[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[NRC-2023-0181]

Proposed Revision to Standard Review Plan Branch Technical Position 7-19, Guidance for Evaluation of Defense In Depth and Diversity to Address Common-Cause Failure Due to Latent Design Defects in Digital Safety Systems

AGENCY: Nuclear Regulatory Commission.

ACTION: Standard review plan-draft branch technical position revision; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is soliciting public comment on draft NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," Branch Technical Position (BTP) 7-19, Revision 9, "Guidance for Evaluation of Defense In Depth and Diversity to Address Common-Cause Failure Due to Latent Design Defects in Digital Safety Systems." The NRC seeks comments on the proposed draft BTP 7-19 revision of the Standard Review Plan (SRP) that provides the NRC staff with guidance for evaluating an applicant's assessment of the adequacy of defense in depth and diversity (D3) for a proposed digital instrumentation and control (DI&C) system.

DATES: Submit comments by **[INSERT 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER)*]**. Comments received after this date will be considered, if it is practical to do so, but the Commission is able to ensure consideration only for comments received on or before this date.

ADDRESSES: You may submit comments by any of the following methods; however, the NRC encourages electronic comment submission through the **Federal rulemaking website**:

- **Federal rulemaking website:** Go to https://www.regulations.gov and search for Docket ID **NRC-2023-0181**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; email: Stacy.Schumann@nrc.gov. For

technical questions, contact the individuals listed in the “For Further Information Contact” section of this document.

- **Mail comments to:** Office of Administration, Mail Stop: TWFN-7-A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Program Management, Announcements and Editing Staff.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the SUPPLEMENTARY INFORMATION section of this document.

FOR FURTHER INFORMATION CONTACT: Ekaterina Lenning, Office of Nuclear Reactor Regulation, telephone: 301-415-3151, email: Ekaterina.Lenning@nrc.gov, Brent Ballard, Office of Nuclear Reactor Regulation, telephone: 301-415-0680, email: Brent.Ballard@nrc.gov, and Carla Roque-Cruz, Office of Nuclear Reactor Regulation, telephone: 301-415-1455, email: Carla.Roque-Cruz@nrc.gov. All are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID **NRC-2023-0181** when contacting the NRC about the availability of information for this action. You may obtain publicly available information related to this action by any of the following methods:

- **Federal Rulemaking Website:** Go to https://www.regulations.gov and search for Docket ID **NRC-2023-0181**.

- **NRC’s Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly available documents online in the ADAMS Public Documents collection at https://www.nrc.gov/reading-rm/adams.html. To begin the search, select “Begin Web-based ADAMS Search.” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff at 1-800-397-4209, at 301-415-4737, or by email to PDR.Resource@nrc.gov. The draft BTP 7-19, Revision 9,

"Guidance for Evaluation of Defense In Depth and Diversity to Address Common-Cause Failure Due to Latent Design Defects in Digital Safety Systems" is available in ADAMS under Accession No. ML23222A237.

- **NRC's PDR:** The PDR, where you may examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

B. Submitting Comments

The NRC encourages electronic comment submission through the **Federal rulemaking website** (https://www.regulations.gov). Please include Docket ID **NRC-2023-0181** in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at https://www.regulations.gov as well as enter the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Discussion

The NRC seeks public comment on the draft BTP 7-19 Revision 9, "Guidance for Evaluation of Defense In Depth and Diversity to Address Common-Cause Failure Due to Latent Design Defects in Digital Safety Systems." This draft revision BTP 7-19, provides the NRC staff with guidance for evaluating an applicant's assessment of the adequacy of

D3 for a proposed DI&C system. The applicant performs this D3 assessment to identify and address potential common-cause failures (CCFs) in a proposed DI&C system and to evaluate the effects of any unprevented CCFs on plant safety.

The purpose of this proposed update is to implement the expanded policy in SRM-SECY-22-0076, “Expansion of Current Policy on Potential Common-Cause Failures in Digital Instrumentation and Control Systems,” (ADAMS Accession Nos. ML23145A181 and ML23145A182) for addressing DI&C CCFs. The proposed update provides guidance for the review of risk-informed D3 assessments, in addition to the existing guidance for assessments based on best-estimate methods. The proposed update also provides review guidance for design techniques or mitigating measures, other than diversity, to address the effects of a DI&C CCF.

Following NRC staff evaluation of public comments, the NRC intends to finalize BTP 7-19, Revision 9 in ADAMS and post it on the NRC’s public website at https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0800. The SRP is guidance for the NRC staff. The SRP is not a substitute for the NRC regulations, and compliance with the SRP is not required.

III. Backfitting, Forward Fitting, and Issue Finality

The guidance in this draft SRP is updated to implement the Commission’s policies in SRM-SECY-22-0076 for review of applicant assessments of defense in depth and diversity to prevent or mitigate common-cause failure of digital instrumentation and control systems used in light-water nuclear power reactors. Issuance of this draft SRP, if finalized, would not constitute backfitting as defined in section 50.109 of title 10 of the *Code of Federal Regulations* (10 CFR), “Backfitting” (the Backfit Rule), and as described in NRC Management Directive (MD) 8.4, “Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests”; would not affect the issue finality of an approval under 10 CFR part 52; and would not constitute forward fitting as that term is defined and described in MD 8.4. The NRC staff’s position is based upon the following considerations.

1. The draft SRP positions, if finalized, would not constitute backfitting or forward fitting or affect issue finality, inasmuch as the SRP would be internal guidance to the NRC staff.

The SRP provides guidance to the NRC staff on how to review an application for NRC regulatory approval in the form of licensing. Changes in internal staff guidance, without further NRC action, are not matters that meet the definition of backfitting or forward fitting or affect the issue finality of a 10 CFR part 52 approval.

2. Current or future applicants are not—with limited exceptions not applicable here—within the scope of the backfitting and issue finality regulations and forward fitting policy.

Applicants are not, with certain exceptions, within the scope of the Backfit Rule or any issue finality provisions under 10 CFR part 52. The backfitting and issue finality regulations include language delineating when those provisions begin; in general, they begin after the issuance of a license, permit, or other approval. Furthermore, neither the Backfit Rule nor the issue finality provisions under 10 CFR part 52—with certain exclusions discussed further in this notice—were intended to apply to NRC actions that substantially change the expectations of current and future applicants.

The exceptions to the general principle are applicable when an applicant references a 10 CFR part 52 license (e.g., an early site permit) and/or NRC regulatory approval (e.g., a design certification rule) with specified issue finality provisions or a construction permit under 10 CFR part 50. The NRC staff does not, at this time, intend to impose the positions represented in the draft SRP (if finalized) in a manner that would constitute backfitting or affect the issue finality of a 10 CFR part 52 approval. If, in the future, the staff seeks to impose a position in the draft SRP (if finalized) in a manner that constitutes backfitting or affects the issue finality of a 10 CFR part 52 approval, then the staff would need to address the Backfit Rule, or the criteria described in the applicable issue finality provision.

The Commission's forward fitting policy generally does not apply when an applicant files an initial licensing action for a new facility. Nevertheless, the NRC staff does not, at this time, intend to impose the positions represented in the draft SRP (if finalized) in a manner that would constitute forward fitting. If, in the future, the staff seeks to impose a position in the draft SRP (if finalized) in a manner that constitutes forward fitting, then the staff would need to address the forward fitting criteria in MD 8.4.

Dated: October 19, 2023.

For the Nuclear Regulatory Commission.

Gerond A. George,
Chief, Licensing Project Branch,
Division of Operating Reactors,
Office of Nuclear Reactor Regulation.

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