

Regulatory Guide Periodic Review

Regulatory Guide Number: 8.21, Revision 1

Title: Health Physics Surveys for Byproduct Material at NRC-Licensed Processing and Manufacturing Plants

Office/Division/Branch: RES/DSA/RPB

Technical Lead: Don Lowman

Recommended Staff Action: Revise

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

RG 8.21 was issued in October 1979 to comply with the regulations in Title 10 of the *Code of Federal Regulations* Part 20 (10 CFR 20), "Standards for Protection Against Radiation." The regulations require that each licensee make, or cause to be made, such surveys as may be necessary to comply with the regulations.

The citations to the regulations described in RG 8.21 are not consistent with those listed in the 1991 revision of 10 CFR 20, which is still effective. However, the guidance in RG 8.21 for radiation surveys is current with those required in the current 10 CFR 20. Also, there are advances in measurement techniques that could be considered in a future revision of this RG.

A periodic review was also performed on RG 8.21 in 2012 and there were similar issues identified.

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?

The staff determines that there is no impact on licensing and inspection activities since the guidance corresponds to current NRC requirements. Additional relevant guidance on radiation surveys can be found in NUREG-1556 Volume 12, Revision 1, "Program-Specific Guidance About Possession Licenses for Manufacturing and Distribution," and NUREG-1757 Volume 1, Revision 2, "Decommissioning Process for Materials Licensees."

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?

An estimate of the effort needed to address the identified issues is between 0.1 FTE and 0.2 FTE and no contractor resources.

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.**

As discussed in Management Directive (MD) 6.6, "Regulatory Guides," the NRC staff reviews RGs periodically to ensure that these guides continue to provide useful guidance. The staff will revise the regulatory citation issues and any other technical information that may need to be updated prior to the next periodic review of the guide.

NOTE: This review was conducted in March 2023 and reflects the staff's plans as of that date. These plans are tentative and are subject to change.