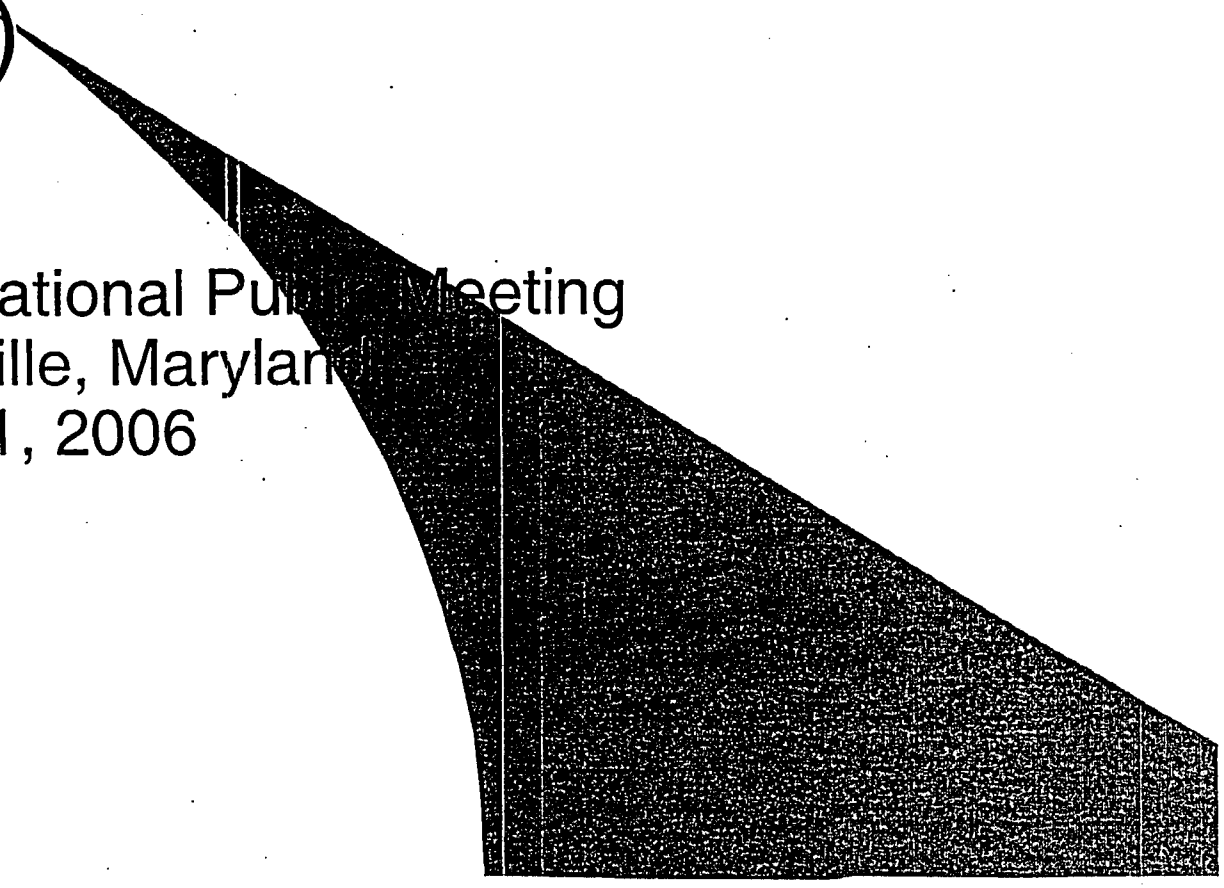
Limiting Safety System Settings During Periodic Testing and Calibration of Instrument Channels (RIS 2006-xx)

