

REGULATORY ANALYSIS

DRAFT REGULATORY GUIDE (DG-8033) “PHILOSOPHY FOR MAINTAINING OCCUPATIONAL RADIATION EXPOSURES AS LOW AS IS REASONABLY ACHIEVABLE”

(Proposed Revision 2 of Regulatory Guide 8.10, dated September 1975)

1. Statement of the Problem

The U.S. Nuclear Regulatory Commission (NRC) is considering revising Regulatory Guide (RG) 8.10, “Operating Philosophy for Maintaining Occupational Radiation Exposures As Low as is Reasonably Achievable,” to describe methods and procedures that the staff of the NRC considers acceptable for maintaining radiation exposures to employees and the public as low as is reasonably achievable (ALARA). It applies to both reactor and nonreactor licensees.

The NRC issued Revision 1 of this RG in September 1975. In 1991, the NRC promulgated amendments to its Title 10 of the *Code of Federal Regulations* (10 CFR) Part 20 regulations (56 FR 23360; May 21, 1991). The 1991 rulemaking included substantive amendments to the 10 CFR part 20 regulations as well as a renumbering of those regulations. As such, this revision (Revision 2) to the guide seeks to achieve alignment with the regulatory structure of 10 CFR Part 20 by updating the guide’s cross-references to the current 10 CFR Part 20 regulations.

Also, this revision includes additional guidance from operating experience in implementing ALARA programs since 1975. It provides more details describing management responsibilities to ensure commitment to ALARA and emphasizes the concept of ALARA as part of the initial design of the facility including operational and termination programs.

2. Objective

The objective of this regulatory action is to assess the need to update NRC guidance and provide applicants with a method to demonstrate compliance with ALARA requirements listed in 10 CFR Part 20, “Standards for Protection Against Radiation,” and 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities,” Appendix I, “Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion ‘As Low as is Reasonably Achievable’ for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents.”

3. Alternative Approaches

The NRC staff considered the following alternative approaches:

1. Do not revise RG 8.10
2. Withdraw RG 8.10
3. Revise RG 8.10

Alternative 1: Do Not Revise Regulatory Guide 8.10

Under this alternative, the NRC would not revise the guidance, and the current guidance would be retained. This alternative is considered the baseline or “no-action” alternative and, as such, involves no value/impact considerations. However, this alternative would not address the revised requirement in the current NRC regulations and the advances made over the past 40 years in ALARA practices and programs.

Alternative 2: Withdraw Regulatory Guide 8.10

Under this alternative the NRC would withdraw this regulatory guide. This would eliminate the current conflict that exists between the current regulatory guide and the newer regulations. It would also eliminate the only readily available description of the methods the NRC staff considers acceptable for demonstrating compliance with the regulations. Although this alternative would be less costly than the proposed alternative, it would impede the public’s accessibility to the most current guidance information.

Alternative 3: Revise Regulatory Guide 8.10

Under this alternative, the NRC would revise RG 8.10 to reflect current regulations, guidance, and practices. One benefit of this action is that it would reflect current NRC requirements and would enhance ALARA programs. The cost to the NRC would be the one-time cost of issuing the revised RG (which is expected to be relatively small), and since compliance is not mandatory, licensees would incur little or no cost.

The impact to the NRC would be the costs associated with preparing and issuing the regulatory guide revision. The impact to the public would be the voluntary costs associated with reviewing and providing comments to NRC during the public comment period. The value to NRC staff and its applicants would be the benefits associated with enhanced efficiency and effectiveness in using a common guidance document as the technical basis for license applications and other interactions between the NRC and its regulated entities.

Conclusion

Based on this regulatory analysis, the staff concludes that revision of RG 8.10 will enhance ALARA practices and programs and reflect current NRC regulations and other currently available ALARA updates. Therefore, the revision of this regulatory guide is warranted.