

# **INDIAN POINT 2 ANNUAL ASSESSMENT MEETING**

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**ENERGY INFORMATION CENTER - JUNE 13, 2001**



***U.S. NUCLEAR REGULATORY COMMISSION - REGION I  
KING OF PRUSSIA, PA***

# AGENDA

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- INTRODUCTION
- BACKGROUND
  - REACTOR OVERSIGHT PROGRAM
  - PLANT HISTORY
- ANNUAL ASSESSMENT LETTER
  - SUMMARY
- NRC CONTINUED OVERSIGHT



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# REACTOR OVERSIGHT PROGRAM

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- RISK INFORMED PROCESS
- USES OBJECTIVE PERFORMANCE INDICATORS
- USES INSPECTIONS FOCUSED ON KEY SAFETY AREAS
- DEFINES EXPECTED NRC & LICENSEE ACTIONS



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# PERFORMANCE INDICATORS & INSPECTION FINDINGS

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## DEFINITION

### ■ PERFORMANCE INDICATORS

- ▶ GREEN: NRC BASELINE INSPECTION
- ▶ WHITE: MAY RESULT IN INCREASED NRC OVERSIGHT
- ▶ YELLOW: MINIMAL REDUCTION IN SAFETY MARGIN AND REQUIRES ADDITIONAL NRC OVERSIGHT
- ▶ RED: REDUCTION IN SAFETY, BUT ADEQUATE PROTECTION TO PUBLIC HEALTH AND SAFETY IS MAINTAINED; FOCUSED NRC OVERSIGHT

### ■ INSPECTION FINDINGS

- ▶ GREEN: VERY LOW SAFETY ISSUE
- ▶ WHITE: LOW TO MODERATE SAFETY ISSUE
- ▶ YELLOW: SUBSTANTIAL SAFETY ISSUE
- ▶ RED: HIGH SAFETY ISSUE



