

Prairie Island Nuclear Generating Plant, Units 1 and 2 Annual Assessment Meeting

Reactor Oversight Process – 2011

Nuclear Regulatory Commission – Region III

Red Wing, MN

July 17, 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**



RIII 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**

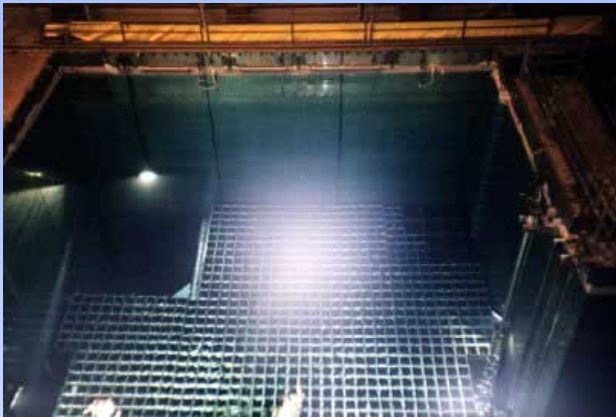


Assurance of Plant Safety

- **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, and**
 - **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

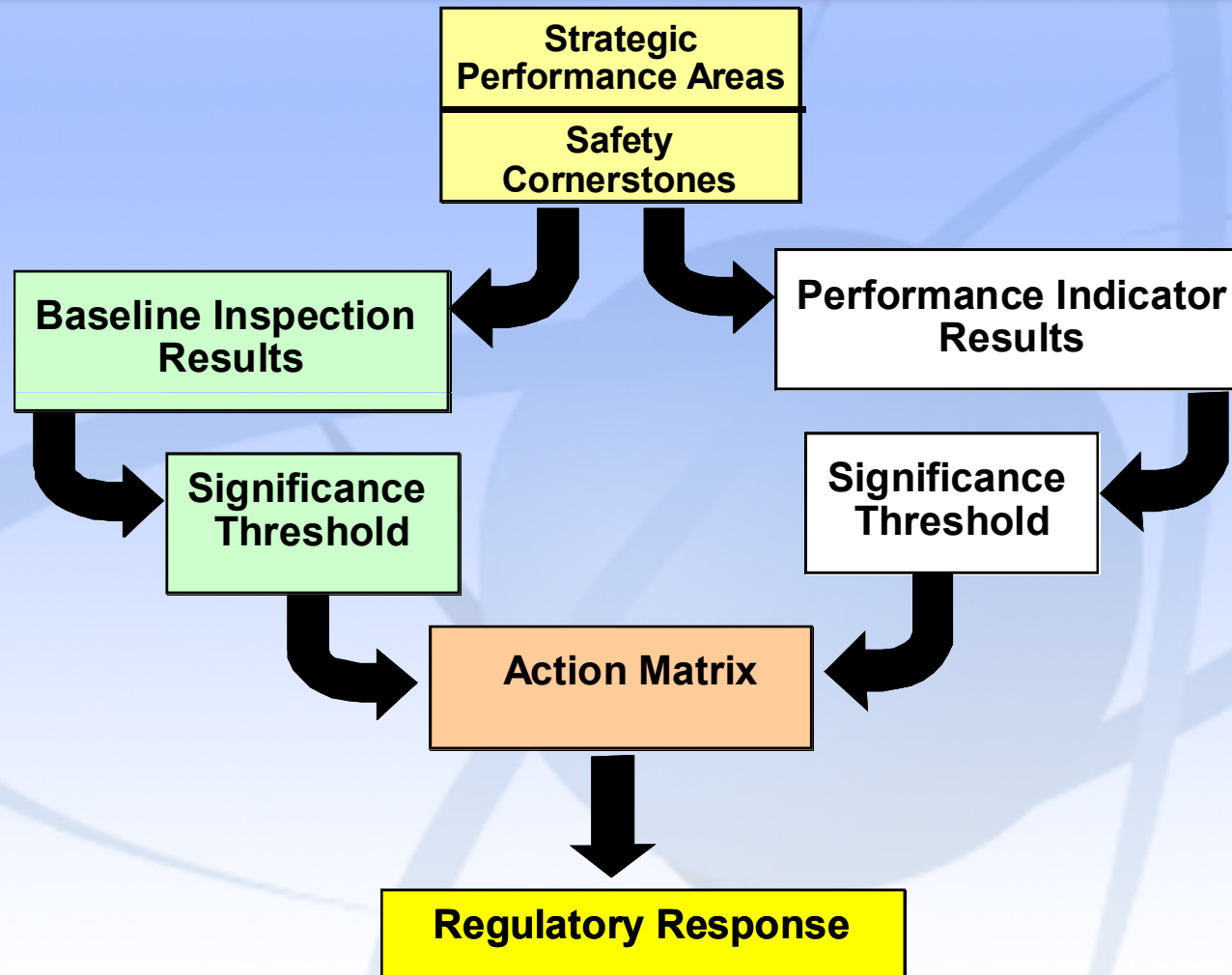


NRC Performance Goals

- **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

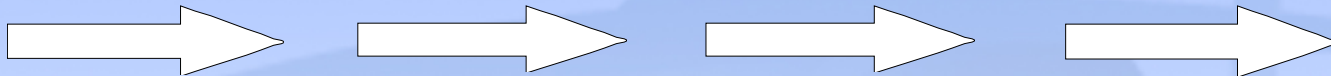
Inspection Findings

- 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 2011***

– Green	6585
– White	9
– Yellow	0
– Red	0

*PIs are counted per plant per quarter

- **Total Inspection Findings in 2011#**

– Green	846
– White	13
– Yellow	2
– Red	0

Finding data current as of 2/24/2012 and does not include security findings



Prairie Island Units 1 and 2

January 1 - December 31, 2011

- **The NRC performed 3,123 hours of baseline inspection activities.**
- **More than 300 hours of additional inspection completed to assess industry issues.**
- **Approximately 1,960 hours of inspection performed by onsite inspectors.**



Safety Significant Findings or Pls

- The NRC identified one finding of moderate safety significance and twenty findings of low safety significance in 2011.
- The White finding was due to a design issue which impacted the way the Unit 1 safety related battery chargers operated during specific plant events.
- The Unit 1 performance indicators remained green throughout 2011



Prairie Island Unit 1

January 1 - December 31, 2011

- **Unit 1 operated in the Licensee Response Column for the 1st quarter of the assessment period**
- **Unit 1 operated in the Regulatory Response Column for the remaining 3 quarters of 2011, based upon the White finding for the battery chargers**
- **A supplemental inspection for the White finding was completed in February 2012.**



Prairie Island Unit 2

January 1 - December 31, 2011

- **Unit 2 operated in the Licensee Response Column due to all findings and performance indicators being assessed as Green.**
- **There were no supplemental inspections for Unit 2 during the assessment period**



Prairie Island Units 1 and 2

January 1 - December 31, 2011

- **Xcel operated Prairie Island Units 1 and 2 in a manner that preserved public health and safety**
- **NRC will perform baseline inspections at both Units for 2012.**



Licensee Response and Remarks

**James Molden
Site Vice President – Prairie Island
Xcel Energy Company**



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**



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



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NRC Social Media Channels



- **Blog:** <http://public-blog.nrc-gateway.gov/>
- **Flickr:** <http://www.flickr.com/photos/nrcgov/>
- **Twitter:** <https://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)