

Dresden Nuclear Power Station Annual Assessment Meeting/Open House

Reactor Oversight Process – 2012

Nuclear Regulatory Commission - Region III

Lisle, Illinois

May 22, 2013

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Purpose of Today's Meeting

- **A public forum for discussion of Dresden Nuclear Power Station's performance in 2012**
- **NRC personnel will be available to answer questions on NRC activities and identified licensee performance issues**

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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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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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Some Nuclear Facts



- 102 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

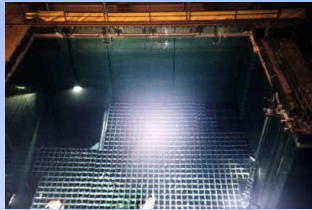
- Nuclear reactors - commercial power reactors, research and test reactors, new reactor designs
- Nuclear materials - nuclear reactor fuel, radioactive materials for medical, industrial, and academic use
- Nuclear waste – transportation, storage and disposal of nuclear material and waste, decommissioning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

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What We 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.

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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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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

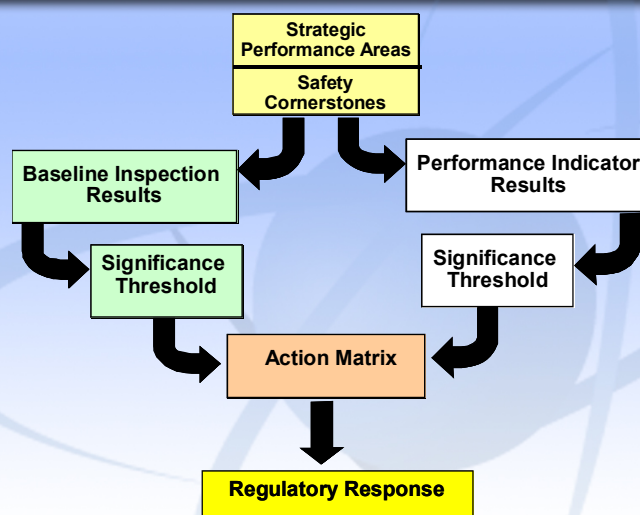
- Require “defense-in-depth”
- Require long-term maintenance of equipment
- Require continual training of operators
- Verify compliance with regulations

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Reactor Oversight Process



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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

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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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NRC Inspection Activities

Dresden Nuclear Power Station for 2012

- **6327 total NRC hours**
 - **2437 hours of direct inspection activity**
 - **815 additional hours reviewing plant operating status**
- **2 resident inspectors on site – residents produce four quarterly inspection reports per year and walk through the plant daily**
- **22 regional inspectors participated in various inspections**
- **3 major team inspections**
 - **Biennial Problem Identification and Resolution**
 - **Triennial Modifications and 50.59 Review**
 - **Biennial Licensed Operator Requalification**

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NRC Annual Assessment Summary

Dresden Nuclear Power Station

- **Exelon operated the plant safely and in a manner that preserved the public health and safety and protected the environment.**
- **Dresden was in the Licensee Response Column of the NRC's Action Matrix for the last quarter of 2012.**
- **No Substantive Cross-Cutting Issues were identified**

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National Summary of Plant Performance

Status as of 12/31/2012

Licensee Response	81
Regulatory Response	18
Degraded Cornerstone	3
Multiple/Repetitive Deg. Cornerstone	1
Unacceptable	0
IMC 0350 Oversight	1
Total	104

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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

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Dresden PIs and Findings

January 1 through December 31, 2012

- All Green Performance Indicators
- 14 Green / Severity Level IV inspection findings

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National Summary

- Performance Indicator Results for 2012*

– Green	6926
– White	23
– Yellow	0
– Red	0

*PIs are counted per plant per quarter

- Total Inspection Findings in 2012#

– Green	914
– White	16
– Yellow	1
– Red	1

Finding data current as of 3/04/2013

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NRC Inspection Findings

Some Examples of Actual Findings

Dresden Nuclear Power Station

- **Human performance error caused loss of electrical bus causing loss of Circulating Water Lift Pumps**
- **Control Rod Drive Flow Control Valve failed closed due to lack of up-to-date Work Instructions**
- **Standby Liquid Control System Valves' thermal insulation not properly inspected after maintenance work performed**

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NRC Inspection Plans for 2013

- **NRC plans baseline inspections at Dresden Nuclear Power Station for the remainder of 2013. This includes the following team inspections:**
 - **Component Design Basis Inspection (Conducted in February through May 2013)**
 - **Initial Examination for Operator Licensing**
- **Potential for inspection of Licensee actions to address NRC concerns on site Probable Maximum Flooding preparations**

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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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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 Representatives

- | | |
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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>

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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)

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