

Regulatory Guide Periodic Review

Regulatory Guide Number: 7.12, Revision 0

Title: Fracture Toughness Criteria of Base Material for Ferritic Steel Shipping Cask Containment Vessels with A Wall Thickness Greater than 4 inches (0.1 m) but not Exceeding 12 inches (0.3 m)

Office/Division/Branch: NMSS/DSFM/CSTB

Technical Lead: Antonio Rigato

Recommended Staff Action: Reviewed with no issues identified

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

RG 7.12 was issued in June 1991, to comply with the regulations in 10 CFR Part 71, "Packaging and Transportation of Radioactive Material." RG 7.12 outlines the fracture toughness criteria that can be used for evaluating ferritic steel containment vessel base material with a wall thickness greater than 4 inches (0.1 m) but not exceeding 12 inches (0.3 in).

The staff has not identified any technical or regulatory issues with the current version of this RG.

The RG references the American Society (ASTM): ASTM E208, 1987, for Testing and Materials, "Standard Method for Conducting Drop-Weight Tests To Determine Nil-Ductility Transition Temperature of Ferritic Steels," This standard was revised in 2006 and reaffirmed in 2012, but the changes do not affect the implementation of this RG.

Also, the RG references the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Codes: ASME/BPVC Section III, "Rules for Construction of Nuclear Power Plant Components," and ASME/BPVC Section XI, "Rules for In-service Inspection of Nuclear Power Plant Components," which were revised in 2015, but the changes do not affect the implementation of this 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?

As no technical or regulatory issues were identified, there is no impact to internal or external stakeholders by not updating this guide affecting licensing and inspection activities.

3. **What is an estimate of the level of effort needed to address identified issues in terms of FTE and contractor resources?**

As no technical or regulatory issues were identified, no resources are required.

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

The RG is acceptable in its current version.

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

No issues were identified during the review.

NOTE: This review was conducted in September 2016 and reflects the staff's plans as of that date. These plans are tentative and subject to change.