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December 9, 2021

Ms. Michelle Gonzalez
Office of Research
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Industry Comments on Trial Use Regulatory Guide 1.247, "Acceptability of Probabilistic Risk Assessment Results for Advanced Non-Light Water Reactor Risk-Informed Activities"

Project Number: 689

Dear Ms. Michelle Gonzalez:

The Nuclear Energy Institute (NEI)¹, on behalf of its members, submits the following comments on Trial Use Regulatory Guide 1.247, "Acceptability of Probabilistic Risk Assessment Results for Advanced Non-Light Water Reactor Risk-Informed Activities." We appreciate the opportunity to comment on this regulatory guide during the trial use period.

NEI appreciates the endorsement of NEI 20-09, Revision 1, "Performance of PRA Peer Reviews Using the ASME/ANS Advanced Non-LWR PRA Standard," without exception in this trial use regulatory guide, as this greatly streamlines the use of this document by end users. This endorsement is the result of consistent communication and work between the NRC and other stakeholders.

In our review of this trial use regulatory guide, we noted a large number of exceptions and clarifications to ANSI/ASME/ANS RA-S-1.4-2021, "Probabilistic Risk Assessment Standard for Advanced Non-Light Water Reactor Nuclear Power Plants." In several cases, these exceptions and clarifications are problematic, as they create inconsistencies with the current state of the practice, or are not appropriate for inclusion in the supporting requirements of the standard. Detailed comments regarding the exceptions and clarifications that should be removed or revised are included in the attachment to this letter.

¹ The Nuclear Energy Institute (NEI) is responsible for establishing unified policy on behalf of its members relating to matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect and engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations involved in the nuclear energy industry.

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We encourage NRC to consider and address all stakeholder comments during the trial use period for this regulatory guide. Please contact me at vka@nei.org or (202) 739-8101 with any questions about the content of this letter or the attached comments.

Sincerely,

A handwritten signature in dark ink, appearing to read "Victoria K. Anderson".

Victoria K. Anderson

Attachment

c: Mr. Anders Gilbertson, RES
NRC Document Control Desk

Detailed Comments on Trial Use RG 1.247

1. The regulatory guide includes several clarifications on nonmandatory appendices and notes (e.g. Nonmandatory Appendix S, HS, and XF). As only the requirements of the standard are endorsed, only requirements should be clarified in the regulatory guidance. All clarifications on notes and non-mandatory appendices should be removed.
2. Exceptions that add expectations for feasibility studies in Human Reliability supporting requirements (e.g., HR-G1) are not appropriate and are redundant to existing requirements. This is inherently part of the Human Reliability Analysis (HRA), and such expectations are too descriptive for supporting requirements in a standard.
3. The exceptions that added an expectation of consideration of acts of commission (e.g., HLR-HR-E) are not consistent with current state of practice, as there are no robust consensus approaches to modeling such considerations. These exceptions should be deleted.
4. Addition of references to Regulatory Guides and NUREGs in the supporting requirements is not appropriate, as the standard cannot be updated to address potential changes to these referenced documents. Some of the NRC staff exceptions (e.g. HR-D4) add this. These references should be removed.
5. In the exception to RCME-A3, the end user is directed to use “EPA or industry guidance” instead of “regional guidance” for weather data. As applicable guidance will vary depending on where the standard is used, the best available information should be used. This exception should be removed.
6. The exception for POS A-1 states that “all stages of licensing process should address low power and shutdown types of evolutions.” This exception should be removed, as this is not necessarily appropriate at all stages of PRA. Additionally, such expectations belong in licensing regulatory guidance, not in supporting requirements of a standard.
7. The exception to SFR-C1 added an expectation that seismic hazard analysis applicability be proven. No additional discussion should be necessary, as this is innate to the analysis process, and this exception should be removed.
8. The regulatory guide includes added text on absolute vs. relative risk significance, however, this portion (RI-N-1) is nonmandatory and should not be part of the regulatory guide. This text should be removed.
9. The NRC declined to endorse supporting requirements that address reporting thresholds (e.g. RI-N-3), however, this is an important aspect of PRA in any licensing process. Non-endorsement of these supporting requirements is inappropriate given their importance in assessing relative consequence, and RG 1.247 should be revised to endorse these supporting requirements.
10. The clarification added to CC-E1 calls for documentation of evaluation of all previous risk informed decisions during a PRA update. This kind of expectation is not appropriate for a standard, and is better suited for application-specific regulatory guidance. This clarification should be removed.