

U.S. Department of Energy
Washington, D.C.

ORDER

DOE 5630.1

8-3-79

1043

SUBJECT: CONTROL AND ACCOUNTABILITY OF NUCLEAR MATERIALS

1. PURPOSE. To provide material control and accountability subsystems for special nuclear materials (SNM) which will complement the physical protection subsystem outlined in other Department of Energy (DOE) orders in the 5630 Series. These three subsystems comprise the DOE safeguards program to guard against the theft or unauthorized diversion of SNM.
2. CANCELLATION. IMD 6104, CONTROL AND ACCOUNTABILITY OF NUCLEAR MATERIALS of 9-29-77, as extended by DOE N 1321.45, of 6-26-79.
3. SCOPE. This Order applies to all ^{7 DOE} Departmental elements, its contractors and subcontractors who may possess, use or ship nuclear material.
4. POLICY. Special nuclear material shall be controlled and accounted for consistent with the common defense and security of the United States. Other designated nuclear materials shall be controlled and accounted for consistent with management and health and safety objectives established by other DOE guidance. In support of this, DOE will:
 - a. Assure that material control and accountability measures for SNM are designed so as to facilitate to the extent practicable, use or integration of material control and accountability measures for SNM to serve criticality, quality control and production control programs.
 - b. Provide material control and/or accountability subsystems for other nuclear materials to facilitate management or health and safety control.
 - c. Provide inventory data on a timely and uniform basis for safeguards and management or health and safety purposes on both SNM and other nuclear material.

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Office of Safeguards
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- d. Assure that nuclear materials or equipment supplied to nations or persons abroad are subject to measures which will assure that they are used for agreed-upon purposes only.
- e. Facilitate the development of foreign country and International Atomic Energy Agency (IAEA) safeguards systems.

5. RESPONSIBILITIES AND AUTHORITIES

- a. The Assistant Secretary for Defense Programs, through the Office of Safeguards and Security:
 - (1) Develops DOE-wide policies, procedures, and standards for the safeguarding of SNM including material control and accountability of SNM and other designated nuclear materials.
 - (2) Approves requests for exceptions to the provisions of this order and those in the 5630 series unless this responsibility is specifically granted to the cognizant operations office by appropriate sections of this order or others in the 5630 series.
 - (3) Establishes, after coordination with Secretarial Offices and field organizations, material control and accountability policies, procedures, and standards affecting field organizations, DOE license-exempt contractors and subcontractors and assures that they are equivalent in their effectiveness to policies, procedures and standards imposed by the Nuclear Regulatory Commission (NRC).
 - (4) Conducts routine periodic assessments of the DOE material control and accountability program, including (a) review of DOE staff survey reports, activities and evaluation of inventory differences, and (b) spot checks, as required, of surveys of license-exempt contractors and, in collaboration with NRC, licensees as required.
 - (5) Conducts onsite safeguards and security reviews of nuclear materials distributed abroad to the extent provided for in international agreements, and participates in international discussions regarding safeguards policies and procedures with other DOE organizations involved in international programs.
 - (6) Provides technical advice, analyses, and recommendations in developing international safeguards policies and procedures,

and subsequently manages programs for technical cooperation with the IAEA in its safeguards role in guarding against the diversion of nuclear materials and equipment supplied for peaceful purposes to nuclear weapons, nuclear explosive devices, or any other military purpose.

- (7) Conducts special investigations of activities of license-exempt contractors, as necessary. Coordinates these special investigations with the appropriate Headquarters program division/office and operations office(s).
- (8) In consultation with program divisions/offices initiates and directs programs for providing required technology, equipment, and procedures to improve material control and accountability and nuclear materials measurement, and to assure that government and industry are provided with chemical and isotopic reference standards, and calibration and test materials in cooperation with the National Bureau of Standards.
- (9) In connection with activities of license-exempt contractors and subcontractors, (a) recommends to the responsible authority corrective action to assure compliance with overall safeguards policies, procedures, and requirements, and (b) recommends suspension of such activities or other arrangements when necessary.
- (10) Prepares reports and provides data for reports to the Secretary on the status of the safeguards program.
- (11) Provides staff guidance and assistance with respect to policies, procedures, criteria and standards developed by the Office of Safeguards and Security.
- (12) Manages the development and maintenance of the Nuclear Materials Management and Safeguards System (NMMSS) by:
 - (a) collecting data relative to nuclear materials including those for which the United States has a safeguards interest both domestically and abroad; (b) processing the data; and
 - (c) issuing reports to support the safeguards and management needs of DOE, NRC, and other government organizations.
- (13) In connection with international agreements, (a) recommends corrective action to assure compliance with overall safeguards policies, procedures, and standards, and (b) recommends suspension of any agreements where necessary to meet DOE policy in regard to such arrangements.

(14) Audits DOE operations office records.

b. Secretarial Offices and Field Organizations:

- (1) Assure that each contractor and subcontractor under their jurisdiction who may use or possess SNM or other nuclear materials is required by contract to develop and maintain written current procedures for safeguards control and accountability of nuclear materials. Review and approve such procedures and revisions thereto prior to being put into effect, and approve exemptions from this requirement.
- (2) Assure that each contract under which nuclear materials are to be supplied to license-exempt contractors contain appropriate safeguards provisions.
- (3) Assure that inventory and scrap levels of nuclear material held by contractors and subcontractors under their jurisdiction are minimized to be consistent with good safeguards practices.
- (4) Take appropriate action to correct deficiencies disclosed during surveys.

c. Heads of Field Organizations:

- (1) Implement material control and accountability of nuclear materials for all DOE activities under their jurisdiction in conformity with the policies, procedures, and requirements set forth in this Order.
- (2) Assure the maintenance of records and issuance of periodic reports reflecting nuclear materials transactions and inventories under their jurisdiction.
- (3) Implement the Nuclear Materials Management and Safeguards System for all DOE activities under their jurisdiction in conformity with the policies, procedures, and standards set forth in this Order.
- (4) Approves exceptions to the requirements of the orders in the 5630 series where specific permission to do so has been granted by DP-1.
- (5) Reviews and analyzes inventory differences experienced in operations under their jurisdiction to determine and document the probable causes.

- (6) Assures that contractors and subcontractors under their jurisdiction analyze and determine the probable cause of all inventory differences; determine the reasons for quantities reported as differences arising on nuclear materials transfers; evaluate the significance of all differences; and take such corrective action as is deemed necessary. Review and approve or direct other necessary actions by the contractor as necessary to eliminate or reduce the inventory difference.
- (7) Report inventory differences immediately to the Office of Safeguards and Security and the appropriate Headquarters Program Office.
- (8) Develop detailed procedures for the conduct and reporting of nuclear materials surveys.

FOR THE SECRETARY OF ENERGY:



William S. Heffelfinger
Director of Administration