



# Initial Implementation Evaluation Panel (IIEP) Brief

## Reactor Oversight Process

## Status and Overall Results

April 2, 2001

## **TOPICS TO BE DISCUSSED**

- Feedback Activities
- Overall Results
- Initial Implementation Issues
- External Lessons Learned Workshop Outcomes
- Future Milestones and Activities

## **FEEDBACK ACTIVITIES**

- Public Informational Meetings in Each Community
- Public Workshops in Each Region
- Monthly Public Interface Meetings with Industry ROP Working Group
- *Federal Register Notice* Soliciting Public Comment
- Initial Implementation Evaluation Panel
- Internal Conference Calls, Management Meetings & Site Visits
- Survey of Internal Stakeholders

## **OVERALL RESULTS**

- Substantially Exercised Process
- Made Several Significant Changes
- Maintained Process Stable
- Successful Demonstration of Framework Objectives
- Data on Process Results and Resources

## **OVERALL RESULTS (Continued)**

### **PERFORMANCE INDICATOR RESULTS (APR-DEC 2000)**

<b>CORNERSTONE PERFORMANCE INDICATOR</b>	<b>WHITE THRESHOLDS CROSSED</b>	<b>YELLOW THRESHOLDS CROSSED</b>
<b>INITIATING EVENTS</b>	<b>9</b>	<b>-</b>
<b>MITIGATING SYSTEMS</b>	<b>14</b>	<b>1</b>
<b>EMERGENCY PREPAREDNESS</b>	<b>6</b>	<b>1</b>
<b>BARRIER INTEGRITY</b>	<b>1</b>	<b>1</b>
<b>OCCUPATIONAL RADIATION SAFETY</b>	<b>1</b>	<b>-</b>
<b>PUBLIC RADIATION SAFETY</b>	<b>-</b>	<b>-</b>
<b>PHYSICAL PROTECTION</b>	<b>4</b>	<b>1</b>

**OVERALL RESULTS (Continued)**  
**INSPECTION RESULTS (APR 2000-MAR 2001)**

CORNERSTONE INSPECTABLE AREA	WHITE FINDINGS	YELLOW FINDINGS	RED FINDINGS
REACTOR SAFETY	5	-	1
EMERGENCY PREPAREDNESS	4	1	-
OCCUPATIONAL RADIATION SAFETY	4	-	-
PUBLIC RADIATION SAFETY	1	-	-
PHYSICAL PROTECTION	1	-	-
OTHER BASELINE PROCEDURES	-	-	-
<b>TOTAL FINDINGS OF SIGNIFICANCE</b>	<b>15</b>	<b>1</b>	<b>1</b>
PENDING ISSUES	2	2	

## **OVERALL RESULTS (Continued)**

### **ACTION MATRIX RESULTS (APR-MAR 2001)**

<b>COLUMNS OF THE ACTION MATRIX</b>	<b>NUMBER OF UNITS THAT HAVE ENTERED COLUMN</b>
<b>LICENSEE RESPONSE</b>	<b>73</b>
<b>REGULATORY RESPONSE</b>	<b>22</b>
<b>DEGRADED CORNERSTONE</b>	<b>5</b>
<b>MULTIPLE/REPETITIVE DEGRADED CORNERSTONES</b>	<b>1</b>
<b>UNACCEPTABLE PERFORMANCE</b>	<b>NONE</b>

# **INITIAL IMPLEMENTATION ISSUES**

## Internal Issues Only

- Inspection Flexibility and Resources

## Issues for External Feedback

- Reactor Safety PI Issues
- Fire Protection Issues
- Radiation Safety Issues
- Cross-cutting/Problem Identification and Resolution Issues



## Issues for External Feedback (cont'd)

- Physical Protection Issues
- Maintenance Issues
- Assessment and Enforcement Issues
- Communication Issues

# **EXTERNAL LESSONS LEARNED WORKSHOP** **OUTCOMES**

## **REACTOR SAFETY PERFORMANCE INDICATOR (PI) ISSUES**

### **SESSION OBJECTIVES:**

- To present current status of several key Reactor Safety PI issues
- To obtain stakeholder feedback on proposed issue resolution approach

### **ISSUES:**

- Safety System Unavailability PI
- Unplanned Power Change PI
- Unplanned SCRAM Pilot Program

## REACTOR SAFETY PERFORMANCE INDICATOR ISSUES

### OTHER ISSUES RAISED:

- Changes were made to guidance in the proposed unplanned reactor shutdown PI regarding Unplanned Scrams with Loss of Normal Heat Removal - design features.
- Delete word “Shutdown” from proposed Unplanned Power Reductions performance indicator to avoid confusion.
- Consider other alternate performance indicators for Unplanned Power Reductions.

