

## U.S. NUCLEAR REGULATORY COMMISSION

### Draft Regulatory Guide and Associated Standard Review Plan: Issuance, Availability

The U.S. Nuclear Regulatory Commission (NRC) has issued for public comment a draft proposed revision of 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 agency'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.

This draft Revision 1 of Regulatory Guide 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," is temporarily identified as Draft Regulatory Guide DG-1161, which should be mentioned in all related correspondence. Like its predecessors, this proposed revision 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, Draft Regulatory Guide DG-1161 provides guidance in four areas:

- (1) a minimal set of functional 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.

Draft Regulatory Guide DG-1161 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, Draft Regulatory Guide DG-1161 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, and Revision 1, dated May 19, 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 RG 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. This revision incorporates lessons learned from those pilot applications. In addition, the appendices to this regulatory guide have been revised to address the changes made in the professional society PRA standards and industry PRA guidance documents.

To accompany Draft Regulatory Guide DG-1161, the NRC is issuing proposed Revision 2 of Section 19.1, "Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants" (SRP). This SRP complements Draft Regulatory Guide DG-1161, in that the NRC staff will use its guidance to ensure more focused and consistent review of PRAs as a basis for regulatory decision-making for light-water reactors.

The NRC intends to update Regulatory Guide 1.200 and its associated SRP Section 19.1, and to develop an additional appendix or revise an existing appendix (as required), to set forth the staff's position when a new or revised PRA standard or industry program is published.

The NRC staff is soliciting comments on Draft Regulatory Guide DG-1161, as well as draft Revision 2 of SRP Section 19.1. Please mention the relevant document identifiers (DG-1161 and/or SRP 19.1) in the subject line of your comments; comments may be accompanied by relevant information or supporting data. Comments submitted in writing or in electronic form

will be made available to the public in their entirety through the NRC's Agencywide Documents Access and Management System (ADAMS). Personal information will not be removed from your comments. 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.

Email comments to: [NRCREP@nrc.gov](mailto:NRCREP@nrc.gov). You may also submit comments via the NRC's rulemaking Web site at <http://ruleforum.llnl.gov>. Address questions about our rulemaking Web site to Carol A. Gallagher (301) 415-5905; email [CAG@nrc.gov](mailto:CAG@nrc.gov).

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 Draft Regulatory Guide DG-1161 and/or draft Revision 2 of SRP Section 19.1 may be directed to Ms. Mary T. Drouin, at (301) 415-6675 or [MXD@nrc.gov](mailto:MXD@nrc.gov).

Comments would be most helpful if received by **October 14, 2006**. Comments received after that date will be considered if it is practical to do so, but the NRC is able to ensure consideration only for comments received on or before this date. Although a time limit is given, comments and suggestions in connection with items for inclusion in guides currently being developed or improvements in all published guides are encouraged at any time.

Electronic copies of Draft Regulatory Guide DG-1161 are available through the NRC's public Web site under Draft Regulatory Guides in the Regulatory Guides document collection of the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/doc-collections/>. Similarly, electronic copies of draft Revision 2 of SRP Section 19.1 are available at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/docs4comment.html>. Electronic copies of the two documents are also available in ADAMS at <http://www.nrc.gov/reading-rm/adams.html>, under Accession #ML062480134 and #ML062510220, respectively.

In addition, Draft Regulatory Guide DG-1161, draft Revision 2 of SRP Section 19.1, 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 either Draft Regulatory Guide DG-1161 or draft Revision 2 of SRP Section 19.1, unless specifically requested on an individual basis with adequate justification. Such requests for single copies of draft or final guides (which may be reproduced) or for placement on an automatic distribution list for single copies of future draft guides in specific divisions 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 8<sup>th</sup> day of September, 2006.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION,

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Office of Nuclear Regulatory Research