

NRC INSPECTION MANUAL

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INSPECTION PROCEDURE 85200

MC&A FOR LICENSEES POSSESSING LESS THAN OR EQUAL TO ONE EFFECTIVE KILOGRAM OF SNM

PROGRAM APPLICABILITY: MC 2681

85200-01 INSPECTION OBJECTIVE

Assure that the licensee is inventorying special nuclear material (SNM) as required and has established, maintained and is following a system of records and reports which provides for accurate, timely information to account for SNM within its facility.

85200-02 INSPECTION REQUIREMENTS

The licensee's SNM accounting system must comply with all applicable NRC requirements. By inspection determine whether:

02.01 Physical inventories are conducted at intervals not to exceed twelve months for licensees authorized to possess more than 350 grams of contained U-235, U-233, or plutonium or any combination thereof. [70.51(d)]

02.02 Material status reports (DOE/NRC Form-742 and Form-742C) and nuclear material transfer reports (DOE/NRC Form-741) are prepared and distributed as required. [70.53(a)(1), 70.54(a)]

02.03 Records of receipt, acquisition or physical inventory of SNM are established and maintained for five years following transfer of such material. [70.51(b)(1), (3)]

02.04 Records of the transfer of SNM to other persons, records of disposal of licensed material pursuant to 20.302, 20.303, and deleted 20.304, and reports made in response to 70.52(b) are established and maintained until the Commission authorizes their disposition. [70.51(b)(1), (2), (5), (6); 70.52(b)]

02.05 Records and reports are maintained either as originals or as reproduced copies or microforms capable of producing clear, legible copies after the required retention period. Reproduced copies and microforms are duly authenticated by authorized personnel. [70.51(i)(1)]

85200-03 INSPECTION GUIDANCE

03.01 Regulations. 70.51(b),(d),(i)(1); 70.53(a)(1); 70.54(a).

03.02 Regulatory Guides and Reports

Regulatory Guide 5.13 - Conduct of Physical Inventories (11/73)
NUREG/BR - 0006 - Material Transfer Report Instructions (4/83)
NUREG/BR - 0007 - Material Status Report Instructions (1/80)
NUREG/CR - 1283 - Accounting Systems for SNM (5/80)

03.03 Criteria. The responsibility for conducting physical inventories should be assigned to an individual who is familiar with the use and storage of SNM at the licensee's facility. However, no individual should be allowed to inventory material for which he has direct responsibility.

All material should be properly packaged, labeled, stored or otherwise prepared for inventory. Inventory quantities should either be based on measurements or on calculations which use a generally accepted empirical formula.

Once the physical inventory is complete, the licensee should check the inventory records for correctness and reconcile and, if necessary, adjust the book records to the results of the physical inventory. Any discrepancy involving a missing item(s) for which an immediate investigation cannot locate the item(s) must be reported in accordance with 10 CFR 70.52.

Inspection effort for this procedure should normally include a thorough check of the adequacy of records created since the last inspection and a partial audit (a random check) of the actual SNM holdings listed on the current book inventory. The records check should include a comparison of the licensee's book inventory against a NMMSS (Nuclear Materials Management and Safeguards System) printout of the current holdings and transactions since the last MC&A inspection. In addition, when the inspection can be scheduled to coincide with the physical inventory, it should include direct observation of the physical inventory taking, testing of the physical inventory listing, and an evaluation of the physical inventory reconciliation. However, no attempt should be made to independently verify all of the licensee's SNM holdings unless it is determined that it can be accomplished with minimal inspection resources and little impact upon the licensee or that it would be prudent to do so because of poor performance by the licensee.

All accounting records should be controlled by serial number or by some other equivalent coding system and be signed by the originator of the record. In addition, all adjustments to such records should be approved by signature of authorized individuals and substantiated by backup data and/or calculations.

The number of records subject to inspection will vary from facility to facility. The region-based inspector is best qualified to assign an inspection priority to records. For facilities possessing less than or equal to one effective kilogram of SNM, 100 percent inspection of the licensee's records can usually be accommodated. However, if the inspector feels that certain of these records cannot be 100 percent inspected with the available manpower resources, the following simplistic inspection procedure can be used to focus inspection resources on those records which need the most scrutiny.

For purposes of this procedure, a record is considered to be defective if it has incorrect or missing data which could affect the material balance. First, select an initial random sample of 45 records. If zero defects are discovered, accept the records. If two or more defects are found, the remaining records of that type should be inspected. If one defect is found, select a second random sample of 55 records. If no additional defects are located, the records should be accepted. If one or more additional defects are detected, 100 percent inspection of that type of record is warranted.

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