

REGULATORY ANALYSIS

DRAFT REGULATORY GUIDE DG-5038

“SPECIAL NUCLEAR MATERIAL DOORWAY MONITORS”

(Proposed Revision 1 of Regulatory Guide 5.27, dated June 1974)

Statement of the Problem

10 CFR Part 73 contains the NRC’s requirements for the physical protection of plants and materials. The requirements include that facilities must search individuals exiting Materials Accountability Areas (MAAs) for concealed Special Nuclear Material (SNM). Searching includes detectors that screen individuals for metal objects and SNM. The detection equipment has changed considerably since the RG was issued in 1974 and as a consequence the guidance contained in the RG does not reflect current technology and equipment.

The need to search individuals exiting MAAs has not diminished since the RG was issued. Further, the search requirement contained in 10 CFR Part 73 is repeated in other NRC publications, such as NUREG-1329, “Entry/Exit Control of Fuel Fabrication Facilities Using or Possessing Formula Quantities of Strategic Special Nuclear Material,” and NUREG-1321, “Testing Standards for Physical Security Systems at Category I Fuel Cycle Facilities.” These documents reinforce the NRC requirement that exiting individuals must be searched as they leave MAAs.

The RG applies to facilities that contain SNM of a formula quantity requiring an MAA. An MAA is any access controlled area that contains SNM.

Objective

The objective of this regulatory action is to provide updated guidance to licensees on how to comply with the requirement that facilities possessing formula quantities of SNM must search individuals exiting MAAs for concealed SNM.

Alternative Approaches

The NRC staff considered the following alternative approaches:

1. Do not issue a new regulatory guide.
2. Revise Regulatory Guide 5.27.
3. Issue a new regulatory guide.

Alternative 1: Do Not Issue a New Regulatory Guide

This alternative is maintaining the status quo, providing no updated guidance to reflect technology upgrades. There is no added value in this choice.

The impacts of this alternative on security and material control are negative. Since the 1974 issue of this regulatory guide is still available as a reference, it can create confusion with users or other stakeholders. However, there would be no impacts on health, safety or the natural environment with this alternative.

Alternative 2: Revise Regulatory Guide 5.27

The beneficial aspects of revising RG 5.27 relate to the physical protection of the material and the control of SNM in storage or in use at the facility. The value of the revision is improving the effectiveness of security and control of SNM at licensee facilities by providing contemporary and consistent language to support a common understanding to users of the guidance.

There is minimal cost involved with publishing a revision or withdrawing this regulatory guide. The minimal costs are derived from staff hours preparing the guide for review and publication. Because there are no mandates included in the RG, nor will any plant modifications or additional equipment be required, there is minimal impact to the licensees absent a small amount of time to review and comment if desired. The revised RG will describe current technology and provide guidance in its application with the objective of providing a method, acceptable to the NRC, of meeting the regulations related to searching individuals exiting from an MAA. Use of the revised RG should lead to more efficient and more effective search efforts. Efficiency gains should result from better calibration of the monitors resulting in fewer false alarms, thereby reducing time consuming second and third screenings of an individual. This will result in an improved capability to identify concealed SNM and a reduction in safeguards risks.

It should be noted that the revision will have no impact on health, safety or the natural environment. The rationale for choosing alternative 2 is based on the need for more current safeguards and security guidance. Improved guidance will serve to assist licensees implementing the requirement for searching individuals exiting MAAs.

Alternative 3: Issue a New Regulatory Guide

Under this alternative, the NRC would issue a new regulatory guide.

One benefit of this action would be the retention of the distinction between requirements for design features of a new facility and operational consideration for existing facilities. This would reduce potential licensee confusion between the sets of instructions. This action would create a newly numbered regulatory guide, which could create some confusion in stakeholders understanding of what the NRC considers acceptable, and also could require changes to licensing documents that reference this regulatory guide.

The impact on the NRC would be the minimal costs associated with preparing and issuing the regulatory guide. The impact on the public would be the voluntary costs associated with reviewing and providing comments to the 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 specific guidance as the technical basis for interactions between the NRC and its regulated entities.

Conclusion

Revision to RG 5.27 should be pursued. The revision will provide contemporary updated guidance at minimal cost and impact. It should also result in less confusion to licensees and other stakeholders who may use the guidance for a reference as it pertains to control of SNM.