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Do not include proprietary materials.*

DATE OF MEETING
03/26/2002

The attached document(s), which was/were handed out in this meeting, is/are to be placed in the public domain as soon as possible. The minutes of the meeting will be issued in the near future. Following are administrative details regarding this meeting:

Docket Number(s) **05000352 and 05000353**

Plant/Facility Name **Limerick Generating Station Units 1 and 2**

TAC Number(s) (if available)

Reference Meeting Notice **02-016**

Purpose of Meeting
(copy from meeting notice) **The NRC staff and Exelon management will discuss the
results of NRC's assessment of the safety performance of
Limerick for the period of April - December 31, 2001.**

NAME OF PERSON WHO ISSUED MEETING NOTICE

Dr. Mohamed Shanbaky

TITLE

Branch Chief

OFFICE

Region I

DIVISION

Division of Reactor Projects

BRANCH

Branch 4

Distribution of this form and attachments:

Docket File/Central File
PUBLIC

Annual Assessment Meeting

Reactor Oversight Program - Cycle 2

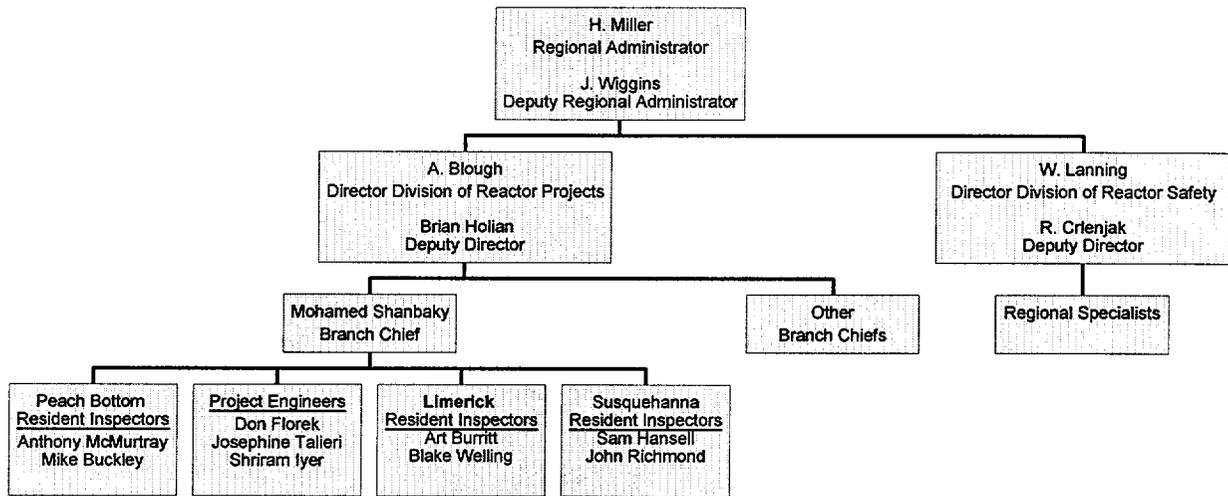


Nuclear Regulatory Commission -Region I
King of Prussia, PA

Agenda

- Introduction
- Review of Reactor Oversight Process
- Discussion of Plant Performance Results
- Licensee Response and Remarks
- NRC Closing Remarks
- Meeting with the Licensee adjourned
- NRC available to address questions from the public

Region I Organization



NRC Representatives

- **Brian Holian, Deputy Director, Division of Reactor Projects**
– (beh@nrc.gov (610) 337-5080)
- **Mohamed Shanbaky, Chief Reactor Projects Branch**
– (mms1@nrc.gov (610) 337-5209)
- **Chris Gratton, Project Manager, NRR**
– (cxg1@nrc.gov (301) 415-1055)
- **Don Florek, Senior Project Engineer**
– (djf1@nrc.gov (610) 337-5185)
- **Art Burritt, Senior Resident Inspector**
– (alb1@nrc.gov (610) 327-1344)
- **Blake Welling, Acting Senior Resident Inspector**
– (bdw@nrc.gov (610) 327-1344)