Informational Pu[illegible]Meeting
Rockville, Maryla[illegible]
July 11, 2006



Presenters

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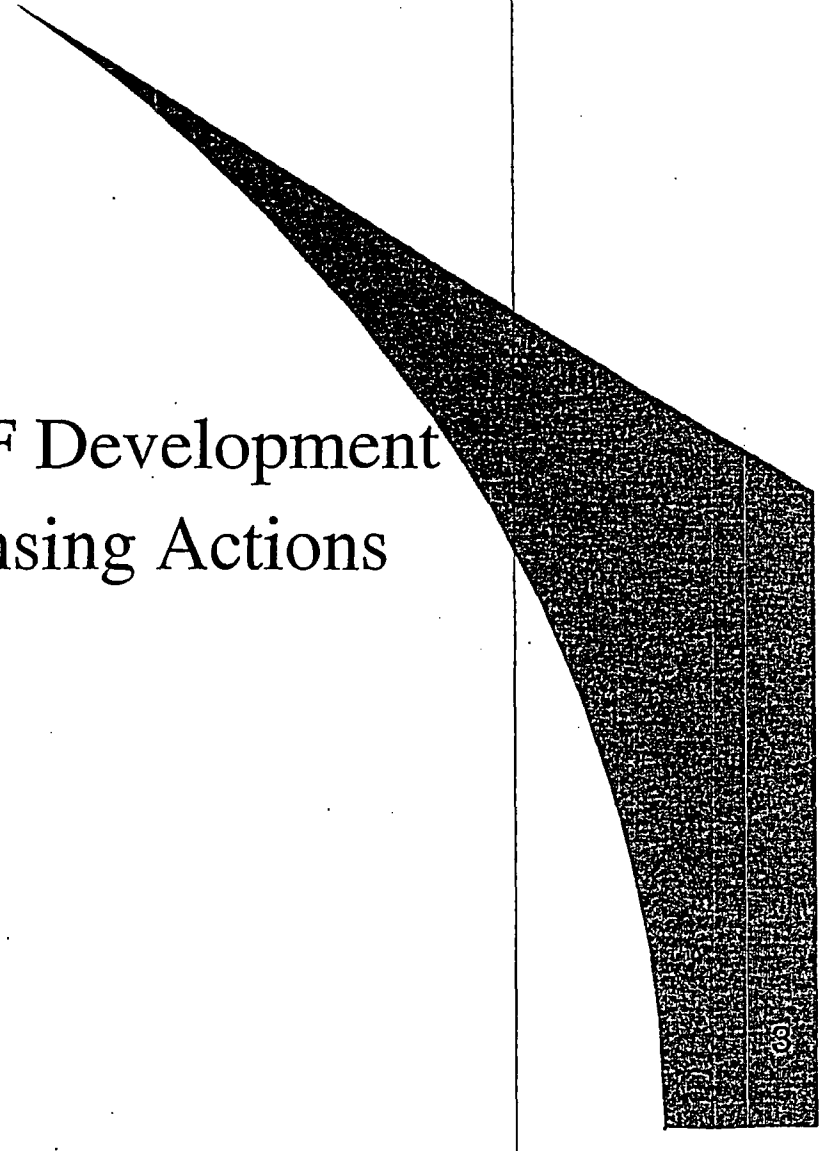
Agenda

- Background
  - 50.36 Requirements
  - Chronology
  - Technical Solutions/TSTF Development
  - Technical Solutions/Licensing Actions
- Purpose of the RIS
- RIS Perspectives
- Going Forward



50.36 Requirements

- Tech Specs will include *"Safety limits, limiting safety system settings, and limiting control settings"*

- 10 CFR 50.36(c)(1)(ii)(A)
  - Automatic protective devices must protect safety limits (Reset to LSP)
  - Must function as required

    (Tech Spec Operability)
  - Scope for Tech Specs is settings that protect SLs (Fuel barrier & RCPB barrier)

Chronology

Identification of the Method 3 Issue

- November 2002
  - NRC staff RAI concern that use of Method 3 of ISA Standard 67.04, Part II could result in non-conservative values for TS (during R. E. Ginna licensing action)

Addressed as a Generic Issue

- Summer 2003
  - Expressed concerns at ISA meetings June 16 & Aug 13
- October 2003 Meeting with NEI
  - Reiterated AV3 concerns
  - LSSS issue is separate from AV3
- Dec 2003
  - NEI letter to NRC technical white paper documenting industry position (LSP protects SL)
- June 2004
  - NRC staff determines that margins may not be sufficient
  - M3 should not be used to calculate AV, where AV is used as LSSS
- July 2004 meeting
  - Discuss staff problem statement; plants with M3 are safe
  - Challenge is what constitutes compliance with definition of LSSS. Must be reconciled with STS

Technical Solutions/TSTF Development

- March 31, 2005 NRC staff letter to NEI
  - Agree with strategy to develop TSTF TS change
  - Disagree with NEI request to withdraw plant-specific RAIs
  - Interim solution for plant-specific reviews
- May 18, 2005 NEI-SMTF letter staff
  - Proposed 7 concepts for use in developing TSTF
- August 23, 2005 NRC staff letter to NEI
  - Responded to public mtg on 7 concepts and to related NEI letters
- September 7, 2005 letter to NEI-SMTF
  - Draft changes for implementing concepts
    - Basis for TSTF review and plant-specific reviews
    - Part A , Part B
- Scope of TSTF being worked
  - Agree on most SL LSSSs, but...
    - Need generic basis for scope
    - Non-SL LSSSs
  - TSTF 493, Revision 0 issued Jan/2006

