Regulatory Guide Periodic Review

Regulatory Guide Number:	**8.26, Revision 0**
Title:	**Applications of Bioassay for Fission and Activation Products**
Office/division/branch:	**RES/DSA/RPB - NRR/DRA/ARCB**
Technical Lead:	**Casper Sun/Steve Garry**
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)?

RG 8.26, Revision 0, was issued in 1980 to provide guidance to determine whether bioassay programs are needed in installations where employees may be subject to internal radiation exposure from the inhalation or ingestion of fission or neutron activation products, as required by 10 CFR Part 20, "Standards for Protection Against Radiation."

Revision 0 of RG 8.26 includes outdated references to 10 CFR Part 20, “Standards for Protection Against Radiation,” such as the reference to 10 CFR 20.108, “Orders Requiring Furnishing to Bioassay Services.” However, the regulations in 10 CFR 20 were revised in 1991 *Federal Register* (56 FR 23359) and section 10 CFR Part 20.108 has been omitted in the revision.

The guide endorses the American National Standards Institute (ANSI) standard N343, 1978 (R 1984), “Internal Dosimetry for Mixed Fission and Activation Products.” However, ANSI N343 has been withdrawn with no replacement. In addition, many of the other references in the guide are outdated.

2. What is the impact on internal and external stakeholders of <u>not</u> updating the RG for the known issues, in terms of anticipated numbers of licensing and inspection activities over the next several years?

RG 8.26 has no impact on licensing activities since the NRC staff is not expecting any new or renewal applications in the next several years.

For operating facilities, there are approximately 35 inspection activities per year over the next several years conducted under Inspection Procedure (IP) 71124.01, “Radiological Hazard Assessment and Exposure Controls” and 18 inspection activities under IP 71124.04, “Occupational Dose Assessment.” However, the NRC staff expects minimal impact on the inspection activities regarding the issues discussed in item 1 above since there may not be any inspections of the bioassay program.

Nonetheless, revising the RG will assist licensees in developing procedures needed for their facility to perform occupational radiation dose calculations based on bioassay measurements, and will assist inspectors in determining if regulatory requirements are being adequately implemented.

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 correct the identified issues is about 0.1 FTE.

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 will consider the new available references and any other technical information that may need to be updated during the next periodic review of the guide.

NOTE: This review was conducted in December 2017 and reflects the staff's plans as of that date. These plans are tentative and are subject to change.