



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001**

November 23, 2020

Ms. Margaret M. Doane
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

**SUBJECT: REVISION 3 TO REGULATORY GUIDE 1.200, "ACCEPTABILITY OF
PROBABILISTIC RISK ASSESSMENT RESULTS FOR RISK-INFORMED
ACTIVITIES"**

Dear Ms. Doane:

During the 680th meeting of the Advisory Committee on Reactor Safeguards, November 4-6, 2020, we met with the NRC staff and industry representatives to complete our review of draft Revision 3 to Regulatory Guide (RG) 1.200, "Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities." Our Reliability and Probabilistic Risk Assessment (PRA) Subcommittee also reviewed this update on February 5, 2020. During these meetings, we had the benefit of discussions with the staff and industry representatives. We also had the benefit of the referenced documents.

RECOMMENDATION

Revision 3 to RG 1.200 should be issued.

BACKGROUND

RG 1.200 describes an approach for determining the acceptability of a PRA to be used for regulatory decisionmaking. It endorses, with qualifications and clarifications, the American Society of Mechanical Engineers (ASME)/American Nuclear Society (ANS) consensus PRA standard and the Nuclear Energy Institute (NEI) peer review process. RG 1.200 is intended to reduce the need for the NRC staff to perform an in-depth review of the base PRA that is used to support an application.

We reviewed the original version of RG 1.200 and provided a report to the Commission, dated September 22, 2003, recommending that it be issued for trial use. Subsequently, we reviewed and recommended issuing Revision 1 to RG 1.200 in our October 23, 2006, report, and Revision 2 to RG 1.200 in our April 9, 2009, report.

In the past few years, the staff has been interacting with the industry on the pertinent issues, resulting in industry-developed guidance on the requirements and the use of peer review for newly developed methods. This update of RG 1.200 is mainly to endorse the technical contents found in these new guidance documents. This revision also endorses a new case for seismic PRA standard, ASME/ANS RA-S Case 1, "Case for ASME/ANS RASb-2013 Standard for

Level 1/Large Early Release Frequency Probabilistic Risk Assessment of Nuclear Power Plant Applications.” Additionally, the staff made other organizational and conforming changes and editorial clarifications, such as changing the title of the RG as the outcome of a differing professional opinion submittal on the use of PRA-related terms.

DISCUSSION

Revision 3 to RG 1.200 is an important step in closing the gap associated with resolution of the acceptability of new methods or models. It should enable more efficiency in the review of risk-informed regulatory initiatives. As part of this resolution, this revision endorses the technical contents found in NEI 17-07, “Performance of PRA Peer Reviews Using the ASME/ANS PRA Standard,” and PWROG-19027-NP, “Newly Developed Method Requirements and Peer Review,” on the requirement and the use of peer review for newly developed methods. The RG also endorses a third document, ASME/ANS RA-S Case 1, for seismic PRA. In addition, this revision provides numerous enhancements and clarifications to guidance.

We agree that Revision 3 to RG 1.200 fully meets its intended goals and objectives and have no further comments. The document should be issued.

We understand that the staff plans to further revise RG 1.200 to expand the scope to advanced light water reactors. We look forward to working with the staff as they continue to revise this guidance.

We are not requesting a formal response from the staff to this letter report.

Sincerely,

Matthew W. Sunseri
Chairman

REFERENCES

1. U.S. Nuclear Regulatory Commission, Draft Regulatory Guide DG-1362, Proposed Revision 3 to Regulatory Guide 1.200, “An Approach for Determining the Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities,” January 10, 2020 (ML20010D223).
2. U.S. Nuclear Regulatory Commission, Draft Regulatory Guide 1.200, Revision 3, “Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities,” November 2, 2020 (ML20307A046).
3. Nuclear Energy Institute, NEI 17-07, Revision 2, “Performance of PRA Peer Reviews Using the ASME/ANS PRA Standard,” August 2019 (ML19241A615).
4. Pressurized Water Reactor Owners Group, PWROG-19027-NP, Revision 1, “Newly Developed Method Requirements and Peer Review,” December 2019 (ML20010F286).
5. Pressurized Water Reactor Owners Group, PWROG-19027-NP, Revision 2, “Newly Developed Method Requirements and Peer Review,” July 2020 (ML20213C660).

6. American Society for Mechanical Engineers and American Nuclear Society, ASME/ANS RA-S Case 1, "Case for ASME/ANS RASb-2013 Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment of Nuclear Power Plant Applications," November 22, 2017.
7. U.S. Nuclear Regulatory Commission, "U.S. Nuclear Regulatory Commission Acceptance of ASME/ANS RA-S Case 1," March 12, 2018 (ML18017A963).
8. U.S. Nuclear Regulatory Commission, "NRC Use of the Term PRA Acceptability and Implementation of the Decision on Differing Professional Opinion (DPO) DPO-2016-001," January 24, 2018 (ML18024A766).
9. Advisory Committee on Reactor Safeguards, "Draft Final Regulatory Guide x.xxx, 'An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities' (Formerly DG-1122)," September 22, 2003 (ML032681088).
10. Advisory Committee on Reactor Safeguards, "Draft Revision 1 to Regulatory Guide 1.200 (DG-1161), 'An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities,' and SRP Section 19.1, 'Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities'," October 23, 2006 (ML063030068).
11. Advisory Committee on Reactor Safeguards, "Draft Final Revision 2 to Regulatory Guide 1.200, 'An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities'," April 9, 2009 (ML090930396).

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