# PERFORMANCE INDICATORS

## Reactor Safety

## Radiation Safety

## Safeguards

Initiating  
Events

Mitigating  
Systems

Barrier  
Integrity

Emergency  
Preparedness

Occupational  
Radiation  
Safety

Public  
Radiation  
Safety

Physical  
Protection

## Performance Indicators

Emergency AC  
Power System  
Unavailability

Reactor Coolant  
System Specific  
Activity

Drill/Exercise  
Performance

Occupational  
Exposure Control  
Effectiveness

RETS/ODCM  
Radiological  
Effluents

Protected Area  
Equipment

Unplanned  
Scrams

High Pressure  
Injection System  
Unavailability

ERO Drill  
Participation

Personnel  
Screening  
Program

Scrams with  
Loss of Normal  
Heat Removal

Heat Removal  
System  
Unavailability

Reactor Coolant  
System  
Leakage

Alert and  
Notification  
System

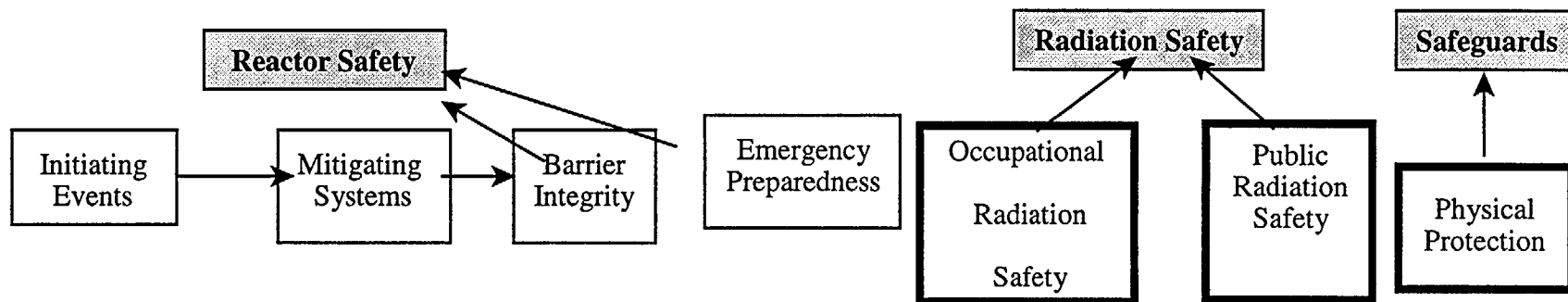
FFD/Personnel  
Reliability  
Program

Unplanned  
Power Change

Residual Heat  
Removal System  
Unavailability

Safety System  
Functional  
Failure

# INSPECTION AREAS



## Inspection Procedures

- |                               |                           |                       |                            |
|-------------------------------|---------------------------|-----------------------|----------------------------|
| ● Adverse Weather             | ● Operability Evaluation  | ● Exercise Evaluation | ● Sec Authorization Access |
| ● Evaluation of Changes       | ● Operator Workarounds    | ● Alert and Notice    | ● Sec Search               |
| ● Equipment Alignment         | ● Permanent Mods-Online   | ● ERO Augment         | ● Sec Response             |
| ● Fire Protection             | ● Permanent Mods          | ● EAL                 | ● Sec Plan change          |
| ● Flood Protection            | ● Post Maintenance Test   | ● EP Preparation      |                            |
| ● Heat Sink                   | ● Refueling Outage        | ● Drill Evaluation    |                            |
| ● In Service Inspection       | ● SSDI                    | ● RAD Access          |                            |
| ● Operator Requalification    | ● Surveillance Testing    | ● ALARA Plan          |                            |
| ● Maintenance Rule Imp        | ● Temporary Modifications | ● RAD monitoring      |                            |
| ● Maintenance Risk Assessment | ● PI&R                    | ● RAD Effluents       |                            |
| ● Non-Routine Events          | ● Event Follow-up         | ● RAD Transport       |                            |
|                               | ● PI Verification         | ● RAD Environmental   |                            |

# NRC ACTION MATRIX

|               | Licensee Response Column              |  | Regulatory Response Column  | Degraded Cornerstone Column   | Multiple/ Repetitive Degraded Cornerstone Column   | Unacceptable Performance Column   |
|---------------|---------------------------------------|--|---|---|--|---|
| RESULTS       |                                       | All Assessment Inputs (Performance Indicators (PIs) and Inspection Findings) Green; Cornerstone Objectives Fully Met | One or Two White Inputs (in different cornerstones) in a Strategic Performance Area; Cornerstone Objectives Fully Met | One Degraded Cornerstone (2 White Inputs or 1 Yellow Input) or any 3 White Inputs in a Strategic Performance Area; Cornerstone Objectives Met with Minimal Reduction in Safety Margin | Repetitive Degraded Cornerstone, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or 1 Red Input; Cornerstone Objectives Met with Longstanding Issues or Significant Reduction in Safety Margin | Overall Unacceptable Performance; Plants Not Permitted to Operate Within this Band, Unacceptable Margin to Safety |
| RESPONSE      | Regulatory Performance Meeting        | None   | Branch Chief (BC) or Division Director (DD) Meet with Licensee  | DD or Regional Administrator (RA) Meet with Licensee  | RA (or EDO) Meet with Senior Licensee Management   | Commission meeting with Senior Licensee Management  |
|               | Licensee Action                       | Licensee Corrective Action   | Licensee Corrective Action with NRC Oversight   | Licensee Self Assessment with NRC Oversight   | Licensee Performance Improvement Plan with NRC Oversight   |   |
|               | NRC Inspection                        | Risk-Informed Baseline Inspection Program  | Baseline and supplemental inspection procedure 95001  | Baseline and supplemental inspection procedure 95002  | Baseline and supplemental inspection procedure 95003   |   |
|               | Regulatory Actions                    | None   | Supplemental inspection only  | Supplemental inspection only  | -10 CFR 2.204 DFI<br>-10 CFR 50.54(f) Letter<br>- CAL/Order  | Order to Modify, Suspend, or Revoke Licensed Activities   |
| COMMUNICATION | Assessment Reports                    | BC or DD review/sign assessment report (w/ inspection plan)  | DD review/sign assessment report (w/ inspection plan)   | RA review/sign assessment report (w/ inspection plan)   | RA review/sign assessment report (w/ inspection plan)<br><br>Commission Informed   |   |
|               | Annual Public Meeting                 | SRI or BC Meet with Licensee   | BC or DD Meet with Licensee   | RA (or designee) Discuss Performance with Licensee  | EDO (or Commission) Discuss Performance with Senior Licensee Management  | Commission Meeting with Senior Licensee Management  |
|               | INCREASING SAFETY SIGNIFICANCE —————> |  |   |   |  |   |

# **MULTIPLE/REPETITIVE DEGRADED CORNERSTONE DESIGNATION**

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- **RA MEET WITH SENIOR LICENSEE MANAGEMENT**
- **LICENSEE PERFORMANCE IMPROVEMENT PLAN WITH CONTINUED NRC OVERSIGHT**
- **BASELINE & SUPPLEMENTAL INSPECTION**
- **EVALUATE NEED FOR ADDITIONAL REGULATORY ACTIONS**
- **RA REVIEW & SIGN ASSESSMENT REPORT**
- **EDO (or COMMISSION) DISCUSS PERFORMANCE WITH SENIOR LICENSEE MANAGEMENT**





