

BTP 7-19 Update

Public Meeting Presentation

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January 31, 2019

Agenda

- Key Messages
- Direction of Update
- Areas for Improvement - Target Areas for Update
- Schedule/Public Meeting Interactions

Key Messages

- The goal is to improve usability for stakeholders by addressing identified areas for improvement
- The update will be informed by internal and external stakeholder input
- Industry participation in this process is essential
- Continual Improvement

Modernization Plans (MPs)

- Developed in accordance with Staff Requirements Memorandum (SRM) to SECY-16-0070
- MP#1 – Common Cause Failure
 - MP#1A: Supplement 1 to RIS 2002-22
 - MP#1D: Update to Branch Technical Position (BTP) 7-19
- MP#2 – 10 CFR 50.59 Guidance
- MP#3 – Commercial Grade Dedication
- MP#4A – ISG-06 Revision
- MP#4B – Broader Modernization Activities

Direction of Update to BTP 7-19 (MP#1D)

- Update will be consistent with SRM to SECY 93-087
- The update will also be consistent with SECY 18-0090 **(ML18179A066)**
 - Five guiding principles
 - Alignment with Supplement 1 to RIS 2002-22 **(ML18143B633)**
- Continuous improvement through tracking use of updated version
- Staff will support on-going activities along with industry similar to work done under MP1A

Identified Areas of Improvement for BTP 7-19

- Key sections of BTP 7-19 may be a barrier to its usability regarding D&IC modifications installed in plants based upon:
 - Feedback received during public meetings
 - Written feedback provided to NRC Staff
- Challenges of using the guidance of BTP 7-19 between existing reactor reviews versus new reactor reviews

Target Areas for BTP 7-19 Update

- Scope of Applicability
- Section 1.9
- Defense-In-Depth focus
- Usability of document in licensing reviews

Additional Considerations for Update Activities

- Alignment with other DI&C IAP activities
 - MP1A: RIS 2002-22 Supplement 1
 - MP2
 - MP4B
- Incorporation of risk insights

Previous Industry Feedback Received

- Below are examples of prior feedback provided by external stakeholders:
 - Meeting on August 22, 2016 – “Barriers to Implementation for Digital I&C Upgrades” **(ML16223A160)**
 - Meeting on September 14, 2016 – “Industry Recommended Areas for Improvement in BTP 7-19” **(ML16238A353)**
 - Industry Proposed Edits – September 2016 **(ML16238A353)**
 - Meeting on May 24th, 2018 – Industry Comments **(ML18122A134)**
- Staff will proceed with stakeholder feedback received to date if additional feedback is not provided during this update cycle

NRC Staff and Industry Interactions

- Industry participation is essential to ensure new revision addresses stakeholder concerns
- Key component to update is having an industry point-of-contact(s) (POCs)
- Two proposed public meetings with industry prior to finalizing of draft revision to BTP 7-19

Upcoming Proposed Milestones BTP 7-19 Revision

- Draft IAP schedule for MP1D Major Milestones
 - Public Meeting – January 31st 2019 – *Done*
 - Public Meeting – Discussion on BTP 7-19 – March 2019
 - Industry Workshop on Draft Revision – May 2019
 - Finalize Draft Revision – June 2019
- Industry feedback requested prior to March 2019 public meeting to inform draft development in a timely manner

Questions



SECY-18-0090 – Five Guiding Principles

1. Applicants and licensees for Production and Utilization Facilities under 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities” or under 10 CFR Part 52, “Licensees, Certifications and Approvals for Nuclear Power Plants” should continue to assess and address CCFs due to software for DI&C systems and components.
2. A defense-in-depth and diversity analysis for reactor trip systems and engineered safety features should continue to be performed to demonstrate that vulnerabilities to a CCF have been identified and adequately addressed. In performing this analysis, the vendor, applicant, or licensee should analyze each postulated CCF for each event evaluated in the accident analysis section of the safety analysis report. This defense-in-depth and diversity analysis can be either a best estimate analysis or a design-basis analysis.
3. This analyses should also be commensurate with the safety significance of the system. An analysis may not be necessary for some low-significance I&C systems whose failure would not adversely affect a safety function or place a plant in a condition that cannot be reasonably mitigated.

Five Guiding Principles continued

4. If a postulated CCF could disable a safety function, then a diverse means, with a documented basis that the diverse means is unlikely to be subject to the same CCF, should perform either the same function or a different function. The diverse or different function may be performed by either a safety or a non-safety system if the system is of sufficient quality to perform the necessary function under the associated event conditions in a reliable manner. Use of either automatic or manual actuation within an acceptable time frame is an acceptable means of diverse actuation. If the defense-in-depth and diversity analysis demonstrates that a CCF, when evaluated in the accident analysis section of the safety analysis report, can be reasonably mitigated through other means (such as with current systems), a diverse means that performs the same or a different function may not be needed.
5. The level of technical justification needed to demonstrate that defensive measures (i.e., prevention and mitigation measures) are adequate to address potential CCFs should be commensurate with the safety significance of the DI&C system. For the systems of higher safety significance, any defensive measures credited need technical justification that demonstrates that an effective alternative to internal diversity and testability has been implemented.