



Susquehanna Annual Assessment Meeting

Susquehanna Steam Electric Station Safety Performance in 2010

&

U.S. Nuclear Plant Safety in light of Japan Events

**2010 Reactor Oversight Process
Nuclear Regulatory Commission – Region I**



NRC Representatives

- **Paul Krohn – Branch Chief**
- **Pat Finney – Senior Resident Inspector**
- **Jon Greives – Resident Inspector**



Agenda

- **Introduction**
- **Discussion of Susquehanna performance during 2010**
- **Discussion of U.S. nuclear plant safety in light of Japan events**
- **NRC to address public questions**
- **Closing remarks**

NRC Assessment Summary

- **PPL operated Susquehanna Units 1 & 2 in a manner that preserved public health and safety.**
- **Susquehanna Unit 1 was in the Regulatory Response column of the Action Matrix based on one White finding.**
- **Susquehanna Unit 2 was in the Licensee Response column of the Action Matrix based on all Green findings and Pls.**

Action Matrix Concept

Licensee Response	Regulatory Response	Degraded Cornerstone	Multiple Repetitive Degraded Cornerstone	Unacceptable Performance
All Inputs are Green; Cornerstone Objectives Fully Met	1 or 2 White Inputs (in different cornerstones); Cornerstone Objectives Fully Met	2 White or 1 Yellow Input; Cornerstone Objectives Met w/ Moderate Degradation in Safety Performance	Multiple Yellow Inputs or 1 Red Input; Cornerstone Objectives Met w/ Significant Degradation in Safety Performance	Overall Unacceptable Performance; Plants not permitted to Operate w/in this Column; Unacceptable Margin to Safety

Susquehanna
Unit 2

Susquehanna
Unit 1



- Increasing safety significance
- Increasing NRC inspection efforts
- Increasing NRC/Licensee management involvement
- Increasing regulatory actions

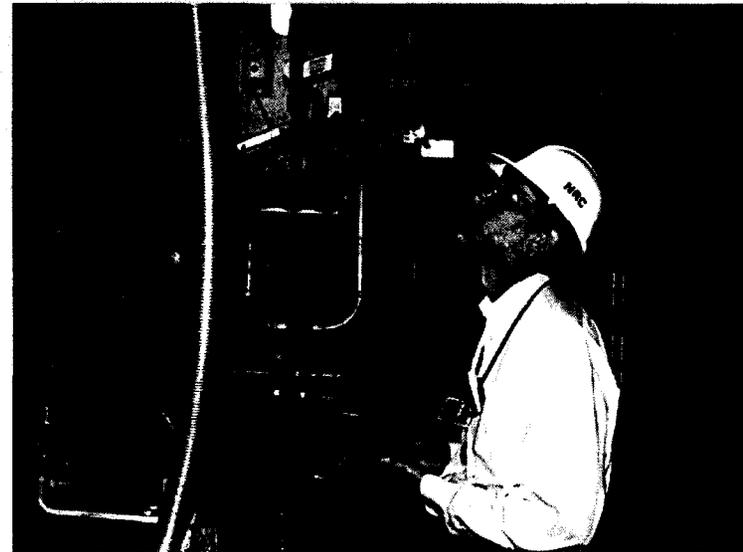


NRC Assessment Summary

- **Cross-cutting theme identified in the CAP component of the Problem Identification and Resolution (PI&R) cross-cutting area – Evaluation of Identified Problems.**
- **Susquehanna Unit 1**
 - **NRC plans to conduct baseline inspections and Supplemental Inspection IP 95002 “Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area,” due to the Flooding Event White Finding and the Unplanned Scrams per 7000 Critical Hours White PI reported in 1st Quarter 2011.**
- **Susquehanna Unit 2**
 - **NRC plans to conduct baseline inspections.**

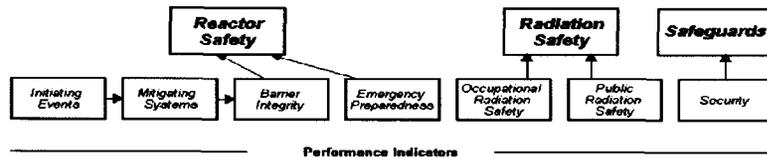
Inspection Activities in 2010

- **6990 hours of inspection and related activities**
- **2 resident inspectors on site – residents perform inspections daily and can respond to plant events at any time**
- **15 regional inspectors**
- **2 major team inspections**
 - **Problem Identification & Resolution**
 - **Component Design Basis**



