REGULATORY ANALYSIS

Regulatory Guide 8.18, Revision 2, "Information Relevant to Ensuring that Radiation Exposure at Medical Institutions Will Be as Low as Is Reasonably Achievable"

1. Statement of the Problem

Regulatory Guide 8.18, "Information Relevant to Ensuring that Radiation Exposure at Medical Institutions will be as Low as Is Reasonably Achievable," Revision 1, October 1982; was issued to provide guidance to medical licensees to maintain occupational exposures as low as reasonably achievable (ALARA) in their institutions. However, the U.S. Nuclear Regulatory Commission (NRC) regulations in Title 10, of the *Code of Federal Regulations,* Part 35, "Medical Use of Byproduct Material" (10 CFR Part 35),[1] have changed significantly since then. Therefore, a revision of this regulatory guide is necessary to provide up-to-date guidance in a format and content for providing methods that the NRC considers acceptable.

2. Objective

The objective of this regulatory action is to provide acceptable methods for performing an assessment of occupational radiation dose and radiation dose to members of the public in medical facilities so that these radiation exposures will be ALARA.

3. Alternative Approaches

The NRC staff considered the following approaches:

- Do not revise Regulatory Guide 8.18, (Revision 1).
- Update Regulatory Guide 8.18.

3.1. Alternative 1: Do Not Revise Regulatory Guide 8.18

Under this alternative, the NRC would not revise this guidance, and the original version of this regulatory guide would continue to be in use. This alternative is considered the baseline or "no action" alternative. However, if the NRC does not update Regulatory Guide 8.18, Revision 1, the staff will be using a version that is almost 30 years old, and the methods used by the licensee to maintain ALARA in a medical facility may not be accurate.

3.2. Alternative 2: Update Regulatory Guide 8.18

Under this alternative, the NRC would update Regulatory Guide 8.18, Revision 1, taking into consideration current NRC regulations. This action would replace outdated guidance with an updated format and content guidance that considers regulations and staff action that have changed since the first revision in October 1982.

4. Conclusion

[1] 10 CFR Part 35, "Medical Use of Byproduct Material," U.S. Nuclear Regulatory Commission, Washington, DC.

Based on this regulatory analysis, the staff recommends that the NRC revise and update Regulatory Guide 8.18. It should result in a significant reduction in the number of questions and requests for clarification submitted to the NRC staff and enhance the efficiency and effectiveness in the ongoing design review process by ensuring a consistent assessment.