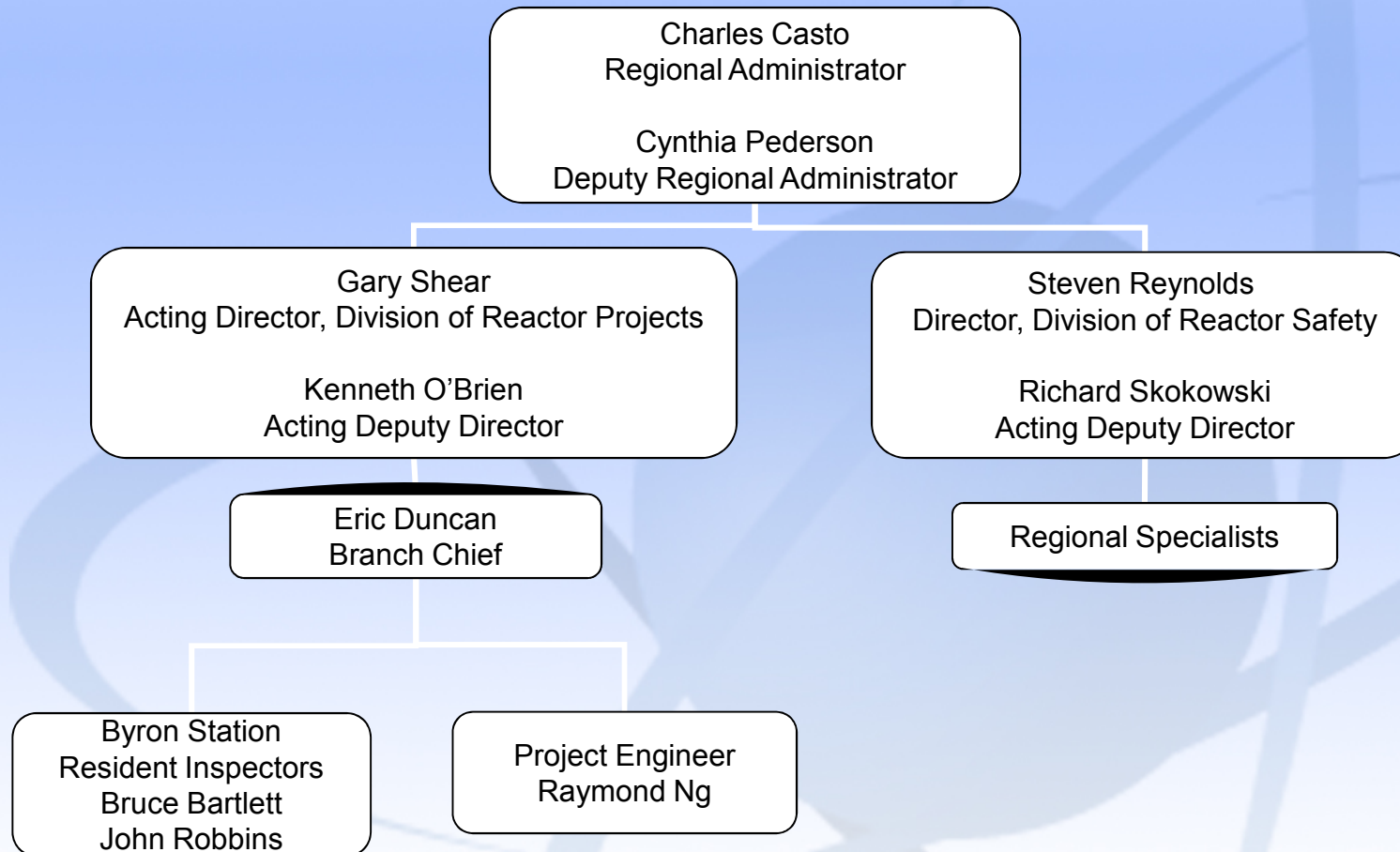


Agenda

- **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**



Region III Organization





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.



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.