## REACTOR SAFETY PERFORMANCE INDICATOR ISSUES

### OTHER ISSUES RAISED: (cont'd)

- Proposal to link SSU thresholds to maintenance rule criteria.
- We should strive for common definitions for unavailability.

## REACTOR SAFETY PERFORMANCE INDICATOR ISSUES

### OUTCOMES:

- No disagreement expressed regarding the alternate performance indicator that has been piloted for Unplanned Scrams.
- Staff should develop success criteria for pilot for Unplanned Power Reductions to ensure fix is better than original concern.
- Agree that ideal world is to have both unavailability and reliability indicators, but we are not there yet. Everyone agrees that we need a common unavailability definition.

## FIRE PROTECTION ISSUES

### SESSION OBJECTIVE:

- Present information on current issues in fire protection, proposed NRC approaches to resolving the issues, and obtain stakeholder feedback to aid NRC in refining its approach.

### ISSUES:

- Improvements need to be made to the fire protection Significance Determination Process (SDP) to make it more effective and efficient to use.
- The plant fire protection licensing bases and approved processes for changing them are not always clear to inspectors and licensees.

## FIRE PROTECTION ISSUES

### OTHER ISSUES RAISED:

- Consider use of licensee self assessment.
- Too much emphasis on safe shutdown and not defense in depth.
- Faster resolution of issues for public confidence.
- Resources - inspection preparation, support, post-inspection activities.....

## FIRE PROTECTION ISSUES

### OUTCOMES:

- Develop quantitative tool (spreadsheet) to be used as part of the SDP for fire scenario development to limit subjectivity and improve overall consistency.
  - Revisions to SDP should not increase the complexity of the SDP.
- Work with contractor/industry to update fire ignition frequency data to capture information thru 2000 to ensure that assumptions used in risk estimations reflect current industry performance.



## FIRE PROTECTION ISSUES

### OUTCOMES: (cont'd)

- Ensure that plant-specific data is factored in when actual plant performance deviates from industry averages.
- Improve the validity and objectivity of the evaluation of fire brigade drill performance.
- Need to provide additional guidance to inspectors on evaluations of fire brigade performance during drills.
- Consider developing a fire brigade drill performance PI and the use of licensee self-assessments as inputs to the process for evaluating overall brigade effectiveness.

## FIRE PROTECTION ISSUES

### OUTCOMES: (cont'd)

- Fire brigade performance should not be judged on the basis of only one drill.
- Develop a process which evaluates human performance and provides a quantitative basis for the significance determination.
- Continue to communicate with external stakeholders prior to implementing revisions to the current SDP guidance.

## FIRE PROTECTION ISSUES

### OUTCOMES: (cont'd)

- Continue to improve how the NRC inspects and evaluates the adequacy of changes to Fire Protection programs.
- Formulate additional guidance to inspectors on how to evaluate the use of manual actions when credited by the licensee, in lieu of automatic actions/passive devices for compliance with license commitments.

# RADIATION SAFETY ISSUES

## PUBLIC RADIATION SAFETY

### ISSUE 1:

Change to the Transportation section of the PUBLIC RADIATION SAFETY SDP.

### ISSUE 2:

Radioactive Material Control section of the SDP.

Clarification is needed to determine the adequacy of licensee controls to assure that licensed radioactive material is controlled and not inadvertently released offsite.

## PUBLIC RADIATION SAFETY

### ISSUE 3:

Time frame to be used for counting radioactive material control occurrences is inconsistently applied.

## OCCUPATIONAL RADIATION SAFETY

### ISSUE 1:

Revise Radiation Exposure Control section of the Occupational Radiation Safety SDP to clarify how the SDP reflects the Commission's policy on enforcement discretion for skin overexposures from hot particles (or discrete radioactive particles).

