

**REGULATORY ANALYSIS**  
**DRAFT REGULATORY GUIDE DG-5065**  
**PERIMETER INTRUSION ALARM SYSTEMS**  
(Proposed Revision 4 to Regulatory Guide 5.44)

**1. Statement of the Problem**

The U.S. Nuclear Regulatory Commission (NRC) is considering revising regulatory guide (RG) 5.44, "Perimeter Intrusion Alarm Systems." When issued in final form, draft Regulatory Guide (DG) 5065, "Perimeter Intrusion Alarm Systems," would revise RG 5.44 such that it would provide implementing guidance for meeting regulatory requirements related to perimeter intrusion alarm systems used to identify unauthorized or attempted unauthorized access to a formula quantity of special nuclear material, special nuclear material of moderate strategic significance, and special nuclear material of low strategic significance. These classes of material are often referred to as Category I, II, and III quantities of special nuclear material.

This proposed revised RG would provide an approach that the NRC staff considers acceptable to meet requirements in NRC regulations related to perimeter intrusion alarm systems, including perimeter intrusion detection sensors and detection methods. It updates methods the NRC staff considers acceptable to meet regulatory requirements in section 73.55 of Title 10 of the *Code of Federal Regulations* (10 CFR) that were revised after Revision 3 to RG 5.44 was issued in 1997. In addition, this proposed RG describes methods the NRC staff finds acceptable to meet regulatory requirements pertaining to perimeter intrusion alarm systems in 10 CFR 20.1801, 10 CFR 20.1802, 10 CFR 73.20, 10 CFR 73.40, 10 CFR 73.45, 10 CFR 73.46, 10 CFR 73.50, 10 CFR 73.51, and 10 CFR 73.67.

**2. Objective**

The objective of this regulatory action is to analyze whether to revise NRC guidance and provide licensees and applicants with a method to demonstrate compliance with requirements in 10 CFR Part 20, "Standards for Protection Against Radiation," and Part 73, "Physical Protection of Plants and Materials," regarding the installation, operation, and maintenance of intrusion detection systems.

**3. Alternative Approaches**

The NRC staff considered the following alternative approaches:

- (1) Take no action.
- (2) Withdraw RG 5.44 without issuing a revised RG.
- (3) Develop a revised RG.

#### Alternative 1: Take no action.

Under this alternative, the NRC would not develop a revision to RG 5.44, Revision 3 issued in 1997. This alternative provides a baseline condition from which any other alternatives will be assessed. If the NRC does not take action, there would not be any changes in costs or benefits to the public, licensees, or the NRC.

However, this alternative would not update NRC guidance to address changes in the applicable regulations. The NRC staff would continue to review each application submitted on a case-by-case basis to determine whether the proposed submittal meets all applicable regulations and review applicable NRC-licensed sites for compliance with these regulations.

#### Alternative 2: Withdraw RG 5.44 a without issuing a revised RG.

Under this alternative, the NRC would withdraw RG 5.44 and would not issue a revised RG. Although this alternative would be less costly than revising RG 5.44, it would not provide the public with the most current guidance or identify updated standards on perimeter intrusion alarm systems. In addition, this alternative would not provide guidance for meeting requirements in 10 CFR 73.55 related to these systems that the NRC issued after the terrorist events of September 11, 2001.

#### Alternative 3: Develop a revised RG

Under this alternative, the NRC would develop and publish for comment DG-5065, a proposed revision to RG 5.44, which has not been updated since 1997. The proposed RG would contain guidance that is consistent with existing updated regulations (e.g., 10 CFR Part 73), current technical standards, and NRC physical protection policy. By revising RG 5.44, the NRC would ensure that the guidance relating to perimeter intrusion alarm systems is current, consistent with NRC regulations, and accurately reflects the NRC staff's positions.

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 the NRC during the public comment period.

NRC staff, licensees, and applicants would benefit from the enhanced efficiency and effectiveness of using a common guidance document as a basis for demonstrating compliance with regulatory requirements associated with perimeter intrusion alarm systems. Updated guidance would help to streamline licensing interactions, such as license amendments, applications, and requests for additional information, between the NRC and its regulated entities.

## **4. Conclusion**

Based on this regulatory analysis, the NRC staff concludes that the issuance of a revision to RG 5.44 is warranted. The revised RG will provide NRC applicants and licensees with updated guidance to facilitate the understanding of and compliance with NRC requirements related to perimeter intrusion alarm systems.