

## U.S. NUCLEAR REGULATORY COMMISSION

### Final Regulatory Guide: Issuance, Availability

The U.S. Nuclear Regulatory Commission (NRC) has issued a revision to an existing guide in the agency's Regulatory Guide Series. This series has been developed to describe and make available to the public such information as methods that are acceptable to the NRC staff for implementing specific parts of the NRC's regulations, techniques that the staff uses in evaluating specific problems or postulated accidents, and data that the staff needs in its review of applications for permits and licenses.

Revision 1 of Regulatory Guide 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," describes one acceptable approach for determining whether the quality of a probabilistic risk assessment (PRA), in total or the parts that are used to support an application, is sufficient to provide confidence in the results, such that the PRA can be used in regulatory decision-making for light-water reactors. Specifically, Revision 1 of Regulatory Guide 1.200 provides guidance in four areas:

- (1) a minimal set of requirements of a technically acceptable PRA
- (2) the NRC's position on PRA consensus standards and industry PRA program documents
- (3) demonstration that the PRA (in total or specific parts) used in regulatory applications is of sufficient technical adequacy
- (4) documentation to support a regulatory submittal

This guidance is intended to be consistent with the NRC's PRA Policy Statement, entitled "Use of Probabilistic Risk Assessment Methods in Nuclear Activities: Final Policy Statement," which the NRC published in the Federal Register on August 16, 1995 (60 FR 42622) to encourage use of PRA in all regulatory matters. That Policy Statement states that "...the use of PRA technology should be increased to the extent supported by the state-of-the-art in PRA methods and data and in a manner that complements the NRC's deterministic approach."

Since that time, many uses have been implemented or undertaken, including modification of the NRC's reactor safety inspection program and initiation of work to modify reactor safety regulations. Consequently, confidence in the information derived from a PRA is an important issue, in that the accuracy of the technical content must be sufficient to justify the specific results and insights that are used to support the decision under consideration.

Revision 1 of Regulatory Guide 1.200 is also intended to be consistent with the more detailed guidance in Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," which the NRC issued in November 2002. In addition, Revision 1 of Regulatory Guide 1.200 is intended to reflect and endorse (with certain objections) the following guidance provided by the American Society of Mechanical Engineers (ASME) and the Nuclear Energy Institute (NEI):

- ASME RA-S-2002, "Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications," dated April 5, 2002
- ASME RA-Sa-2003, "Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications," Addendum A to ASME RA-S-2002, dated December 5, 2003
- ASME RA-Sb-2005, "Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications," Addendum B to ASME RA-S-2002, dated December 30, 2005
- NEI-00-02, "Probabilistic Risk Assessment Peer Review Process Guidance," Revision A3, dated March 20, 2000, with its supplemental guidance on industry self-assessment, dated August 16, 2002, Revision 1, dated May 19, 2006, and an update to Revision 1 dated November 15, 2006
- NEI-05-04, "Process for Performing Follow-on PRA Peer Reviews Using the ASME PRA Standard," dated January 2005

When used in support of an application, this regulatory guide will obviate the need for an in-depth review of the base PRA by NRC reviewers, allowing them to focus their review on key assumptions and areas identified by peer reviewers as being of concern and relevant

to the application. Consequently, this guide will provide for a more focused and consistent review process. In this regulatory guide, as in Regulatory Guide 1.174, the quality of a PRA analysis used to support an application is measured in terms of its appropriateness with respect to scope, level of detail, and technical acceptability.

This regulatory guide was issued for trial use in February of 2004, and five trial applications were conducted. The staff subsequently revised Regulatory Guide 1.200 to incorporate the lessons learned from those pilot applications. The NRC solicited public comment on this guidance by publishing a Federal Register notice (71 FR 54530) concerning Draft Regulatory Guide DG-1161. The public comment period closed on October 14, 2006, and the staff has considered and appropriately addressed all comments received. The staff's responses to all comments received are available in the NRC's Agencywide Documents Access and Management System (ADAMS) at <http://www.nrc.gov/reading-rm/adams.html>, under Accession #ML070040474.

The NRC staff encourages and welcomes comments and suggestions in connection with improvements to published regulatory guides, as well as items for inclusion in regulatory guides that are currently being developed. You may submit comments by any of the following methods.

Mail comments to: Rules and Directives Branch, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Hand-deliver comments to: Rules and Directives Branch, Office of Administration, U.S. Nuclear Regulatory Commission, 11555 Rockville Pike, Rockville, Maryland 20852, between 7:30 a.m. and 4:15 p.m. on Federal workdays.

Fax comments to: Rules and Directives Branch, Office of Administration, U.S. Nuclear Regulatory Commission at (301) 415-5144.

Requests for technical information about Regulatory Guide 1.200 may be directed to Ms. Mary T. Drouin, at (301) 415-6675 or [MXD@nrc.gov](mailto:MXD@nrc.gov).

Regulatory guides are available for inspection or downloading through the NRC's public Web site in the Regulatory Guides document collection of the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/doc-collections/>. Regulatory Guide 1.200 is also available for inspection or downloading through the NRC's Agencywide Documents Access and Management System (ADAMS) at <http://www.nrc.gov/reading-rm/adams.html>, under Accession #ML070240001.

In addition, Revision 1 of Regulatory Guide 1.200 and other related publicly available documents, including public comments received, can be viewed electronically on computers in the NRC's Public Document Room (PDR), which is located at 11555 Rockville Pike, Rockville, Maryland. The PDR reproduction contractor will make copies of documents for a fee. The PDR's mailing address is USNRC PDR, Washington, DC 20555-0001. The PDR can also be reached by telephone at (301) 415-4737 or (800) 397-4205, by fax at (301) 415-3548, and by email to [PDR@nrc.gov](mailto:PDR@nrc.gov).

Please note that the NRC does not intend to distribute printed copies of Revision 1 of Regulatory Guide 1.200, unless specifically requested on an individual basis with adequate justification. Such requests for single copies (which may be reproduced) should be made in writing to the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Reproduction and Distribution Services Section; by email to [DISTRIBUTION@nrc.gov](mailto:DISTRIBUTION@nrc.gov); or by fax to (301) 415-2289. Telephone requests cannot be accommodated.

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(5 U.S.C. 552(a))

Dated at Rockville, Maryland, this 26<sup>th</sup> day of January, 2007.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION,

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Brian W. Sheron, Deputy Director  
Office of Nuclear Regulatory Research