



NUCLEAR REGULATORY COMMISSION

10 CFR Chapter 1

[NRC-2018-0044]

Clarification on Endorsement of Nuclear Energy Institute Guidance in Designing Digital Upgrades in Instrumentation and Control Systems

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft regulatory issue summary; request for comment and public meeting.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is seeking public comment on the draft Regulatory Issue Summary (RIS) 2002-22, Supplement 1, “Clarification on Endorsement of Nuclear Energy Institute Guidance in Designing Digital Upgrades in Instrumentation and Control Systems.” This RIS Supplement clarifies the guidance in RIS 2002-22, which remains in effect. The NRC continues to endorse Nuclear Energy Institute 01-01 (NEI-01-01) as stated in RIS 2002-22, as clarified by the RIS Supplement.

DATES: Submit comments by **[INSERT DATE 15 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 before this date.

ADDRESSES: You may submit comments by any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2018-0044**. Address questions about NRC dockets to Jennifer Borges; telephone: 301-287-9127; e-mail: Jennifer.Borges@nrc.gov. For

technical questions, contact the individuals listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- **Mail comments to:** May Ma, Office of Administration, Mail Stop: TWFN-7-A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

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: Tekia Govan, Office of Nuclear Reactor Regulation (NRR), telephone: 301-415-6197, e-mail: Tekia.Govan@nrc.gov 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-2018-0044** 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 Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2018-0044**.

- **NRC’s Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select “[ADAMS Public Documents](#)” and then 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, 301-415-4737, or by e-mail to

pdresource@nrc.gov. The draft RIS is available in ADAMS under Accession No.

ML18051A084.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

B. Submitting Comments

Please include Docket ID **NRC-2018-0044** 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 <http://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. Background

The RIS is intended for all holders of and applicants for power reactor operating licenses or construction permits under 10 CFR part 50, "Domestic Licensing of Production and Utilization Facilities," all holders of, and applicants for, a power reactor combined license, standard design approval, or manufacturing license, and all applicants for a standard design certification, under 10 CFR part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," and all holders of, and applicants for, a

construction permit or an operating license for non-power production or utilization facilities under 10 CFR part 50, including all existing non-power reactors and proposed facilities for the production of medical radioisotopes, such as molybdenum-99, except those that have permanently ceased operations and have returned all of their fuel to the U.S. Department of Energy.

In 2002, the NRC staff issued RIS 2002-22 to notify addressees that the NRC staff had reviewed NEI-01-01 and was endorsing the report for use as guidance in designing and implementing digital upgrades to nuclear power plant instrumentation and control systems. Following the NRC staff's 2002 endorsement of NEI 01-01, holders of operating licenses have used this guidance in support of digital design modifications implemented without prior NRC approval in accordance with 10 CFR 50.59. The NRC inspections of documentation for these activities uncovered inconsistencies in the performance and documentation of engineering evaluations and associated technical bases for determinations on the 10 CFR 50.59(c)(2) evaluation criteria. This RIS Supplement clarifies the RIS 2002-22 endorsement of the NEI 01-01 guidance by providing additional guidance for developing and documenting "qualitative assessments" that are used to provide an adequate basis for a licensee's determination that a digital modification will exhibit a low likelihood of failure to support a conclusion when applying 10 CFR 50.59 that a license amendment is not needed.

The NRC published a notice of opportunity for public comment on this RIS in the *Federal Register* on July 3, 2017 (82 FR 30913). Following that notice, the NRC staff engaged in multiple communications with the public and stakeholders and continued internal discussions about the RIS. As a result of these efforts, the NRC has substantially rewritten the RIS. Due to the extensive nature of these revisions, and in light of this additional opportunity for comment, the NRC is not directly responding to

each comment received in the previous comment period. All comments and other communications associated with the previous version of this RIS can be found in ADAMS under Accession No. ML18039A804.

Proposed Action

The NRC is requesting public comments on the draft RIS. To the extent that the NRC's revisions have not resolved a comment that was submitted in the previous comment period, the NRC asks that such comments be resubmitted for further consideration. Because of the extensive communication about this RIS, the NRC believes that stakeholders will be able to submit comments quickly. In addition, the NRC seeks to issue this RIS as expeditiously as possible to minimize misunderstandings about the NRC's requirements for digital I&C modifications under 10 CFR 50.59. Therefore, the NRC is publishing the draft RIS with a 15 day comment period. Requests for extension of the comment period may be submitted as described above in the **ADDRESSEES** section.

The NRC is also requesting specific comments on Figure 1 in the attachment of the draft RIS:

- Does Figure 1 clearly explain the engineering evaluation process (as described in Section 4 of the RIS attachment) to determine sufficient dependability, which may be used in performing and documenting a qualitative assessment (as described in Section 3 of the RIS attachment)?
- How could the figure and/or explanatory text in the draft RIS be modified to clarify the relationship between the engineering evaluation and qualitative assessment approaches described in the draft RIS?

The NRC plans to hold a public meeting to discuss this RIS and the issues associated with clarification of the applicability of the endorsed NEI 01-01 guidance. All comments that are to receive consideration in the final RIS must still be submitted electronically or in writing as indicated in the **ADDRESSES** section of this document. Additional details regarding the meeting will be posted at least 10 days prior to the public meeting on the NRC's Public Meeting Schedule Web site at <http://www.nrc.gov/public-involve/public-meetings/index.cfm>. The NRC staff will make a final determination regarding issuance of the RIS after it considers any public comments received in response to this request.

Dated at Rockville, Maryland, this day of March 7, 2018.

For the Nuclear Regulatory Commission.

Tekia Govan,
*Project Manager,
ROP Support and Generic Communication Branch,
Division of Inspection and Regional Support,
Office of Nuclear Reactor Regulation.*

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