

Regulatory Guide Periodic Review

Regulatory Guide Number: 8.8, Revision 3

Title: Information Relevant To Ensuring That Occupational Radiation Exposures At Nuclear Power Stations Will Be As Low As Is Reasonable Achievable

Office/division/branch: RES/DSA/RPB and NRR/DRA/ARCB
Technical Lead: Casper Sun and David Garmon-Candelaria

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)?

This RG (Revision 3 to RG 8.8) was issued in June 1978. It provides guidance for planning, designing, constructing, operating, and decommissioning a light-water reactor nuclear power plant to maintain exposures to radiation during routine operations" as low as is reasonably achievable" (ALARA) and comply with the 1978 version of 10 CFR Part 20, "Standards for Protection Against Radiation."

The current regulations in 10 CFR Part 20 also include an ALARA requirement. In particular, section 10 CFR 20.1101, "Radiation protection programs," states that licensees should establish radiation protection principles to achieve occupational doses and doses to members of the public that are ALARA. However, the regulations in 10 CFR Part 20 were revised since 1978 and consequently some of the citations to the regulations are incorrect in RG 8.8.

In addition, the guidance and assessment methods in Revision 3 are adequate and consistent with 10 CFR Part 20 in terms of radiation protection and safety. The majority of the sixteen (16) references listed in the RG are still available. However, some of the standards referenced in the guide have been withdrawn and others have been revised.

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 impact on licensing and inspection activities is minimal. The staff is not expecting any license applications in the next several years. Licensees have modified their ALARA programs to be consistent with current regulations and the NRC currently inspects plant-specific ALARA programs as part of the Reactor Oversight Process (ROP) based on the requirements in 10 CFR Part 20.1101 and the NRC's inspection procedure (IP71124.02), "Occupational ALARA Planning and Controls." Review of inspection results since the inception of the ROP indicates that performance deficiencies are typically of very low safety significance and indicative of discreet events as opposed to overall program weaknesses.

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 between 0.1 – 0.4 FTE. It is possible that additional FTE may be needed if other related issues emerge requiring significant interaction with the industry and external stakeholders.

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 reassess the guide during the next RG periodic review and determine, based on any new technology and inspection findings, if the guide needs to be revised, withdrawn, or remain as-is.

NOTE: This review was conducted in March 2018 and reflects the staff's plans as of that date. These plans are tentative and are subject to change.