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



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**



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**

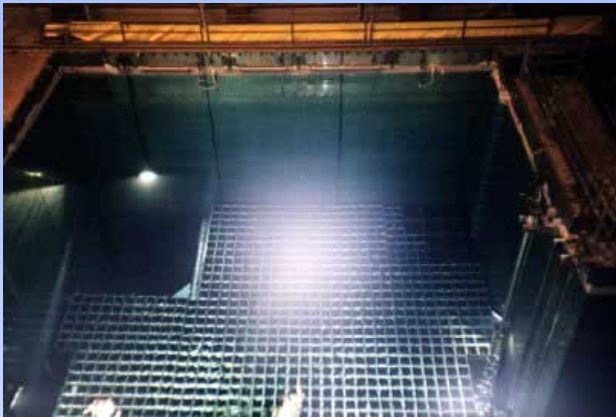


Assurance of Plant Safety

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



What We Do – Nuclear Waste



- **The NRC regulates:**
 - **Storage of spent reactor fuel in fuel pools or dry storage casks**
 - **Any national spent fuel storage site**



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
 - Intrusion detection systems and alarm stations

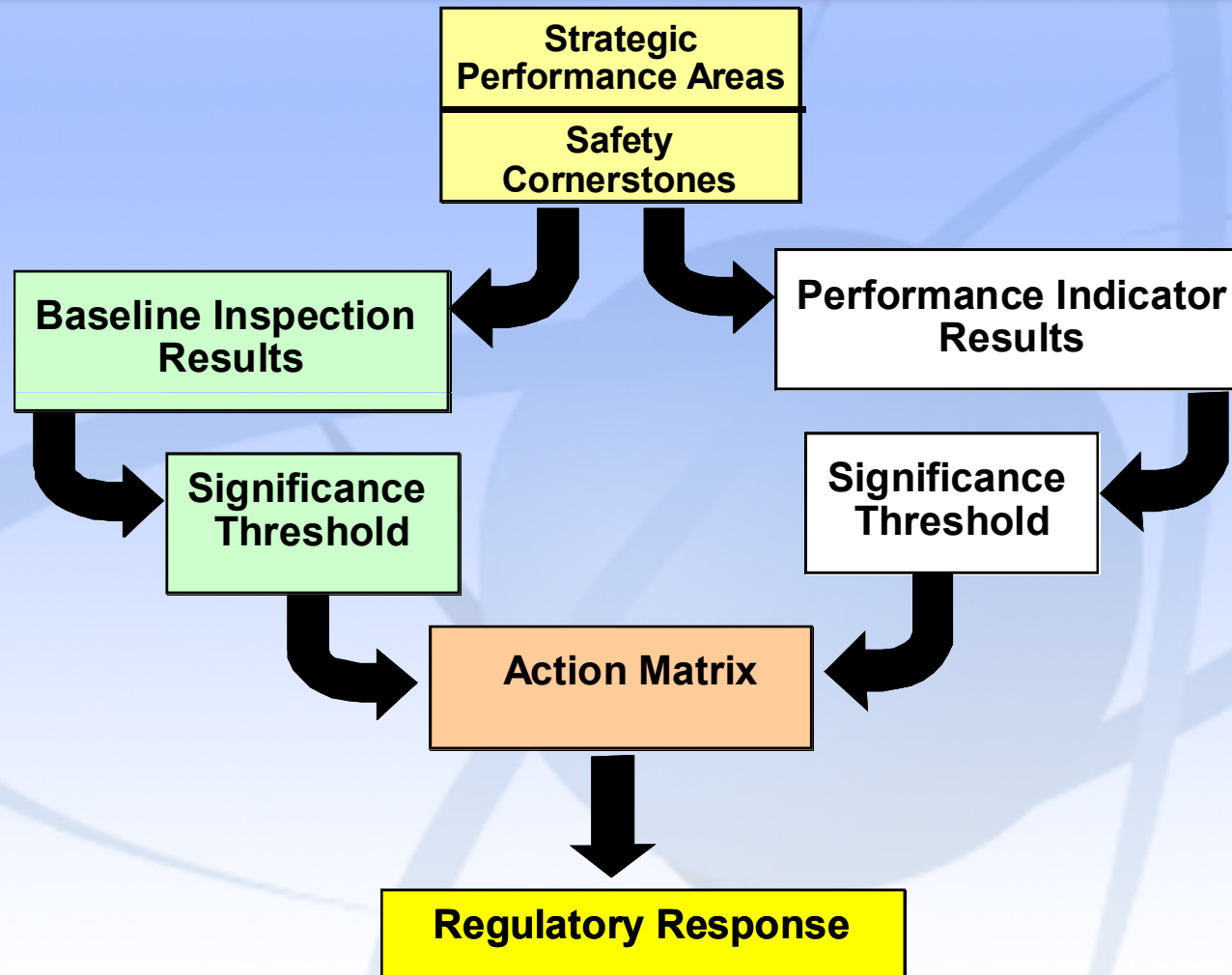


NRC Performance Goals

- **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



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

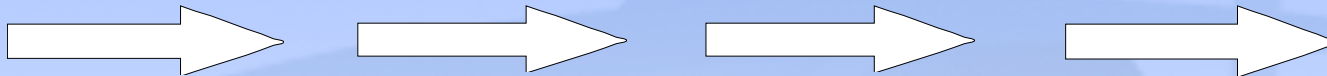
Inspection Findings

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



Action Matrix Concept

Licensee Response	Regulatory Response	Degraded Cornerstone	Multiple/Rep. Degraded Cornerstone	Unacceptable Performance
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Increasing Safety Significance

Increasing NRC Inspection Efforts

Increasing NRC/Licensee Management Involvement

Increasing Regulatory Actions



National Summary of Plant Performance

Status as of 12/31/2011

Licensee Response	88
Regulatory Response	11
Degraded Cornerstone	3
Multiple/Repetitive Deg. Cornerstone	1
Unacceptable	0
IMC 0350 Oversight	1
Total	104



National Summary

- Performance Indicator Results for 2011¹
 - Green 6585
 - White 9
 - Yellow 0
 - Red 0
- Total Inspection Findings in 2011²
 - Green 846
 - White 13
 - Yellow 2
 - Red 0

1 Pis are counted per plant per quarter

2 Finding data does not include security findings



Byron Station Assessment Results

January 1 - December 31, 2011

- **Unit 1 was in the Licensee Response column throughout 2011**
- **Unit 2 was in the Regulatory Response column throughout 2011**
- **There was no substantive cross-cutting issue identified during 2011**



Safety Significant Findings or Pls

- One White Finding was issued on March 14, 2011
- The White finding was associated with the failure of the Upper Lube Oil Cooler of the Unit 2 Train B Diesel Generator on November 17, 2010
- Unit 2 transitioned to Regulatory Response column in 1st quarter 2011
- A 95001 Supplemental Inspection was completed and the White finding was closed in August 2011
- Unit 2 returned to Licensee Response column in 1st quarter 2012



Byron Station Inspection Activities

January 1 - December 31, 2011