Technical Solutions/Licensing Actions

- Licensing actions content showed that licensees did not agree on a generic basis for identifying SL LSSSs
- Varied approach resulted in resource intensive licensing action reviews
- Scope of TSTF-493, Rev 0 did not provide a list of functions that would resolve the issue for most plants
- A generic communication is needed to establish NRC staff perspectives to assist in establishing a generic basis for licensing actions and TSTF-493

Purpose of the RIS

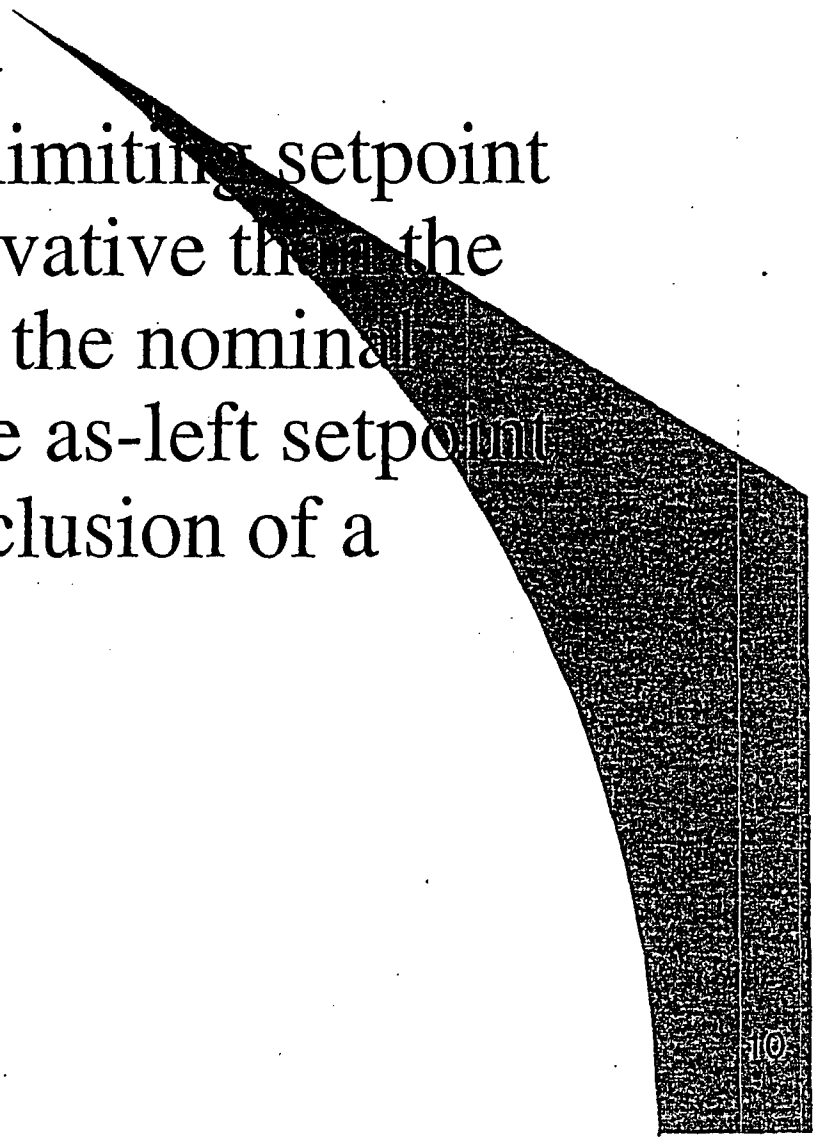
- This RIS discusses issues that could occur during testing of LSSSs and which, therefore, may have an adverse affect on equipment operability.
- This RIS also presents an approach, found acceptable to the NRC staff, for addressing these issues for use in licensing actions that require prior NRC staff approval.
- Methods and approaches different from those in this RIS may also be acceptable to the NRC staff.

RIS Seeks to Clarify NRC Staff Perspectives.....

- Limiting trip setpoint is the LSSS required by regulations for automatic protective devices related to SL
- Regulations also require LSSSs for automatic protective devices related to SLs
- Reactor core SLs and Reactor coolant system pressure SLs that (1) initiate a reactor trip; or (2) actuate safety systems. As such these variables provide protection against violating reactor core safety limits, or reactor coolant system pressure safety limits.
- Setting tolerances

Setting Tolerance

It is the band around the limiting setpoint or any value more conservative than the limiting setpoint, such as the nominal setpoint, within which the as-left setpoint must be found at the conclusion of a channel test



