NRC/NEI Meeting on ISA 67.04

NRC Headquarters, Rockville, MD
October 8, 2003, 1 p.m.

Industry Standard & Recommended Practices
for
establishing setpoints for nuclear safety-related instrumentation

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OUTLINE

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I. NEI Participation

NEI facilitates communications between NRC and industry groups:

- Coordinate industry participation:
  - Instrumentation, Systems, & Automation Society (ISA)
  - Commercial Reactor Licensees
  - NSSS Owners Groups
  - NEI Licensing Action Task Force (LATF)
  - Owners Group Tech Spec Task Force (TSTF)
  - Nuclear Utility Backfitting & Reform Group (NUBARG)

- Identify the issue and establish a resolution process.

II. Technical Specifications

Describe the history and philosophy of Technical Specifications for instrumentation:

- Custom Tech Specs (CTS):
  - Single column; the Trip Setpoint (TSP) is the Limiting Safety System Setting (LSSS)[1]

- Standard Tech Specs (STS):
  - Two column; the TSP is the LSSS, and the Allowable Value (AV) is an operability criterion for periodic surveillance.

    – or –

  - Five column; the TSP is the LSSS, and the AV is an operability criterion for periodic surveillance; however, when a channel is found beyond the AV, channel operability is re-assessed using information from three of the columns.

- Improved Tech Specs (ITS):
  - One or two column; the TSP and/or the AV may be the LSSS, depending on plant-specific preferences.

- Variations in ITS based on NSSS type.

- ISA-S67.04 & Reg. Guide 1.105 history.

- Interpretation of the LSSS.

[1] Column examples are for Westinghouse Tech Specs

III. Technical Issues

Begin developing a precise statement of the technical issues:

- Supplement previous meetings:
  - ISA, Williamsburg, VA, June 16-17, 2003
  - NRC/ISA, August 13, 2003
  - 9/8/03 NRC summary of August 13 meeting with ISA group

- Terminology:
  - Analytical Limit (AL)
  - Trip Setpoint (TSP)
  - Allowable Value (AV)
  - Total Loop Uncertainty (TLU)
  - Measured Error (ME)
  - Unmeasured Error (UE)
  - Limiting Safety System Setting (LSSS)

- Purpose of the AV
  - Discuss industry positions:
    - That the AV is used during periodic surveillance to demonstrate channel operability by validating the respective TSP.
    - That the TSP protects the AL.
  - Discuss NRC position: – that the AV protects the AL.

- Acceptable methods for determining an AV:
  - Describe statistical methods, in general.
  - Outline the three methods in ISA-RP67.04.
  - Note that other methods are used.
  - All methods should satisfy the criteria in ISA-S67.04.
  - Describe licensee practices in implementing AVs.

IV. Licensing Basis

Establish the continued acceptability of ISA-RP67.04, Method 3, where it is the current licensing basis:

- Regulatory Guide 1.105 endorses ISA-S67.04, Part I-1994.
  - The current edition is ANSI/ISA-67.04.01-2000)

- ISA-S67.04, Section 4.3.2, provides criteria for AV determination:
  - Uncertainties apply to "portion of the instrument channel being tested"
  - "assumptions, data, and methods … shall be documented"
  - "methods shall be consistent with setpoint determination method"
  - "only applicable to setpoints subjected to periodic surveillance"

- The relationship between Part I and Part II of ISA-67.04:
  - Part II is "Recommended Practice"
  - Method 3 is technically valid

- Plant-specific setpoint uncertainty calculations must support/justify validity of TSP & AV.

- Current plant-specific licensing basis for TSPs and AVs should be maintained.

- NRC has approved current Tech Spec TSPs & AVs.

- The NRC has reviewed and approved plant-specific methodologies that use Method 3.

- Changing the AV methodology will not improve safety margins.

- Estimated initial cost to change AV methodology is approximately $500,000 to >$1,000,000 per site.

- NRC should continue to review Proposed License Amendments (PLAs) in accordance the each plant's current licensing basis.

V. Resolution Process

Begin outlining a process for generic resolution:

- NRC formally define the issue (technical aspects & licensing aspects)
- Relevant information should be made public so it can be used.
- NEI coordinate Industry response to address NRC issue.
- Achieve NRC/Industry consensus on process issues via the NEI/NRC interface.
- Achieve NRC/Industry consensus on technical issues via the normal ISA standards process.
- Achieve NRC/Industry consensus on licensing issues via the normal ITS Tech Spec Task Force (TSTF) Traveler process.
- NRC should continue to review Proposed License Amendments (PLAs) in accordance the each plant's current licensing basis.

VI. Meeting Summary

NRC and NEI summarize the results of today's meeting:

- List any follow-up items.
- Establish responsibilities and schedule for follow-up items.
- Include this issue as an agenda item at the next NRC/NEI senior management meeting.
- Schedule the next NRC/NEI meeting on this issue.