

Regulatory Guide Periodic Review

Regulatory Guide Number: **1.178**
Revision number: **1**

Title: **An Approach for Plant-Specific Risk-Informed Decisionmaking for Inservice Inspection of Piping**

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. Section 2.1.2 of RG 1.178 contains guidance related to ensuring that a risk-informed change is consistent with the defense-in-depth philosophy. As such, RG 1.178 has been identified as regulatory guidance that will need revisions similar to RG 1.174 to ensure consistency with that guidance.

Additionally, the following issues have been identified. The references in RG 1.178 should be updated to reflect, at a minimum, the publication of new revisions of RGs, such as RG 1.174, Revision 2, and withdrawal of any referenced RGs, such as RG 1.176.

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 1.178 is not updated with revised language regarding ensuring consistency with the defense-in-depth philosophy, licensing reviews of related risk-informed applications may be treated inconsistently with previous licensing reviews. However, current NRC efforts to precisely define the agency’s defense-in-depth philosophy are expected to result in significant modifications to the guidance on defense-in-depth in RG 1.174, and related regulatory guidance documents. As such, failing to coordinate these revisions in RG 1.178 with the impending revisions RG 1.174 related to defense-in-depth is likely to result in significantly inconsistent licensing reviews.

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 1.178, the changes related to the defense-in-depth language are expected to require very little effort, i.e., a few days of effort, as it is anticipated that readers will simply be directed to the associated guidance in RG 1.174. Further, the changes in RG 1.178 would be implemented by staff in the Office of Nuclear Regulatory Research and no contractor support is anticipated.

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 staff plans to develop a draft guide of RG 1.178 in conjunction with the development of the draft guide of RG 1.174, as directed in SRM-SECY-11-0014. However, the schedule for developing a draft guide for RG 1.174 is dependent on work currently being performed by the NRC's Risk Management Regulatory Framework (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 and RG1.178 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.