

NRR-PMDAPEm Resource

From: Waters, Michael
Sent: Friday, December 04, 2015 11:13 AM
To: REMER, Jason
Cc: Lubinski, John; Doyle, Daniel
Subject: FYI - Draft Outline of staff's presentation at the 12/17 Commission Meeting on Digital I&C

Jason,

John Lubinski asked me to touch base with you today regarding staff's discussion at the pending Commission meeting on digital I&C on 12/17.

Given the relative short notice for this Commission meeting, we plan to soon share with the invited speakers at the meeting, an outline on the presentation that is being developed by NRC staff. We will send the outline to the speakers once they are all formally confirmed and the final agenda is set.

For NEI's awareness, below is a draft outline of our current presentation approach, based on the current meeting agenda (subject to change). The external panel speakers are not being requested by staff to address or respond to these specific topics in their presentation. This is just being provided for their overall awareness, as they develop their presentation on the topics requested in the invitations from the NRC Office of the Secretary.

Thanks,

Mike

Michael D. Waters

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Draft Outline of NRC staff presentation (*subject to change*)

Background of Digital I&C and Recent Lessons Learned

- *Unique Aspects of Digital I&C*
- *Digital technology challenges and guidance development (e.g., 80s & 90s)*
- *Digital I&C Steering Committee and ISGs (2007-2011)*
- *Recent Lessons learned for operating and new reactors*

Proposed Rule: Incorporation by Reference of the IEEE 603-2009 Standard

- Overview of the IEEE 603 standard and use in digital I&C licensing
- Changes from the 1991 to the 2009 edition of the standard
- Discussion of applicability & additional conditions in the proposed rule
- Potential impacts of proposed rule on operating plants and new reactors
- Stakeholder engagement and feedback on the proposed rule

Other Key Regulatory Initiatives

- **Draft NRC Digital Instrumentation and Control Action Plan.** Staff will discuss its draft digital I&C action plan. The plan addresses key policy review and guidance activities that staff is focused on in the near-term, based on industry feedback and staff experience. Staff will also note the upcoming interactions with the NEI digital I&C working group on these topics early next year.
- **Examination of NRC position on software common cause failure and relationship to IEEE 603-2009 rulemaking.** Staff will discuss its plan to examine NRC's policy on software common cause failure (CCF). Staff's position on this issue is derived significantly from Commission policy established in SRM-SECY-93-087. The staff has discussed this as a high priority activity at the most recent meeting with the NEI digital I&C working group. The current regulatory treatment and acceptance criteria for addressing the potential for software common cause failures in digital I&C systems have been problematic for licensees. Although staff has licensed digital systems using this criteria, the staff believes the assumptions in SECY-93-087 should be re-evaluated, in light of the changes in the technology and new considerations of graded safety approaches.
- **Review of draft NEI guidance for digital modifications under 10 CFR 50.59.** Staff will discuss its plans to review the anticipated guidance from NEI in implementing digital upgrades under 10 CFR 50.59. NEI is developing Appendix D to NEI 96-07 to provide specific guidelines for application of 10 CFR 50.59 to digital modifications. NRC has not yet seen this guidance. Current guidance for the 50.59 screening and evaluation of digital I&C systems has not been sufficient in ensuring licensees are consistently performing appropriate modifications under 50.59. NRC and industry agree that this is a high priority activity.
- **Enhancement of licensing process guidance in Digital I&C Interim Staff Guidance-06 and design specific review standards for new reactors.** Staff will discuss its plans to enhance the current licensing process under ISG-06 for operating reactor digital reviews - - based on experience from its pilot use in the Diablo Canyon license amendment review and industry feedback. Staff would also discuss its on-going efforts to develop design specific review standards for new reactors. Existing review guidance may not fully address the accompanying safety hazards that can result from highly-integrated I&C systems. Industry has expressed concerns regarding the level of technical detail needed in license applications, and the need for factory acceptance test reports as part of NRC's licensing decision. The staff discussed this as a high priority activity at the recent meeting with the NEI digital I&C working group meeting.
- **Examination of policy for reviewing cybersecurity design features during licensing** Staff will discuss its plans to examine options for reviewing cybersecurity design features as part of the license review process. The ACRS and a segment of industry have encouraged staff to consider this option. There are benefits to considering cyber security early in the design process in order to avoid un-secureable designs. Staff intends to provide a recommendation to the Commission in 2016. This activity has been underway, and discussed with industry in two public meetings.

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