

**PART 74—MATERIAL CONTROL  
AND ACCOUNTING OF SPECIAL  
NUCLEAR MATERIAL**

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**Subpart A—General Provisions**

**§ 74.1 Purpose.**

(a) This part has been established to contain the requirements for the control and accounting of special nuclear material at fixed sites and for documenting the transfer of special nuclear materials. General reporting requirements as well as specific requirements for certain licensees possessing special nuclear material of low strategic significance and formula quantities of strategic special nuclear material are included. Requirements for the control and accounting of source material at enrichment facilities are also included. The specific control and accounting requirements for other licensees are contained in §§ 70.51, 70.57, and 70.58 of this chapter.

(b) The general conditions and procedures for the submittal of a license application for the activities covered in this part are detailed in § 70.22 of this chapter.

[50 FR 7579, Feb. 25, 1985, as amended at 56 FR 55998, Oct. 31, 1991]

**§ 74.2 Scope.**

(a) The general requirements of this part apply to each person licensed pursuant to part 70 or 72 of this chapter, who possesses special nuclear material in a quantity greater than 350 grams of contained uranium-235, uranium-233, or plutonium, or any combination thereof; or who transfers or receives a quantity of special nuclear material of 1 gram or more of contained uranium-235, uranium-233, or plutonium.

(b) In addition, specific control and accounting requirements are included for certain licensees who:

- (1) possess and use formula quantities of strategic special nuclear material,
- (2) possess and use special nuclear material of low strategic significance, or
- (3) possess uranium source material and equipment capable of producing enriched uranium.

(c) Specific control and accounting requirements for special nuclear material of moderate strategic significance

and for miscellaneous categories of licensees who possess special nuclear material are contained in §§ 70.51, 70.57, and 70.58 of this chapter.

(d) As provided in part 76 of this chapter, the regulations of this part establish procedures and criteria for material control and accounting for the issuance of a certificate of compliance or the approval of a compliance plan.

[50 FR 7579, Feb. 25, 1985, as amended at 56 FR 55998, Oct. 31, 1991; 59 FR 48960, Sept. 23, 1994]

#### § 74.4 Definitions.

As used in this part:

*Abrupt loss* means a loss occurring in the time interval between consecutive sequential performances of a material control test which is designed to detect anomalies potentially indicative of a loss of strategic special nuclear material from a specific unit of SSNM (i.e., a quantity characterized by a unique measurement) introduced into a process.

*Accessible location* means a process location at which SSNM could be acquired without leaving evidence of the acquisition, i.e., without tools or other equipment to obviously violate the integrity of the containment.

*Act* means the Atomic Energy Act of 1954 (68 Stat. 919), including any amendments thereto.

*Active inventory* means the sum of additions to inventory, beginning inventory, ending inventory, and removals from inventory, after all common terms have been excluded. Common terms are any material values which appear in the active inventory calculation more than once and come from the same measurement.

*Additions to material in process* means: (1) Receipts that are opened, except for receipts opened only for sampling and subsequently maintained under tamper-safing; (2) opened sealed sources; and (3) material removed from process for nonconformance with chemical or physical specifications that is subsequently reprocessed, measured for contained SSNM, and reintroduced to process.

*Alarm Threshold* means a predetermined quantity of SSNM calculated from the specified probability of detection for a given loss and the standard

deviation associated with a material control test. An alarm threshold serves to trigger a response action.

*Batch* means a portion of source material or special nuclear material handled as a unit for accounting purposes at a key measurement point and for which the composition and quantity are defined by a single set of measurements. The source material or special nuclear material may be in bulk form or contained in a number of separate items.

*Bias* means the deviation of the expected value of a random variable from the corresponding correct or assigned value.

*Calibration* means the process of determining the numerical relationship between the observed output of a measurement system and the value, based upon reference standards, of the characteristic being measured.

*Category IA material* means SSNM directly useable in the manufacture of a nuclear explosive device, except if:

(1) The dimensions are large enough (at least two meters in one dimension, greater than one meter in each of two dimensions, or greater than 25cm in each of three dimensions) to preclude hiding the item on an individual;

(2) The total weight of five formula kilograms of SSNM plus its matrix (at least 50 kilograms) cannot be carried inconspicuously by one person; or

(3) The quantity of SSNM (less than 0.05 formula kilograms) in each container requires protracted diversions in order to accumulate five formula kilograms.

*Category IB material* means all SSNM material other than Category IA.

*Commission* means the Nuclear Regulatory Commission or its duly authorized representatives.

*Continuous process* means a unit process in which feed material must be introduced in a systematic manner in order to maintain equilibrium conditions.

*Controlled access area* means any temporarily or permanently established area which is clearly demarcated, access to which is controlled, and which affords isolation of the material or persons within it.