[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[NRC-2012-0110]

An Approach for Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft regulatory guide; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC or the Commission) is issuing for public comment four (4) draft regulatory guides (DGs), DG-1285, "An Approach for Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," (proposed Revision 3 of Regulatory Guide [RG] 1.174); DG-1286, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Inservice Testing," (proposed Revision 1 of RG 1.175); DG 1287, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications" (proposed Revision 2 of RG 1.177); and DG-1288, "An Approach for Plant-Specific Risk-Informed Decisionmaking for Inservice Inspection of Piping" (proposed Revision 2 of RG 1.178). These guides describe methods the NRC staff considers acceptable for plant-specific, risk-informed decisionmaking on specific licensee activities.

DATES: Submit comments by June 29, 2012. Comments received after this 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.

ADDRESSES: You may access information and comment submissions related to this document, which the NRC possesses and are publicly available, by searching on http://www.regulations.gov under Docket ID NRC-2012-0110. 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-2012-0110. Address questions about NRC dockets to Carol Gallagher; telephone: 301-492-3668; e-mail: Carol.Gallagher@nrc.gov.
- **Mail comments to**: Cindy Bladey, Chief, Rules, Announcements, and Directives Branch (RADB), Office of Administration, Mail Stop: TWB-05-B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.
- **Fax comments to**: RADB at 301-492-3446.

For additional directions on accessing information and submitting comments, see "Accessing Information and Submitting Comments" in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Robert Carpenter, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone: 301-251-7483 or e-mail: Robert.Carpenter@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Accessing Information and Submitting Comments

A. Accessing Information

Please refer to Docket ID NRC-2012-0110 when contacting the NRC about the availability of information regarding this document. You may access information related to this document, which the NRC possesses and is publicly available, by any of the following methods:

- **Federal Rulemaking Web Site**: Go to http://www.regulations.gov and search for Docket ID NRC-2012-0110.
- **NRC's Agencywide Documents Access and Management System (ADAMS)**: You may access publicly available documents online in the NRC Library 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 pdr.resource@nrc.gov. The DGs and their corresponding regulatory analysis are available electronically under the following ADAMS Accession Numbers: DG-1285 (ML12012A006 and ML12013A089), DG-1286 (ML12017A053 and ML12017A052), DG-1287 (ML12017A054 and ML12017A059), and DG-1288 (ML12017A076 and ML12017A077).
- **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.

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B. Submitting Comments

Please include Docket ID NRC-2012-0110 in the subject line of your comment submission, in order to ensure that the NRC is able to make your comment submission available to the public in this docket.

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 publically 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 submissions into ADAMS.

II. Further Information

The NRC is issuing for public comment 4 draft regulatory guides in the NRC's "Regulatory Guide" series. This series was 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.

These 4 draft regulatory guides are temporarily identified by their task numbers, DG-1285, DG-1286, DG-1287, and DG-1288. The focus of the revisions to these RGs addresses the Commission's Staff Requirements Memorandum (SRM) (SECY-11-0014, issued 3-15-2011), titled "Use of Containment Accident Pressure in Analyzing Emergency Core Cooling System and Containment Heat Removal System Pump Performance in Postulated Accidents" directing the staff to revise the discussion on defense-in-depth. Specifically, the SRM stated,

> Because the statements in Regulatory Guide 1.174 are subject to different interpretations, the staff should revise this guide using precise language to assure that the defense-in-depth philosophy is interpreted and implemented consistently. To the extent that other regulatory guidance refers to defense in depth, the relevant documents should be updated also, as appropriate.

In reviewing these RGs, it was observed that clarification could be added in several other places; for example:

- The use of the terms "PRA technical acceptability," "PRA technical adequacy," and "PRA quality" were not clear.
- References in the RGs, in places, have been either updated or are no longer in use.

Although the focus of this proposed revision is to revise the discussion on defense-in-depth, the NRC staff believes that the identified clarifications should be addressed. In DG-1285 (proposed Rev. 3 of RG 1.174) the terms on PRA technical acceptability, PRA technical adequacy, and PRA quality are revised to be consistent with RG 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities" and the references were updated. It is the intent of the staff, following the public review and comment period, to review all four RGs and identify administrative changes that will improve the consistency, quality, and usability of each guide. Stakeholders and the

public are requested to provide any input regarding areas in these DGs where clarification and improvements may be needed.

DG-1285, is proposed revision 3 of Regulatory Guide 1.174 dated May 2011, it provides guidance on an approach the NRC finds acceptable for analyzing issues associated with proposed changes to a plant's licensing basis and for assessing the impact of these changes on the risk associated with plant design and operation. One key element to this type of decisionmaking is an engineering analysis of the proposed change. As part of the engineering analysis, licensees evaluate the impact of the change on maintaining adequate defense-in-depth. This proposed revision incorporates additional language and specific examples of how maintaining defense-in-depth is achieved when licensees use risk-informed analysis of proposed changes to the plant's licensing basis.

DG-1286, is proposed revision 1 of Regulatory Guide 1.175 dated August 1998, it provides an approach to using risk-informed decisionmaking in developing inservice testing programs for nuclear power plants. This revision updates the defense-in-depth evaluation to be consistent with the proposed changes to Regulatory Position 2.1.1 in draft Regulatory Guide DG-1285, (above) which provides guidance on evaluating proposed changes to a plant's licensing basis, including changes to the inservice testing program.

DG-1287, is proposed revision 2 of Regulatory Guide 1.177 dated May 2011, it describes a method acceptable to the NRC for using probabilistic risk analysis to evaluate proposed changes to a plant's technical specifications. As in evaluating changes to a plant's licensing basis, a key element in evaluating changes to technical specifications is an engineering analysis of the proposed change. As part of the engineering analysis, licensees

evaluate the impact of the change on maintaining adequate defense-in-depth. This revision updates the defense-in-depth evaluation to be consistent with the proposed changes to Regulatory Position 2.1.1 in draft Regulatory Guide DG-1285, (above) which provides guidance on evaluating proposed changes to the plant's technical specifications.

DG-1288, is proposed revision 2 of Regulatory Guide 1.178 dated September 2003, it provides an approach to using risk-informed decisionmaking in developing inservice inspection programs for piping in nuclear power plants. This revision updates the defense-in-depth evaluation to be consistent with the proposed changes to Regulatory Position 2.1.1 in draft Regulatory Guide DG-1285, which provides guidance on evaluating proposed changes to a plant's licensing basis, including changes to the inservice inspection program for piping systems.

Dated at Rockville, Maryland, this 4th day of May, 2012.

For the Nuclear Regulatory Commission.

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