Reference Sources

- Reactor Oversight Process
 - ▶ <http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html>

- Public Electronic Reading Room
 - ▶ <http://www.nrc.gov/reading-rm/adams.html>

- Public Document Room
 - ▶ 1-800-397-4209 (Toll Free)

NRC Activities

- Ensure nuclear plants are designed, constructed, and operated safely
- Issue licenses for the peaceful use of nuclear materials in the U.S.
- Ensure licensees use nuclear materials and operate plants safely, and are prepared to respond to emergencies

NRC Performance Goals

- Maintain safety and protect the environment
- Enhance public confidence
- Improve effectiveness, efficiency, and realism of processes and decision making
- Reduce unnecessary regulatory burden

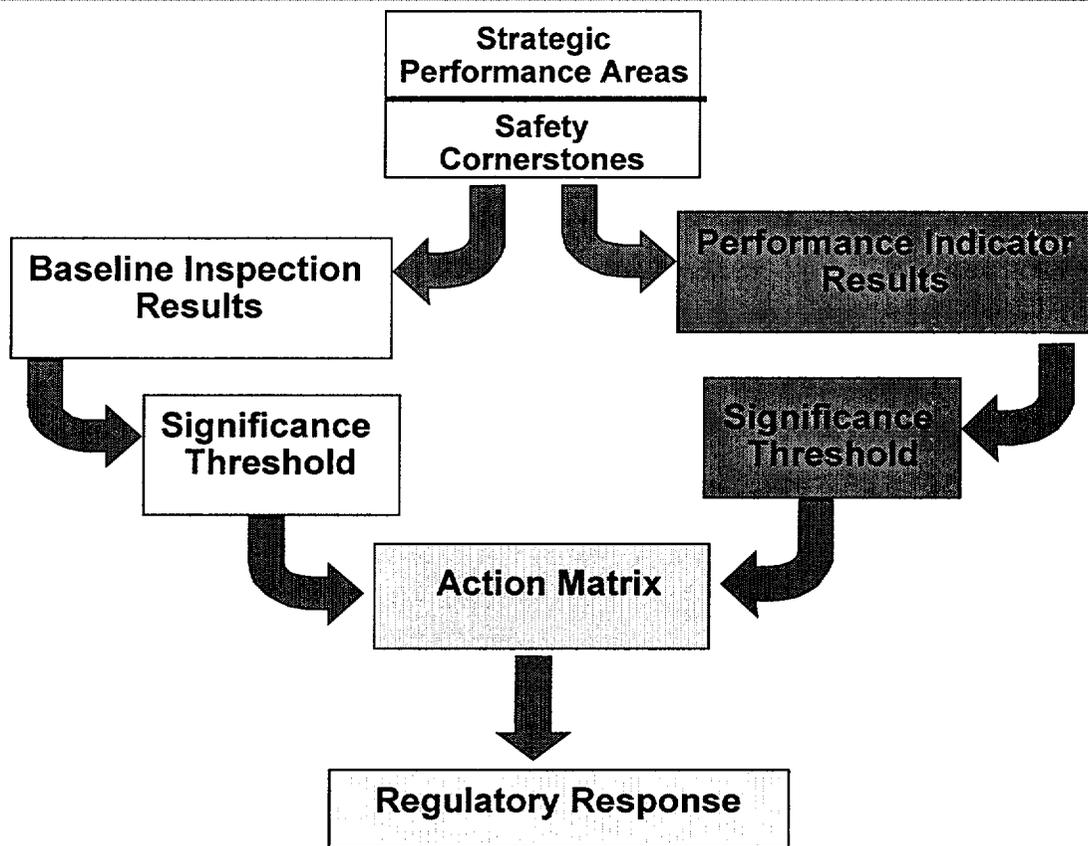
NRC Oversight Activities

- Provides assurance plants are operating safely and in accordance with the regulations
- Risk informed process
- Objective indicators of performance
- Inspections focused on key safety areas
- Defines expected NRC and licensee actions

