

## Regulatory Guide Periodic Review

Regulatory Guide Number: 1.174  
Revision number: 2

Title: **An Approach for Using Probabilistic Risk Assessment In Risk-Informed Decisions on Plant Specific Changes to The Licensing Basis.**

Office/division/branch: RES/DRA/PRB  
Technical Lead: Anders Gilbertson

Staff Action Decided: **Reviewed with issues identified for future consideration.**

**1. What are the known technical or regulatory issues with the current version of the Regulatory Guide (RG)?**

In SRM-SECY-11-0014, "Staff Requirements – SECY-11-0014 – Use of Containment Accident Pressure in Analyzing Emergency Core Cooling System and Containment Heat Removal System Pump Performance in Postulated Accidents," the staff were directed by the Commission to revise Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," using precise language to assure that the defense-in-depth philosophy is interpreted and implemented consistently, which includes similarly revising other regulatory guidance that refers to defense-in-depth, as appropriate.

Additionally, the following issues have been identified. The references in RG 1.174 should be updated to reflect, at a minimum, the publication of new revisions of RGs and withdrawal of any referenced RGs. The format of RG 1.174 should also be updated to conform to the latest acceptable format.

**2. What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of anticipated numbers of licensing and inspection activities over the next several years?**

If RG 1.174 is not updated with revised language regarding how the defense-in-depth philosophy should be better integrated into risk informed decision making, licensing reviews of related risk-informed applications may not appropriately balance defense-in-depth considerations with risk insights provided by PRAs.

**3. What is an estimate of the level of effort needed to address identified issues in terms of full-time equivalent (FTE) and contractor resources?**

Based on prior efforts related to the update of RG 1.174, the changes related to the defense-in-depth language are expected to require 4 to 5 staff-weeks of effort (about 0.2 FTE) once the Commission has provided its guidance on Risk Management Regulatory Framework (RMRF). Further, the changes in RG 1.174 are not anticipated to require contractor support as the work will be implemented by staff in the Office of Nuclear Regulatory Research and the Office of Nuclear Reactor Regulation.

4. **Based on the answers to the questions above, what is the staff action for this guide (Reviewed with no issues identified, Reviewed with issues identified for future consideration, Revise, or Withdraw)?**

Reviewed with issues identified for future consideration.

5. **Provide a conceptual plan and timeframe to address the issues identified during the review.**

The schedule for developing a draft guide for RG 1.174 is dependent on work currently being performed by the NRC's RMRF working group, as directed by the commission in SRM-SECY-13-0132. In this staff requirements memorandum (SRM), the RMRF working group was directed to develop a Commission Paper that, in part, preserves the insights contained in Enclosure 3 of SECY-13-0132, "Defense-in-Depth Observations and Detailed History," and includes a description of the interrelationships of several on-going activities, including the staff efforts to address the defense-in-depth direction in SRM-SECY-11-0014. As such, the schedule for updating RG 1.174 will be developed following the Commission's issuance of an SRM in response to the RMRF Commission Paper. It is currently estimated that the Commission SRM on the RMRF Commission Paper would be issued in the second quarter of Calendar Year 2016.

#### **References**

1. SRM-SECY-11-0014, "Staff Requirements – SECY-11-0014 – Use of Containment Accident Pressure in Analyzing Emergency Core Cooling System and Containment Heat Removal System Pump Performance in Postulated Accidents," U.S. Nuclear Regulatory Commission, March, 2011, ADAMS Accession No. ML110740254.
2. Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," U.S. Nuclear Regulatory Commission, May, 2011, ADAMS Accession No. ML100910006.
3. SRM-SECY-13-0132, "Staff Requirements – Secy-13-0132 – U.S. Nuclear Regulatory Commission Staff Recommendation for the Disposition of Recommendation 1 of the Near-Term Task Force Report," U.S. Nuclear Regulatory Commission, May, 2014, ADAMS Accession No. ML14139A104.
4. SECY-13-0132, "U.S. Nuclear Regulatory Commission Staff Recommendation for the Disposition of Recommendation 1 of the Near-Term Task Force Report," U.S. Nuclear Regulatory Commission, May, 2014, ADAMS Accession No. ML13277A418.

**NOTE: This review was conducted in April 2015 and reflects the staff's plans as of that date. These plans are tentative and are subject to change.**