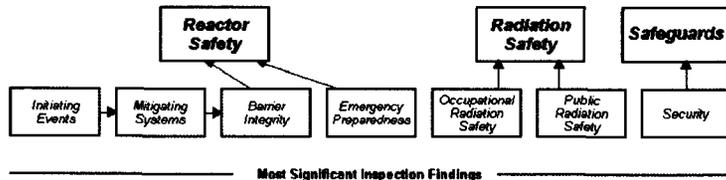
Performance Indicator and Inspection Results

January 1 through December 31, 2010



Performance Indicators

■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■
■	■	■	■	■	■



Most Significant Inspection Findings

10/2011	■	■	■	■	■	■
4Q/2010	■	■	■	■	■	■
3Q/2010	W (1)	■	■	■	■	■
2Q/2010	■	■	■	■	■	■

- All Green Performance Indicators
- 16 Non Cited Violations
- 1 White inspection finding
- 1 Green inspection finding



2010 Susquehanna Assessment Summary

- **Susquehanna was operated safely**
- **Unit 1 was in the Regulatory Response column of the Action Matrix (2010). Currently in the Degraded Cornerstone of Action Matrix (2011).**
- **Unit 2 is in the Licensee Response column of the Action Matrix (2010).**
- **Baseline inspections and IP 95002 for Unit 1 in 2011.**
- **Baseline inspections planned for Unit 2 in 2011.**



***Susquehanna
Assessment Meeting***

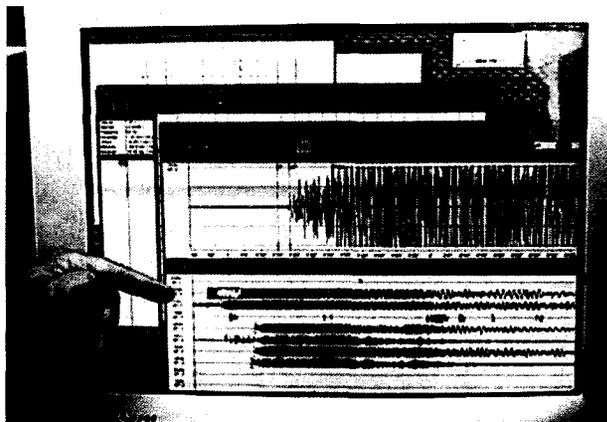
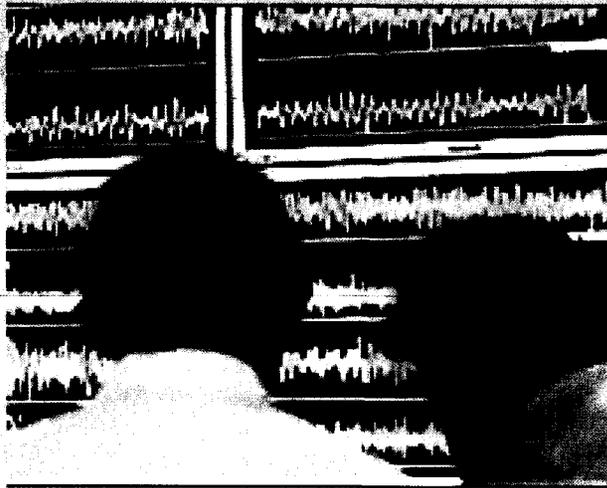
**U.S. Nuclear Plant Safety
in Light of
Japan Events**



U.S. Nuclear Plants Remain Safe

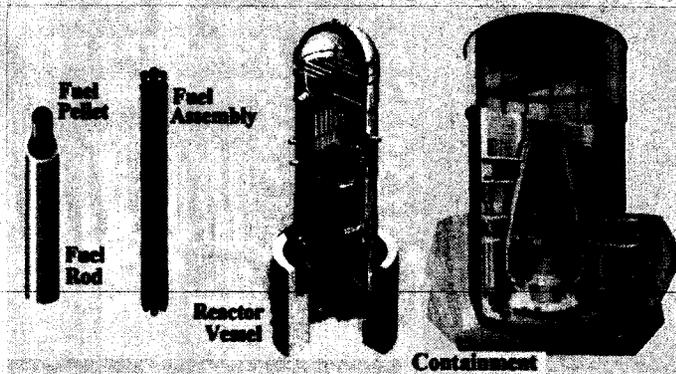
- **NRC requires plants to be designed to withstand site specific external events**
- **NRC requires a defense-in-depth approach to safety**
- **NRC performs independent safety inspections**
- **NRC assesses new safety information and requires improvements**