NRC Response to 9/11

- Highest Level of Security Maintained
- Comprehensive Review of Security
- Closely Coordinated Response With:
 - Our Licensees
 - FBI
 - Military, State, and Local Agencies
 - Intelligence Communities
- Issued Security Advisories
 - Increased Patrols
 - Augmented Security Capabilities
 - Added Barriers and Posts
 - More Limited Access
 - Enhanced Security Awareness
- Issued Order on Security
- NRC Monitoring Enhanced Security

Reactor Oversight Process



Examples of Baseline Inspections

- Equipment Alignment ~ 70 hrs/yr
- Annual Fire Protection ~ 35 hrs/yr
- Triennial Fire Protection ~200 hrs every 3 yrs
- Operator Response ~ 125 hrs/yr
- Plant security ~40 hours/yr
- Emergency preparedness ~60 hrs/yr
- Rad release controls ~100 hrs every 2 years
- Worker radiation protection ~125 hrs/year
- Corrective action program ~10% every inspection
- Corrective action program ~200 hr every 2 yrs

Significance Threshold

Performance Indicators

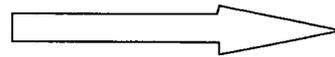
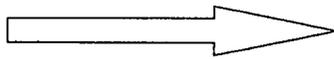
Green:	Only baseline Inspection
White:	May increase NRC oversight
Yellow:	Requires more NRC oversight
Red:	Requires more NRC oversight

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/Degraded Cornerstone	Unacceptable Performance
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Increasing Safety Significance

Increasing NRC Inspection Efforts

Increasing NRC/Licensee Management Involvement

Increasing Regulatory Actions

Substantive Cross Cutting Issue

- Common cause of inspection findings
 - ▶ Human performance
 - ▶ Problem Identification and Resolution
 - ▶ Safety conscious work environment
- Multiple inspection findings with a common cause
- Multiple cornerstones
- May be documented in an assessment letter
- Focus licensee and NRC activities

National Summary of Plant Performance

End of Calendar Year 2001

Licensee Response	74
Regulatory Response	24
Degraded Cornerstone	4
Multiple/Repetitive Degraded Cornerstone	1
Unacceptable	0
<hr/>	
Total Plants	103

National Summary

- Performance Indicator Results 4th Qtr Calendar Yr 2001

- ▶ Green 1834
- ▶ White 8
- ▶ Yellow 0
- ▶ Red 0

- Total Inspection Findings (April 2001 - December 2001)

- ▶ Green 660
- ▶ White 23
- ▶ Yellow 2
- ▶ Red 0

Limerick Annual Assessment

(April 1 - Dec 31, 2001)

- Operated safely
- Fully met all cornerstone objectives
- Regulatory Response Band of Action Matrix
 - One Inspection Finding of low to moderate safety significance (White) in Unit 1 and 2 Emergency Preparedness cornerstone
 - One Inspection Finding of low to moderate safety significance (White) in Unit 2 Barrier Integrity cornerstone
- All Performance Indicators requiring no additional NRC oversight (Green)
- Supplemental inspections to be performed

Limerick Inspection Activities

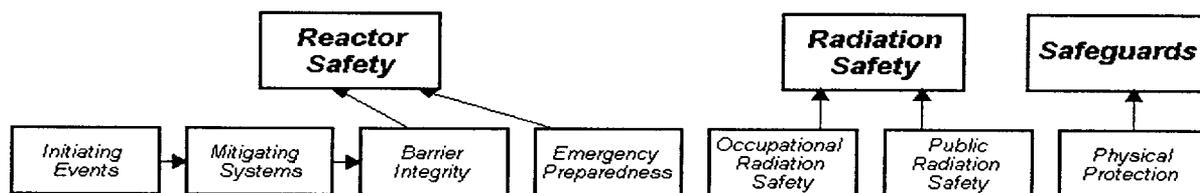
(Jan 1 - Dec 31, 2001)

- 5800 hours of inspection related activity
- Two resident inspectors performing resident inspections
- 17 inspections by regional inspectors
 - ▶ Includes 4 team inspections
- Inspection Findings
 - ▶ 15 findings of very low safety significance
 - ▶ 2 findings of low to moderate safety significance