### ISSUE 2:

Implementation of a collective dose screening criteria in the ALARA portion of the SDP may result in either too harsh or too lenient an agency response to similar ALARA issues.

## OCCUPATIONAL RADIATION SAFETY

### ISSUE 3:

The current basis of the ALARA portion of the SDP (i.e., comparing actual dose expanded to dose projection for each job) leaves it open to artificial manipulation of the outcomes.

## RADIATION SAFETY ISSUES

### OTHER ISSUES RAISED:

- Cornerstone objective conflicts with Part 20
- What is basis for criteria in SDP?
  - Extra-regulatory requirements?
  - Appropriate?
- Use a PI rather than SDP in ALARA?
- Will focus on ALARA lengthen outages and increase total dose?
- SDP criteria should be related to identified ALARA program weakness or failure



## RADIATION SAFETY ISSUES

### OTHER ISSUES RAISED: (cont'd)

- 3 year rolling average should be more contemporaneous
- Green/white threshold too low
- Internal logic not consistent
- Inspection level has not decreased in response to improved industry performance
- SDP is overly focused on Dose Projection as was to determine the significance or issues?

## RADIATION SAFETY ISSUES

### OTHER ISSUES RAISED: (cont'd)

- Is there a way to be objective without numerical criteria?
- Use of 3 year average in SDP is not appropriate

## RADIATION SAFETY ISSUES

### OUTCOMES:

#### PUBLIC RADIATION SAFETY

- Transportation section of SDP:
  - The proposed changes were considered appropriate
- Radioactive material section of SDP:
  - The proposed changes were considered appropriate
- Time frame for counting radioactive material:
  - The proposed changes were considered appropriate
- Parking lot issue: “Public” radiation doses inside protected areas

## RADIATION SAFETY ISSUES

OUTCOMES: (cont'd)

### OCCUPATIONAL RADIATION SAFETY

- Clarity of radiation exposure control SDP relative to hot particles:
- Revise SDP to explicitly reflect enforcement policy

## RADIATION SAFETY ISSUES

OUTCOMES: (cont'd)

### ALARA ISSUES - AREAS OF ALIGNMENT

- Clarify cornerstone objectives-ALARA and programmatic.
- Remove Group 2, Question 1 - will be used as guidance.
- Group 2, Question 2 - gets to ALARA performance “unplanned, unintended dose(s) that resulted from actions or conditions contrary to.....”
- Significance of ALARA finding should be based on the magnitude of “unintended dose” - also other criteria.

## RADIATION SAFETY ISSUES

OUTCOMES: (cont'd)

ALARA ISSUES - AREAS OF ALIGNMENT (cont'd)

- Use 3-year rolling average for inspection planning.
- Need to make 3-year rolling averages more contemporaneous.
- Single ALARA finding doesn't warrant "yellow" significance.
- It is appropriate for multiple "white" findings in ALARA to result in a degraded cornerstone.

## RADIATION SAFETY ISSUES

OUTCOMES: (cont'd)

ALARA ISSUES - AREAS OF ALIGNMENT (cont'd)

- ALARA PI: Proposed and tabled pending revisions to ALARA SDP.
- Parking Lot Issue: No color ALARA findings.

## RADIATION SAFETY ISSUES

OUTCOMES: (cont'd)

### AREAS FOR DEVELOPMENT

- Definition/process for “unintended dose”.
- ALARA SDP
- Revisit/revise as necessary inspection guidance.



## CROSS CUTTING ISSUES/ PROBLEM IDENTIFICATION & RESOLUTION

### SESSION OBJECTIVES:

- To inform stakeholders of concerns regarding the role of cross cutting areas in the ROP, ongoing activities to address these issues and possible enhancements to how the NRC inspects licensee problem identification and resolution (PI&R) activities.
- To solicit stakeholder feedback and possible consensus on related issues.

## CROSS CUTTING ISSUES/ PROBLEM IDENTIFICATION & RESOLUTION

### ISSUES:

- Does ROP provide sufficient information on cross cutting areas?
- Does the ROP encompass all pertinent cross cutting areas?
- Does the ROP appropriately address cross cutting issues?
- What is the appropriate frequency of the PI&R team inspection?

