

Regulatory Guide Number: 5.28, Revision 0

Title: Evaluation of Shipper-Receiver Differences in the Transfer Of Special Nuclear Materials

Office/Division/Branch: NMSS/FCSE/MCAB

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SUBJECT: Basis for Withdrawal

(1) What regulation(s) did the Regulatory Guide support?

Regulatory Guide (RG) 5.28 was published in June 1974 to provide guidance on meeting the material control and accounting (MC&A) requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) 70.58(g) related to the evaluation of shipper-receiver differences (SRDs). However, this citation has subsequently been deleted from 10 CFR 70.58 (g). The requirements related to SRDs are now found in 10 CFR 74.31(c)(7), 10 CFR 74.33(c)(7), 10 CFR 74.43(b)(7), and 10 CFR 74.59(h)(1).

(2) What was the purpose of the Regulatory Guide?

RG 5.28 provided guidance to licensees on concepts, principles, and methods acceptable to the NRC staff for evaluating SRDs. The identification and evaluation of SRDs is one of the means of detecting diversion, theft, loss, or misstatements of the amount of special nuclear material (SNM) transferred from one facility to another.

(3) How was the Regulatory Guide used?

RG 5.28 was used to assist licensees in establishing procedures for evaluating SRDs.

(4) Why is the Regulatory Guide no longer needed?

A new regulatory guide has been developed that combines and updates the guidance found in RG 5.28 and two other guides, RG 5.49, "Internal Transfers of Special Nuclear Material," and RG 5.57, "Shipping and Receiving Control of Strategic Special Nuclear Material." This new guide has been designated RG 5.41, "Shipping, Receiving, and Internal Transfer of Special Nuclear Material."

In addition, RG 5.28 endorsed American National Standards Institute (ANSI) Standard N15.17, "Concepts and Principles for the Statistical Evaluation of Shipper-Receiver Differences in the Transfer of Special Nuclear Materials," with qualifications. However, ANSI N15.17 is no longer an active standard. Finally, RG 5.28 references, RG 5.18, "Limit of Error Concepts and Principles of Calculation in Nuclear Materials Control," which been withdrawn.

(5) What guidance is available once the Regulatory Guide is withdrawn?

The guidance in RG 5.28 has been updated and incorporated into RG 5.41, "Shipping, Receiving, and Internal Transfer of Special Nuclear Material." Additional guidance on evaluation of SRDs can be found in NUREG-1065, "Acceptable Standard Format and Content for the Fundamental Nuclear Material Control (FNMC) Plan Required for Low-Enriched Uranium Facilities," NUREG/CR-5734, "Recommendations to the NRC on Acceptable Standard Format and Content for the Fundamental Nuclear Material Control (FNMC) Plan Required for Low-Enriched Uranium Enrichment Facilities," and NUREG-1280, "Standard Format and Content Acceptance Criteria for the Material Control and Accounting (MC&A) Reform Amendment."

(6) Is the Regulatory Guide referenced in other documents and what are the "ripple effects" on these documents if it is withdrawn?

RG 5.28 is referenced in inspection procedure (IP) 85209, "Measurement Control and Statistics," dated 04/10/ 85. However, the procedure is not used because there are currently no operating Category II fuel cycle facilities. There may be new applicants in the future, in which case IP 85209 may be used for future Category II facility MC&A inspections. In that case, IP 85209 will be revised, and the reference to RG 5.28 will be revised as well.

RG 5.28 is referenced in inspection manual chapter (IMC) 1247, Appendix C5, "Fuel Facility Material Control & Accounting Inspector Technical Proficiency Training and Qualification Journal." At the next scheduled revision for IMC 1247, Appendix C5, the reference to RG 5.28 will be replaced with a reference to the guide that will replace RG 5.28.

RG 5.28 is referenced in one other regulatory guide, RG 5.57. However, RG 5.57 is also being withdrawn at the same time as RG 5.28.

RG 5.28 is referenced in the following NUREGs:

- NUREG-0450, "Report of the Material Control and Material Accounting Task Force,"
- NUREG/CR-2820, "Resolution of Shipper-Receiver Differences," and
- NUREG/CR-2935, "Examples of MC&A Systems to Meet Prompt Accountability Specifications."

NUREG-0450 was issued in 1978 to assess the objectives and goals of material control and material accounting in the NRC safeguards program. The report recommended a review and update of RG 5.28. NUREG-0450 is a historical report that will not be updated.

NUREG/CR-2820 was published in 1982 with the purpose of developing methods for resolving SRDs and to provide additional guidance to the NRC and licensees. The NUREG refers to RG 5.28, which was the current guidance at the time for evaluating SRDs. If NUREG/CR-2820 is revised in the future, the reference to RG 5.28 will be removed.

NUREG/CR-2935 was published in 1983 to provide guidance in designing an MC&A system that would ensure timely detection and response to loss of strategic SNM. Included in the NUREG is a short section on SRD data analysis, with both RG 5.28 and ANSI N15.17 mentioned. The NUREG is a historical technical document that will not be updated.

(7) What is the basis for believing that no guidance similar to that in the Regulatory Guide will ever be needed?

RG 5.28 is being withdrawn because it is outdated and refers to requirements in 10 CFR part 70 that have been moved to 10 CFR part 74. Similar guidance is still needed for the SRD requirements in 10 CFR part 74. The guidance in RG 5.28 has been updated and incorporated into RG 5.41. RG 5.41, along with NUREG-1065, NUREG/CR-5734, and NUREG-1280, provide the necessary guidance for licensees and NRC staff on the evaluation of SRDs.

(8) Will generic guidance still be needed?

Guidance is still needed for the SRD requirements in 10 CFR part 74. The guidance in RG 5.28 has been updated and incorporated into RG 5.41. RG 5.41, along with NUREG-1065, NUREG/CR-5734, and NUREG-1280, provide the necessary guidance for licensees and NRC staff on the evaluation of SRDs.

(9) What is the rationale for withdrawing this Regulatory Guide instead of revising it?

RG 5.28 is being withdrawn because it is outdated and refers to requirements in 10 CFR part 70 that have been moved to 10 CFR part 74. Similar guidance is still needed for the SRD requirements in 10 CFR part 74. The guidance in RG 5.28 has been updated and incorporated into RG 5.41.

(10) Do other agencies rely upon the Regulatory Guide, e.g., the Agreement States, National Aeronautical and Space Administration, Department of Energy?

The staff is not aware of any other agency that uses or relies on the guidance in RG 5.28.