U.S.NRC
UNITED STATES NUCLEAR REGULATORY COMMISSION
Protecting People and the Environment

Susquehanna
Annual Assessment Meeting

2008 Reactor Oversight Process

Nuclear Regulatory Commission – Region I

Purpose of Today's Meeting

- Discuss Susquehanna Steam Electric Station performance for 2008
- Provide PPL the opportunity to respond to the NRC's annual performance assessment and discuss its actions to maintain or improve performance
- Provide stakeholders the opportunity to ask the NRC staff questions about Susquehanna plant performance and our role in ensuring safe plant operations

Agenda

- Introduction
- NRC Organization and Performance Goals
- Reactor Oversight Process (ROP)
- National Summary of Plant Performance
- Susquehanna Plant Performance Assessment
- PPL Response and Remarks
- NRC Closing Remarks
- Break
- NRC available to address public questions

Region I Organization

Samuel J. Collins
Regional Administrator

Marc L. Dapas
Deputy Regional Administrator

Division of Reactor Safety

Darrell J. Roberts, Director
Peter Wilson, Acting Deputy Director

Regional Specialists

Division of Reactor Projects

David C. Lew, Director
James W. Clifford, Deputy Director

Paul G. Krohn
Branch 4 Chief

Susquehanna Resident Inspection Staff

Frederick W. Jaxheimer Senior Resident Inspector
Patrick Finney, Resident Inspector

Project Engineers
Andrew Rosebrook, Senior Project Engineer
Roy L. Fuhrmeister, Senior Project Engineer
Jeffrey Bream, Project Engineer
Edgardo Torres, Project Engineer