## CROSS CUTTING ISSUES/ PROBLEM IDENTIFICATION & RESOLUTION

### OTHER ISSUES RAISED:

- Need to consider eliminating human performance as a cross cutting area because of the overly subjective nature of what constitutes a human performance issue.
- Need to consider effect of reducing frequency of PI&R team inspection on public confidence.

## CROSS CUTTING ISSUES/ PROBLEM IDENTIFICATION & RESOLUTION

### OUTCOMES: (cont'd)

- Initial data supports a fundamental assumption of the ROP that cross cutting issue will be identified by PI's or baseline inspections. Explained planned actions to collect data to assess whether additional changes to the ROP are warranted.
- Explained how common cause failures and design are covered by the ROP. No new cross cutting issues identified.

## CROSS CUTTING ISSUES/ PROBLEM IDENTIFICATION & RESOLUTION

### OUTCOMES: (cont'd)

- Changes have been made to our guidance regarding how to document and treat cross cutting issues. Discuss planned actions to collect data to assess whether additional changes to the ROP are warranted.
- Discussed basis for possible reduction in frequency of PI&R item inspection. Discussed possible re-allocation of resources from team to routine inspections. Discuss possible pilot approach.

## PHYSICAL PROTECTION ISSUES

### SESSION OBJECTIVE:

- The goal of this session was to introduce several issues that NRC is currently working on and answer questions about these issues.

### Issues:

1. Group 2 Questions
2. Physical Protection SDP (PPSDP)
3. Inspection Procedures Revisions
4. Performance Indicators

## PHYSICAL PROTECTION ISSUES

### OTHER ISSUES RAISED:

- Should licensee identified findings that are entered in the C.A.P. be run-through the PPSDP? Threshold question?
- Ensure SPA Pilot Program follows the current program and revision to 10 CFR 73.55.
- The Physical Security Performance Indicators should be reevaluated in light of the Performance Requirements of the Revision to 10 CFR 73.55.

## PHYSICAL PROTECTION ISSUES

### OTHER ISSUES RAISED (cont'd)

- The FFD Performance Indicators should be reevaluated in light of the requirements of the New Rule.
- The Security Equipment Performance Index PI has an inconsistent performance threshold and should be changed.



## PHYSICAL PROTECTION ISSUES

### OUTCOMES:

- Clarified recent revision to the Group 2 questions that were issued 2/27/01. No further actions needed.
- Inspection procedures being revised were discussed and questions answered. No further actions needed.
- The interim SDP (issued 2/27) was discussed and questions were answered. Staff should address efficacy of the SDP as it is applied.

## MAINTENANCE EFFECTIVENESS ISSUE

### SESSION OBJECTIVE:

- Discuss challenges associated with (a)(4)-related findings and the current Reactor Safety Significance Determination Process (SDP), discuss proposed SDP enhancement, and solicit stakeholder feedback.

### ISSUE:

- The significance of certain maintenance rule performance issues cannot be assessed with the existing SDP.

## MAINTENANCE EFFECTIVENESS ISSUE

### OTHER ISSUES RAISED:

- Treatment of past (a)(4) evaluations that would increase in significance from a PRA upgrade or correcting a PRA deficiency?
- Is there a need for an SDP for (a)(1), (a)(2), and (a)(3)?
- Will the NRC issue an (a)(4) violation for “failing to manage risk” when issuing a violation for “failing to adequately assess the risk”?
- Proposed (a)(4) SDP process could have an unintended consequence: cause licensee to make its risk management guidance vague.

## MAINTENANCE EFFECTIVENESS ISSUE

### OTHER ISSUES RAISED: (cont'd)

- Licensees with more sophisticated PRA models may be penalized compared to licensees with simple IPEs.
- Proposed (a)(4) SDP process would be an additional burden to the licensee.
- Proposed (a)(4) SDP process could have an unintended consequence: cause licensee to make its risk management guidance vague.

## MAINTENANCE EFFECTIVENESS ISSUE

### OTHER ISSUES RAISED: (cont'd)

- Licensees with more sophisticated PRA models may be penalized compared to licensees with simple IPEs.
- Proposed (a)(4) SDP process would be an additional burden to the licensee.