# PLANT HISTORY

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## ■ PAST PLANT EVENTS

- 8/99 PLANT TRIP & LOSS OF OFFSITE POWER
- 2/00 STEAM GENERATOR TUBE FAILURE

## ■ OPERATING SUMMARY

- SG REPLACEMENT PROJECT
- REACTOR STARTUP
- FULL POWER WITH OCCASIONAL POWER REDUCTIONS
  - PLANNED TESTING
  - REPAIR EMERGENT EQUIPMENT PROBLEMS

## ■ 95003 INSPECTION

- 14 INSPECTORS (250 YEARS NUCLEAR EXPERIENCE); 3 WEEKS OF ON-SITE INSPECTION
- IDENTIFIED SIMILAR WEAKNESSES TO PREVIOUS FINDINGS IN STATION PROGRAMS AND PROCESSES



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## DEGRADED CORNERSTONES

- **DEGRADED CORNERSTONES IN:**
  - INITIATING EVENTS
  - MITIGATING SYSTEMS
  - EMERGENCY PREPAREDNESS
  
- **ASSOCIATED WITH PERFORMANCE PROBLEMS DURING:**
  - AUGUST 1999 REACTOR TRIP WITH ELECTRICAL DISTRIBUTION SYSTEM COMPLICATIONS
  - FEBRUARY 2000 STEAM GENERATOR TUBE FAILURE (SGTF)
  
- **2 WHITE PIs**
  - INITIATING EVENTS
  - MITIGATING SYSTEMS



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## **END-OF-CYCLE REVIEW**

- **IP2 IS BEING OPERATED SAFELY**
  
- **WEAKNESSES EXIST IN STATION PROGRAMS AND PROCESSES INDICATING THE NEED FOR A CONTINUED IMPROVEMENT PLAN**
  - **DESIGN CONTROL**
  - **EQUIPMENT RELIABILITY**
  - **PROBLEM IDENTIFICATION AND RESOLUTION**
  - **HUMAN PERFORMANCE**
  - **EMERGENCY PREPAREDNESS**
  
- **SOME PROGRESS HAS BEEN OBSERVED IN IMPROVING PREVIOUSLY IDENTIFIED PERFORMANCE PROBLEMS; HOWEVER, PROGRESS HAS BEEN SLOW AND LIMITED IN SOME AREAS**



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## **END-OF-CYCLE REVIEW (continued)**

- **ALIGNMENT BETWEEN BUSINESS PLAN AND PERFORMANCE ISSUES**
  - **HOWEVER, IMPLEMENTATION STRATEGIES VARY IN QUALITY AND DEPTH**
  
- **AS NOTED IN CON EDISON'S RESPONSE TO 95003 INSPECTION**
  - **ISSUES NOT AMENABLE TO "FAST FIXES"**
  - **MANY IMPROVEMENT EFFORTS WILL NECESSITATE MULTI-YEAR EFFORTS**
  
- **NRC WILL CONTINUE TO MONITOR EFFECTIVENESS OF PERFORMANCE IMPROVEMENT EFFORTS**
  - **INCLUDING SIGNIFICANT CHANGES PRIOR TO OR SUBSEQUENT TO ANY LICENSE TRANSFER**



# **ANNUAL ASSESSMENT LETTER**

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## **SUMMARY**

- **IP2 BEING OPERATED SAFELY AND AN ACCEPTABLE MARGIN OF SAFETY EXISTS**
- **IP2 REMAINS IN MULTIPLE/REPETITIVE DEGRADED CORNERSTONE COLUMN**
- **NO ADDITIONAL REGULATORY ACTIONS REQUIRED AT THIS TIME**
- **NRC PLANS TO CONDUCT BASELINE INSPECTIONS, PLUS:**
  - **ADDITIONAL FOCUSED SUPPLEMENTAL INSPECTIONS**
  - **CONTINUE SITE VISITS, MANAGEMENT MEETINGS, AND QUARTERLY ASSESSMENTS**



# QUESTIONS & ANSWERS

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**PLEASE FEEL FREE TO PROVIDE ADDITIONAL COMMENTS  
THROUGH THE “NRC PUBLIC MEETING FEEDBACK” FORM**

**ADDITIONAL INFORMATION ON THE THE TOPICS  
DISCUSSED CAN BE FOUND AT : *www.nrc.gov***



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