Division of Nuclear Materials Safety

John D. Kinneman, Director
Daniel S. Collins, Deputy Director

Regional Specialists

NRC Strategic Plan 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

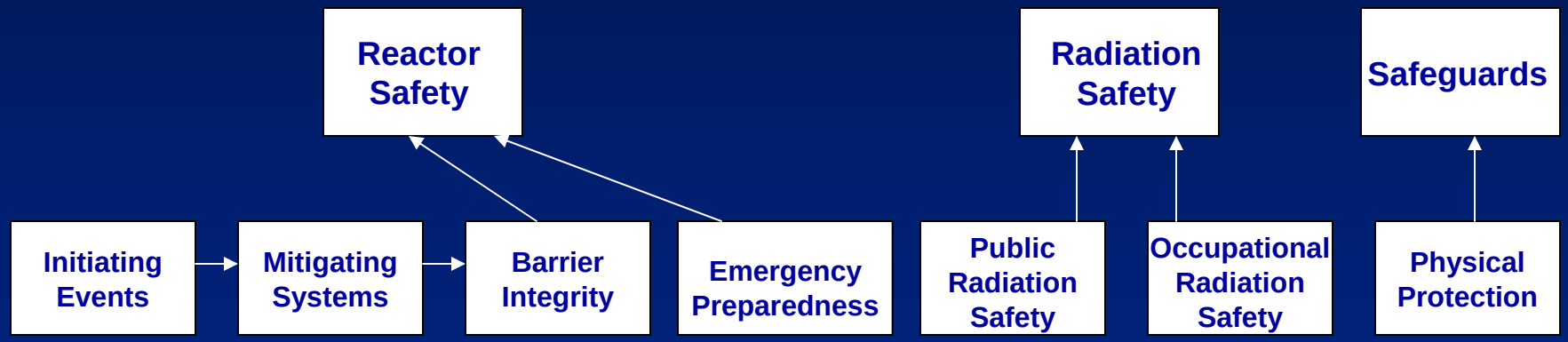
NRC Regulatory Functions

What We Regulate

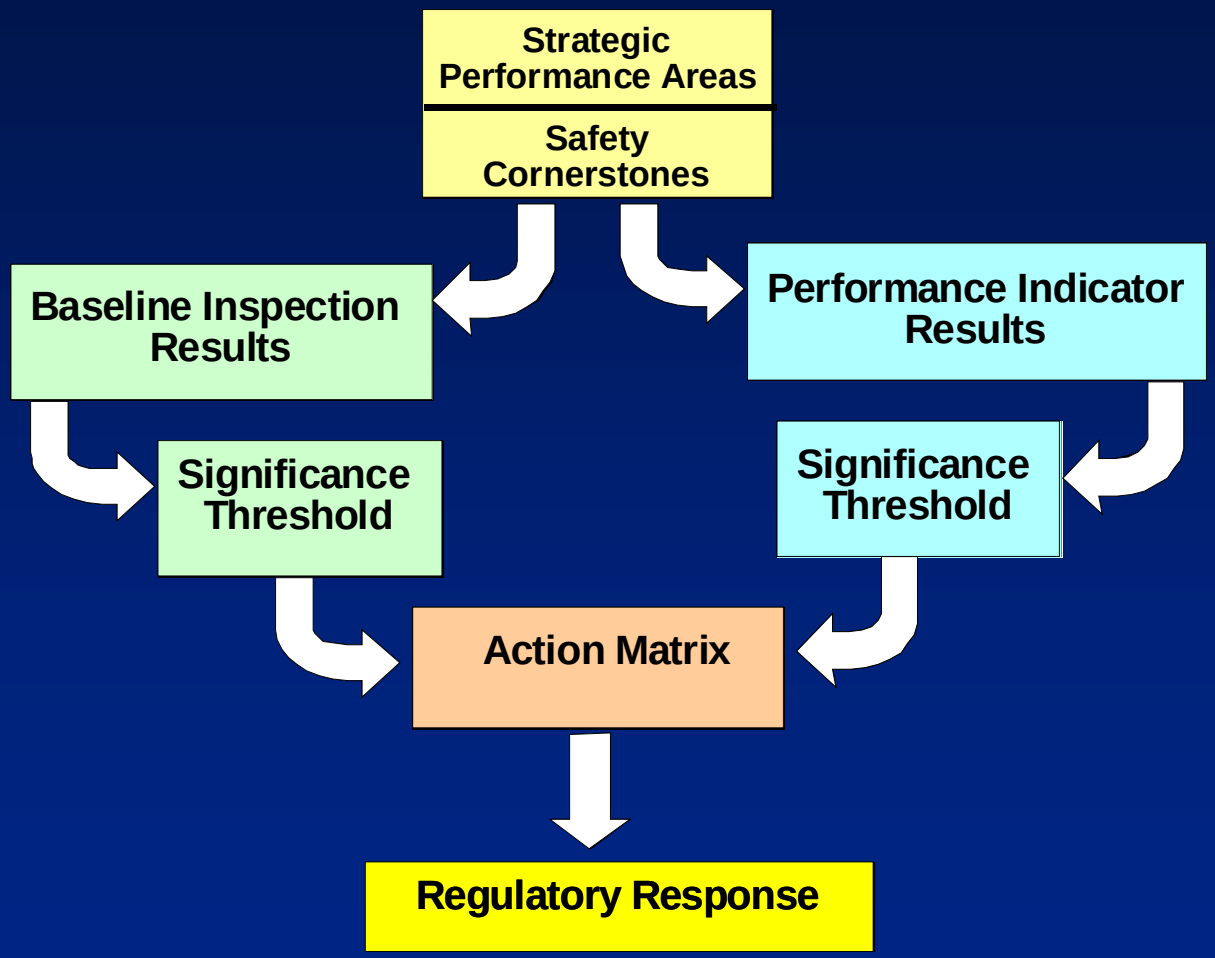
- Nuclear Reactors
  - Commercial power, research, test, and new reactor designs
- Nuclear Material
  - Reactor fuel, radioactive material for medical, industrial, and academic uses
- Nuclear Waste
  - Transportation, storage, disposal, and facility decommissioning
- Nuclear Security
  - Facility physical security

Reactor Oversight Process

3 Strategic Areas & 7 Cornerstones



Reactor Oversight Process



Examples of Baseline Inspection Areas

- Equipment Alignment
- Maintenance
- Operator Training
- Emergency Preparedness
- Engineering
- Corrective Action Program
- Security Program
- Radiation Protection