Examples of Major Inspection Activities in 2011:

- **Unit 1 Refueling Outage (March 13 to April 24)**
- **Temp. Inst. 183 (March 23 to April 27)**
- **Special Inspection (March 31 to May 4)**
- **Modification/50.59 Inspection (May 2 to June 16)**
- **Problem Identification and Resolution Inspection (Aug. 15 to Sept. 2)**
- **95001 Supplemental Inspection (August 22 to August 26)**
- **Unit 2 Refueling Outage (September 18 to October 10)**



Byron Station Annual Assessment Summary

January 1 - December 31, 2011

- **Exelon operated Byron Station in a manner that preserved public health and safety**
- **All cornerstone objectives were met with one White finding identified**



Byron Station Annual Assessment Summary

January 1 - December 31, 2011

- **No substantive cross-cutting issue was identified at Byron Station**
- **NRC plans baseline inspections at Byron Station for 2012 for both units**



Licensee Response and Remarks

Tim Tulon
Site Vice President, Byron
Exelon Nuclear



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
 - 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
 - Select “What We Do” for Public Affairs



Actions in Response to the Japan Nuclear Accident

- Actions in response to Japan Nuclear Accident
Website: <http://www.nrc.gov/japan/japan-info.html>
- Mailbox for comments on staff actions:
JLD_Public.Resource@nrc.gov
- Office of Public Affairs Point of Contact:
OPA.resource@nrc.gov or 301-415-8200



NRC Representatives

- **Gary Shear, Acting Director, Division Reactor Projects**
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- **Kenneth O'Brien, Acting Deputy Division Director, DRP**
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- **Joel Wiebe, Project Manager, NRR**
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- **Bruce Bartlett, Senior Resident Inspector**
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- **John Robbins, Resident Inspector**
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- **Raymond Ng, Project Engineer**
 - (630) 829-9574
- **Eric Duncan, Branch Chief**
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NRC Representatives

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



NRC Social Media Channels



- **Blog:** <http://public-blog.nrc-gateway.gov/>
- **Flickr:** <http://www.flickr.com/photos/nrcgov/>
- **Twitter:** <http://twitter.com/#!/nrcgov>
- **YouTube:** <http://www.youtube.com/user/NRCgov>
- **RSS:** <http://www.nrc.gov/public-involve/listserver.html#rss>



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)