RIC 2005
SESSION W-F3
EXPANDING THE BENEFIT OF PIs

Performance Indicator Status

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- What do PI trends over the five years of ROP tell us about industry performance?
- How do we interpret PI guidance?
- How do we change PIs?
- What are the attributes of a good PI?
- Which PIs require near-term attention?

ROP PIs indicate good industry performance

- Number of non-green PIs in a quarter has fallen from 20 in 2000 to 6 in 2005
- Industry average performance has improved significantly in some areas not monitored before the ROP
- Industry average performance has not declined in any PI and all are less than 50% of the G/W threshold

How do we interpret PI guidance in NEI 99-02?

- NEI responds informally to licensees
- Licensees and NRC discuss issue and if unable to resolve, an FAQ is submitted
  - It is essential that the licensee and NRC agree on the facts
- Monthly ROP meeting of industry and NRC resolve the FAQ (not the facts)
- IF consensus cannot be achieved, Director, DIPM will make the call
- Results are posted on the NRC and CDE websites
- Revisions of NEI 99-02 incorporate FAQs

How do we change PIs?

- IMC 0608 describes the process for changes to PIs
- FAQs should just interpret NEI 99-02
- Consideration of a new PI requires a formal process
  - Feasibility and justification
  - Formal definition
  - Gathering historical data to set proposed threshold
  - Does the PI adds value commensurate with burden?
  - Piloting for six months
  - Training and implementation
- Changes to an existing PI may require piloting if the change requires new data

What are the attributes of a "good" ROP PI?

- Represents valid and verifiable indication of performance relevant to the area of concern
- Capable of being objectively measured
- Encourages appropriate action
- Provides reasonable sample of performance
- Allows for establishment of risk-informed or expert panel threshold to guide NRC and licensee action
- Threshold represents an outlier and has some indication of risk
- Provides sufficient time to correct deficiencies before they pose an undue risk to the public
- A single deficiency does not cause a threshold to be crossed

PIs that require near-term attention

- RCS Identified Leakage
- Scrams with Loss of Normal Heat Removal
- Mitigating Systems Performance Index (MSPI)

Scrams w/ LONHR

- Guidance/interpretations evolved since outset of ROP
- Industry recommended elimination and replacement
- NRC agreed to work with stakeholders to revise the indicator to resolve problems
- Task Force formed to develop replacement
- Focus will be on scrams which challenge operators

Mitigating Systems Performance Index (MSPI)

- Piloted as a replacement for Safety System Unavailability PIs
- Incorporates reliability and availability of key equipment with plant-specific importance measures
- Some upfront burden, but substantial long-term benefits
- Implementation targeted for Jan ‘06

Benefits of MSPI

- Data consolidation with maintenance rule, PRAs, and WANO
- Simplifies accounting by eliminating:
  - Fault exposure times (T and T/2)
  - Cascading of support systems
  - Unavailability monitoring during shutdown
- Focuses on risk-significant functions
- Replaces generic performance thresholds with plant-specific risk-informed thresholds