NRC Performance Indicators

- Initiating Events PIs
- Mitigating Systems PIs
- Barrier Integrity PIs
- Emergency Planning PIs
- Radiation Protection PIs
- Security PIs are not Publicly Available

Significance Threshold

Performance Indicators

- Green — Baseline Inspection
- White — Requires additional NRC oversight
- Yellow — Requires more NRC oversight
- Red — Requires most 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

- Increasing Safety Significance
- Increasing NRC Inspection Efforts
- Increasing NRC/Licensee Management Involvement
- Increasing Regulatory Actions

National Summary of Plant Performance

(at end of 2008)

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

National Summary of Plant Performance

(at end of 2008)

Performance Indicator Results

Green	1762
White	6
Yellow	0
Red	0

Total Inspection Findings

Green	776
White	17
Yellow	0
Red	0

NRC Inspection Activities at Susquehanna (for 2008)

- 6400 hours of inspection and related activities
- 2 resident inspectors on-site
- 16 regional inspectors
- 4 major team inspections:

  Problem Identification & Resolution
  License Renewal
  Physical Security Area Team
  EP Exercise Evaluation

Susquehanna PIs / Findings
(January 1 – December 31, 2008)

- All "Green" Performance Indicators
- 1 "Green" Finding
- 9 "Green" Non-Cited Violations (NCV)
- 1 SL IV Traditional Enforcement NCV
- Overall Susquehanna was operated safely in 2008.

NRC Inspection Findings Susquehanna

- **Ineffective Evaluation and Incorporation of Operating Experience (OE) into the Corrective Action Program** (CAP)
  - SQ received and entered OE regarding control of field work for nitrogen freeze seals into the CAP
  - PPL determined no changes were needed to the procedures and the information was not communicated to the workers.
  - Result was an oxygen deficient atmosphere in a plant vital area, declaration of an Alert, and unplanned unavailablity of safety related equipment.

Susquehanna Potential Chilling Effect Letter

- The NRC issued a Potential Chilling Effect Letter (CEL) to Susquehanna on Jan. 28, 2009, regarding the Safety Conscious Work Environment (SCWE) at the site.
- The NRC expressed concern with the progress and effectiveness of PPL actions during 2008 to address indications of a declining SCWE and negative employee perceptions, because it may impact employee willingness to raise safety concerns and lead to a chilling effect at the site.

What is SCWE?

- A *work environment where employees are encouraged to raise safety concerns without fear of retaliation and where concerns are promptly reviewed, given the proper priority based on their potential safety significance, and appropriately resolved with timely feedback to the originator of the concerns and to other employees*.

NRC Actions to Date

- Office of Investigations assist visit.
- Interviews and focus groups with Susquehanna staff.
- Several PI&R sample inspections
- Issued Chilling Effect Letter Jan. 28, 2009
- Focused baseline inspections and NRC Management visits during 2009.

Licensee Response and Remarks

William Spence

Chief Operating Officer

PPL

NRC Annual Assessment Summary Susquehanna

- PPL operated the plant safely and in a manner that preserved public health and safety and protected the environment
- Susquehanna was in the Licensee Response column of the NRC's Action Matrix for all of 2008
- All cornerstone objectives were fully met
- NRC plans baseline inspections at Susquehanna for the remainder of 2009

Contacting the NRC

- Report a safety concern:
  - (800) 695-7403
  - Allegation@nrc.gov
- General information or questions:
  - www.nrc.gov
  - Public Affairs Officers:
    - Diane Screnci 610-337-5330
    - Neil Sheehan 610-337-5331

NRC Representatives

- David C. Lew, Division Director, DRP
  - 610-337-5229
- Paul G. Krohn, Branch Chief
  - 610-337-5120
- Frederick Jaxheimer, Senior Resident Inspector
  - 570-542-2134
- Patrick Finney, Resident Inspector
  - 570-542-2134
- Andrew Rosebrook, Senior Project Engineer
  - 610-337-5199
- Roy L. Fuhrmeister, Senior Project Engineer
  - 610-337-5059

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)

U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

End of the Presentation

Nuclear Regulatory Commission

Region I

King of Prussia, Pennsylvania

May 19, 2009