## ASSESSMENT AND ENFORCEMENT ISSUES

### SESSION OBJECTIVE:

- To present information, obtain stakeholder feedback, develop potential approaches, and reach consensus on identified approaches for selected assessment and enforcement issues.

### ISSUES:

- 50.9 enforcement of PI reporting errors
- Enforcement consistency in the ROP
- The disposition of no color findings
- The role of regulatory conferences

## ASSESSMENT AND ENFORCEMENT ISSUES

### ISSUES: (cont'd)

- Appropriate actions for a PI that re-enters the green band without proper corrective action
- The role of historical issues in the ROP

## ASSESSMENT AND ENFORCEMENT

### OTHER ISSUES RAISED:

- No new issues raised

### OUTCOMES:

### ROLE OF NO COLOR FINDINGS

- Recent guidance revision appears to have reduced number of No Color findings
- Group was split on how to treat No Color findings
  - Keep no color and address perception problem
  - Minimize no color findings and drive for fewer bins



## ASSESSMENT AND ENFORCEMENT

OUTCOMES: (cont'd)

### REGULATORY CONFERENCES AND REGULATORY PERFORMANCE MEETINGS

- Changing focus of Regulatory Conference by discussing safety significance first, then compliance and corrective actions
- Discussed other possible changes
  - Someone besides regional enforcement coordinator opens meeting
  - Conduct SERC with appropriate levels of management (e.g. consistent with the Action Matrix)
- Emphasize importance of sharing safety evaluation basis and assumptions prior to SERC

## ASSESSMENT AND ENFORCEMENT

OUTCOMES: (cont'd)

### TREATMENT OF INADEQUATE CORRECTIVE ACTIONS

- Alignment to keep performance issue open
  - Open a PI&R finding of same color as original
- Criteria for finding
  - Strong causal link
  - Programmatic breakdown
- Opportunity for licensee input
  - Exit meeting appropriate
- Findings closed when adequate corrective actions taken and inspected

## ASSESSMENT AND ENFORCEMENT

OUTCOMES: (cont'd)

### TREATMENT OF HISTORICAL ISSUES

- Alignment reached on determination of significance and how it is portrayed
- Alignment reached that an issue with current risk significance is a performance issue, regardless of whether it reflects current licensee organization performance

## ASSESSMENT AND ENFORCEMENT

OUTCOMES: (cont'd)

TREATMENT OF HISTORICAL ISSUES (cont'd)

- Two different views for treatment in Action Matrix
  - Treat like any other issue
  - Define class of issues for discretion
- Two different views on removing issues
  - Keep for four quarters
  - Remove when corrected

## COMMUNICATION ISSUES

### SESSION OBJECTIVES:

- Present information and key issues. Solicit feedback from stakeholders on NRC's activities, and develop consensus on selected issues associated with communication activities related to the Reactor Oversight Process.

### ISSUES:

- Inspection Reports and insights beyond Inspection Reports
- Annual Licensee Assessment
- Reactor Oversight WEB page
- Public Communication associated with the SDP
- Appropriately considering public feedback

## COMMUNICATIONS ISSUES

### OTHER ISSUES RAISED:

- No consensus on documenting observations or minor violations.
- “Compliance not commensurate with significance.”
- Clearly describe significance referencing basis for SDP result – area for improvement.
- Consider WEB site for decommissioned plants.
- Establish feedback process on ROP for licensees.
- No consensus on annual assessment meetings for “all green” plants.

## COMMUNICATIONS ISSUES

### OUTCOMES:

- Staff received comments to consider in all areas.
- Will consider recommended enhancements to ROP WEB page, e.g., “Bottom-line” first, easier navigation to details, plain language in narratives.
- Will consider suggestions on responding better to public comments on ROP.
- Will consider ideas for public interaction in conjunction with the annual assessment meeting with each licensee.

# **FUTURE MILESTONES AND ACTIVITIES**

## **Milestones**

- Evaluate *Federal Register Notice* Input - April 2001
- Conduct First Agency Action Review Meeting - June 2001
- Submit Commission Paper on Initial Implementation - June 2001
- Brief Commission on Initial Implementation - July 2001



# **FUTURE MILESTONES AND ACTIVITIES**

## **Activities**

- Risk Based Performance Indicators
- Industry Trending Program
- Reactor Oversight Process Self-Assessment and Ongoing Improvements