Limerick 1 and 2

Performance Indicators 4Q/2001

http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/LIM1/lim1_chart.html
http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/LIM2/lim2_chart.html



Performance Indicators

Unplanned Starts (C)	Emergency AC Power System Availability (C)	Radiation System Availability (C)	Emergency System Availability (C)	Occupational Radiation Safety (C)	Public Radiation Safety (C)	Physical Protection (C)
Boiling with Loss of Normal Heat Response (C)	High Pressure Injection System Availability (C)	Radioactive System Leakage (C)	ERC Drill Participation (C)			Physical Protection (C)
Unplanned Power Changes (C)	Reactor Trip System Availability (C)		ERC Drill Success (C)			Physical Protection (C)
	Reactor Trip System Availability (C)					
	Reactor Trip System Availability (C)					
	Reactor Trip System Availability (C)					

Limerick 2

Inspection Finding Summary

http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/LIM2/lim2_chart.html



Most Significant Inspection Findings

Quarter	Initiating Events	Mitigating Systems	Barrier Integrity	Emergency Preparedness	Occupational Radiation Safety	Public Radiation Safety	Physical Protection
4Q/2001	No findings this quarter	C	W (1)	Findings without color designation	No findings this quarter	No findings this quarter	No findings this quarter
3Q/2001	No findings this quarter	C	No findings this quarter	W (1)	No findings this quarter	No findings this quarter	No findings this quarter
2Q/2001	C	C	C	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter
1Q/2001	No findings this quarter	C	No findings this quarter	C	No findings this quarter	No findings this quarter	No findings this quarter

Miscellaneous findings

Additional Inspection & Assessment Information

◆ Assessment Reports/Inspection Plans:

4Q/2001
3Q/2001
2Q/2001
1Q/2001

◆ Cross Reference Of Assessment Reports

◆ List of Inspection Reports

◆ List of Assessment Letters/Inspection Plans

Last Modified: March 1, 2002

Emergency Preparedness Cornerstone

- Unit 1 and 2 White finding - November 2001
 - ▶ Inadequate critique of an emergency preparedness drill
- Supplemental inspection - planned for May 2002
- Unit 1 and 2 Severity Level III Violation - October 2001
 - ▶ False records and installation of improper jumpers by contractor personnel on several off-site sirens
- Inspection activity completed
 - ▶ Actions were acceptable

Barrier Integrity Cornerstone

- Unit 2 White finding - January 11, 2002
 - ▶ Inadequate measures to identify a degraded safety relief valve
- Supplemental Inspection planned for June 2002

Potential Cross Cutting Issue

Human Performance Thoroughness of Technical Evaluations

- Three inspection findings with this similar causal factor
 - ▶ Barrier Integrity
 - Inadequate measures to identify a degraded safety relief valve (White)
 - ▶ Mitigating System
 - Low standby liquid control relief valve set points (Green)
 - Loose safety relief valve tail pipe studs (Green)
- Exelon is addressing issues in their corrective action program