Designed for Site Specific Natural Events



- **Earthquakes**
- **Tsunamis**
- **Hurricanes**
- **Floods**
- **Tornadoes**

The NRC Requires Defense-In-Depth

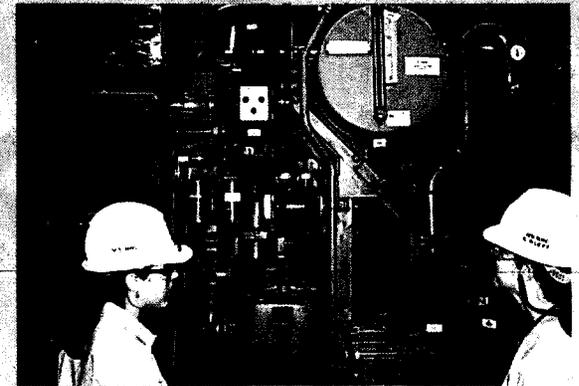


- **Redundant and diverse safety systems**
- **Multiple physical barriers to contain radioactive material**
- **Testing and inspection of systems important to safety**
- **Emergency planning**

NRC Independent Safety Inspections

Reactor Oversight Program

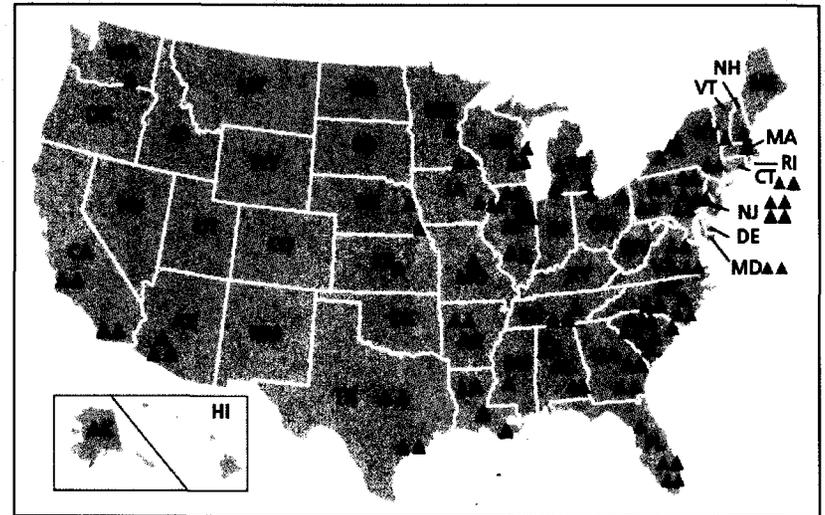
- **NRC inspectors have unfettered access to all plant activities related to nuclear safety and security**
- **At least two full-time NRC resident inspectors at each nuclear plant**
- **NRC inspectors review many areas including Operations, Maintenance, Security, Engineering, Radiological Controls, and Fire Protection**



NRC Requires Safety Improvements

NRC assesses new safety information, develops lessons learned, and requires safety enhancements:

- **NRC operating experience program**
- **Rulemaking (Station Blackout)**
- **Post TMI Actions**
- **Post 9/11 Orders**
- **Generic Safety Issues**



NRC Response to Events in Japan

- **NRC conducting a methodical and systematic review**
- **Near term actions (<90 days)**
 - **conducting additional inspections.**
 - **identifying near term operational issues**
- **Longer term actions**





Meeting Ground Rules

- Please ensure you have filled out a white card if you'd like to speak
- To be fair, the amount of time allotted will be limited and based on the number of speakers who sign up
- Please be courteous to the speaker, NRC staff, and other meeting attendees
- Written comments are welcome during and after this meeting – Please give them to any NRC Representative. Comments may be sent via mail via the NRC Meeting Feedback Form.

Questions



Information Resources Regarding Events in Japan

- <http://www.nrc.gov/japan/japan-info.html>
- <http://www.nrc.gov/japan/faqs-related-to-japan.pdf>
- <http://www.epa.gov/japan2011/index.html>
- <http://www.state.gov/p/eap/regional/158236.htm>
- http://www.cbp.gov/xp/cgov/newsroom/news_releases/national/03172011_6.xml
- <http://blog.energy.gov/content/situation-japan>

Contacting the NRC

- **Report a safety concern**
 - **1-800-695-7403**
 - **allegation@nrc.gov**
- **General questions**
 - **www.nrc.gov**
 - **Region I Public Affairs**
 - **Diane Screnci, 610-332-5330 or diane.screnci@nrc.gov**
 - **Neil Sheehan, 610-332-5331 or neil.sheehan@nrc.gov**





- **End of Presentation**