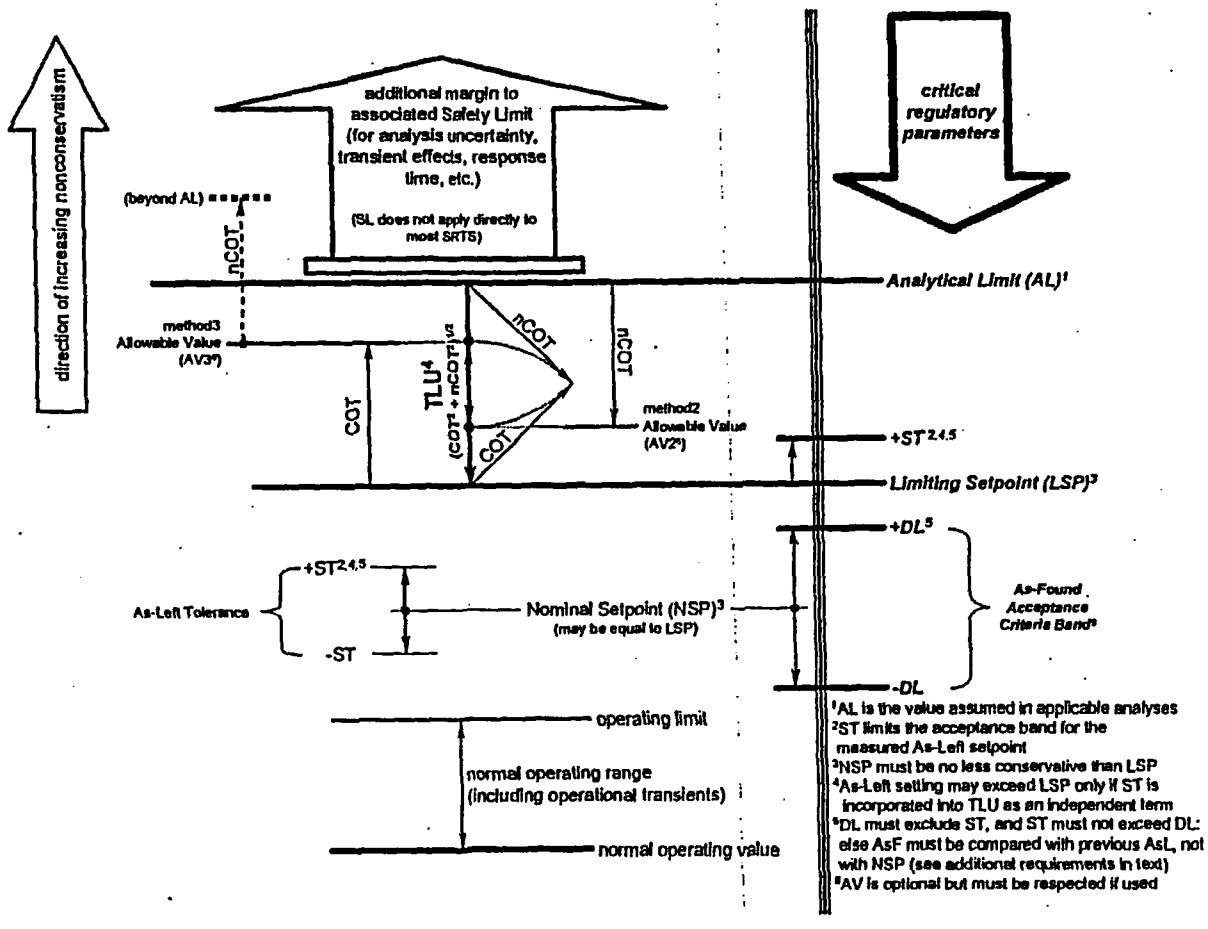
Using Nominal Setpoints for Determining the Acceptability of a Channel Test

- Setting tolerance must be less than or equal to square root of the sum of the squares of reference accuracy, MT&E and readability accuracy
- Deviation limit (acceptable as-found criteria band) should not include setting tolerance, but could include all uncertainties expected for the test
- Total loop uncertainties should include setting tolerance

Operability Determination

- As-Found value within As-Left ST; Instrument is operable, no reset required
- As-Found value > As-Left ST and ≤ DL; Instrument is operable, reset is required
- As-Found value > DL and ≤ AV; Instrument is degraded. An immediate operability determination must be made and corrective action program (or equivalent) would apply
- As-Found Value is > AV; Instrument is inoperable

Setpoint Methods Terminology



Going Forward

- Industry TSTF-493 Revision 1
  - Summer/Fall 2006
- Staff SE/CLIIP
  - Spring `07
  - Opportunity for public comment
- Generic Communication Being Drafted
  - RIS
  - Revision to RG 1.105
  - Industry revising ISA 67.04