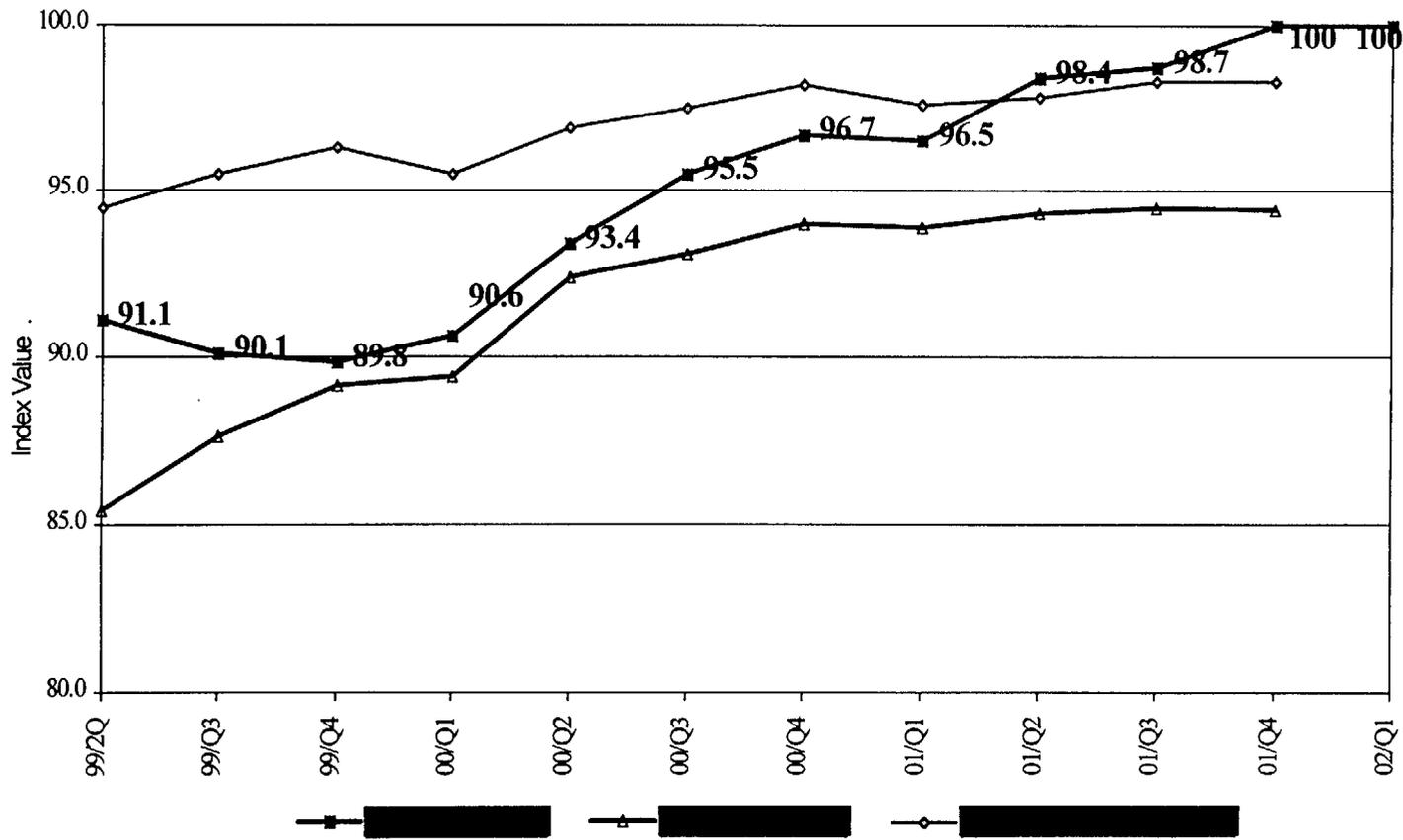
Slides presented by Exelon

Limerick Generating Station

NRC Public Meeting

March 26, 2002

INPO Performance Index



Unit 1 = 100
Unit 2 = 100
Station = 100
Best Quartile = 98.3

Year 2001-Accomplishments

- ◆ Safe and Reliable Operation of the Units
- ◆ Industry Top Quartile Performance
 - Industrial Safety
 - Safety System Reliability
 - Radiation Exposure
- ◆ Material Condition Improvements
 - System Health Improvement Plan
 - Plant Health Committee
 - Project Review Committee

Emergency Preparedness Critique

Corrective Actions

- ◆ Standards
- ◆ Instructor/Evaluator Training
- ◆ Procedure Improvements
- ◆ Follow-up Training/Evaluation

Siren

Corrective Actions

- ◆ Contractor Oversight
- ◆ Equipment Upgrades
- ◆ Performance Monitoring

2N Safety Relief Valve (SRV) Corrective Actions

- ◆ 2N SRV Replaced
- ◆ Root Cause Determined
- ◆ Corrective Actions
 - Valve Manufacturing Requirements
 - Revised Performance Monitoring Criteria
- ◆ Additional Testing

Focus Areas

- ◆ Security
- ◆ Emergency Preparedness
- ◆ Human Performance
- ◆ Equipment Reliability
- ◆ Corrective Action Program