

Regulatory Guide Periodic Review

Regulatory Guide Number: 3.10 Revision 0

Title: Liquid Waste Treatment System Design Guide for Plutonium Processing and Fuel Fabrication Plants

Office/Division/Branch: NMSS/DFM/CTCFB

Technical Lead: Nicole Cortés Medina

Recommended Staff Action: Revise

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

RG 3.10 Revision 0 was issued in June 1973 to provide guidance for a plutonium processing and fuel fabrication plant, including a mixed oxide (MOX) fuel fabrication facility, pertaining to the liquid waste treatment system design. It provides a detailed list of the design guidelines that should be submitted for evaluation to determine whether satisfactory provisions have been made by the applicant for the treatment and storage of liquid radioactive wastes.

A periodic review of RG 3.10 was performed in September 2013 and determined that there were no issues identified in the RG. However, based on this review the staff has noted that the references listed in the guidance are outdated and the RG formatting needs to be updated. Therefore, it is recommended for the RG to be revised for administrative changes.

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 part of the staff's periodic review, the staff determined that the guidance contained in this reg guide is not captured in other agency guidance. Specifically, staff reviewed NUREG-1718 "Standard Review Plan for the Review of an Application for a Mixed Oxide (MOX) Fuel Fabrication Facility," and determined that this RG was not cited in the current guidance for MOX facilities and its guidance is not represented in the same level of detail. There may be a future application for plutonium processing or plutonium fuel fabrication facilities and the guidance could be useful for facility designers.

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.

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 0.15 FTE to address the revision of RG 3.10 for administrative changes.

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)?**

Revise

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

RG 3.10 needs to be updated to include missing sections such as the implementation section, the references section, and some additional administrative changes. The staff will consider the new available references that may be applicable to this RG. The staff is planning a potential revision of this RG initiated in 3rd quarter of CY 2024.

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