

Regulatory Guide Periodic Review

Regulatory Guide Number: 3.3 Revision 1

Title: Quality Assurance Program Requirements for Fuel Reprocessing Plants and for Plutonium Processing and Fuel Fabrication Plants

Office/Division/Branch: NMSS/DFM/IOB

Technical Lead: Benjamin Karmioli

Recommended Staff Action: Withdraw

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

RG 3.3 Revision 1 was issued in March 1974, to describe an acceptable method to meet the regulatory quality assurance program requirements for fuel reprocessing plants and for plutonium processing and fuel fabrication plants. It addresses the requirement to meet the criteria of Appendix B of Part 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," and it endorses the use of ANSI N45.2-1971, "Quality Assurance Program Requirements for Nuclear Power Plants," to meet these requirements.

A periodic review of RG 3.3 was performed in 2013 and no issues were identified. This review of the staff has identified that the standard ANSI N45.2-1971, "Quality Assurance Program Requirements for Nuclear Power Plants," which is endorsed in the guidance is outdated, including the formatting of the RG and the updated standard for endorsement is ASME NQA-1, "Quality Assurance Requirements for Nuclear Facility Applications." However, RG 1.28, "Quality Assurance Program Criteria (Design and Construction)," is already endorsing this standard and provides appropriate guidance to applicants for a quality assurance program that meets the criteria of Appendix B of Part 50.

It is notable that the most recent plutonium processing and fuel fabrication plant, the Mixed Oxide (MOX) Fuel Fabrication Facility, has cited RG 1.28, instead of RG 3.3, in their Quality Assurance Program Description (QAPD).

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 previously stated, this RG was not cited in the Mixed Oxide (MOX) Fuel Fabrication Facility QAPD. It is unlikely that other plutonium processing and fuel fabrication plant applicants would cite or use this RG because it is endorsing an outdated standard.

There will be no impact on licensing and inspection activities since there is currently no application expected for a plutonium processing and fuel fabrication plant within the next several years. The guidance in RG 1.28 could be used for any unexpected application that could be submitted to the NRC.

- 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?**

Approximately 0.125 to update RG 1.28.

- 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)?**

Withdraw.

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

Near Term: Withdraw RG 3.3 and issue a *Federal Register* Notice (FRN) referencing RG 1.28.

Long term: Update RG 1.28 to include plutonium processing and fuel fabrication plants. RG 1.28 already applies to reprocessing plants.

NOTE: This review was conducted in March 2024 and reflects the staff's knowledge of industry plans as of that date.