

Regulatory Guide Periodic Review

Regulatory Guide Number: 1.96, Revision 1

Title: Main Steam Isolation Valve Leakage Control Systems for Boiling Water Reactor Nuclear Power Plants

Office/division/branch: NRR/DSS/SBPB
Technical Lead: Stanley Gardocki

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)?

Regulatory Guide 1.96, Revision 2 (Rev. 2), "Main Steam Isolation Valve Leakage Control Systems for Boiling Water Reactor Nuclear Power Plants," issued in June 1976, establishes the Nuclear Regulatory Commission's (NRCs) position for an acceptable approach for the design of boiling water reactor main steam line leakage control systems. The main steam line valve leakage control system provides additional features to ensure the low-leakage characteristics of the main steam isolation valves, in the event of a postulated design basis loss-of-coolant accident, reduce direct untreated leakage from the isolation valves when isolation of the primary system and the containment is required. The below technical issues have not indicated any safety concerns or a need to revise the RG at this time.

- The RG was last revised in 1976 as Revision 1; the format is out-of-date. This does not impact the ability of the RG to communicate the related acceptable methodologies.
- The RG does not point to, or reference any other RGs. Any apparent or future need to integrate this RG with any other RG (e.g. RG 1.183) can be done during the next periodic review of this RG or earlier if needed.
- Appendix A extracts some information from the ASME Code. It would be recommended that the next revision point to the code rather than contain the included information; this would eliminate the need to revise the RG as the Code changes. The current information appears to be acceptable as written and does not impact the ability of the RG to communicate the related acceptable methodologies.
- The NRC has allowed amendments to licenses and technical specifications to remove leakage control systems or use alternate methods based on AST or other criteria that were not acceptable in Section B or allowed by elements of Section C of this RG. The RG does contain a change in Section A of Revision 1 that states, "If an applicant proposes to use a method different from that described in this guide for implementing General Design Criteria 54 with regard to the control or limitation of leakage past the main steam isolation valves of a boiling water reactor, the acceptability of the alternative method will be determined by the staff on a case-by-case basis." The amendments issued using alternative methodologies would have been reviewed under these criteria. The guide could be revised to better integrate the allowed exemption requirements or

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expound on acceptable alternative methods. The related amendments do not have an impact on the guide as written; however, not incorporating the data into a new revision could possibly increase NRC or licensee burden. This observation has no impact on the ability of the current RG to communicate the requirements as currently stated in the RG.

- The above referenced formatting and code issues do not cause a substantive problem with using the RG and have no impact on the use of the RG.

(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?

There are no known pending or anticipated license amendments. The staff anticipates that there will be no licensees that update their licensing basis to adopt the referenced NRC guidance in the next several years.

(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?

The staff estimates 0.1 FTE to address the identified issues.

(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 reassess this RG during the next periodic review.

NOTE: This review was conducted in October 2013 and reflects the staff's plans as of that date. These plans are tentative and subject to change.