

DLAI 4145.8  
NAVSUPINST 4000.34C  
AFJI 23-504  
MCO P4400.105E

DSS-E

March 10, 2004

RADIOACTIVE COMMODITIES IN THE DEPARTMENT OF DEFENSE  
SUPPLY SYSTEM

(This publication has been revised significantly and  
must be reviewed in its entirety.)

A. REFERENCES. References are provided in the enclosure.

B. PURPOSE. This instruction:

1. Supercedes DLAI 4145.8, NAVSUPINST 4000.34B, AFJI 23-504, and MCO P4400.105D, 15 Feb 00.

2. Provides guidance for the control of radioactive material in the Department of Defense (DoD) Supply System in accordance with (IAW) reference A2 of the enclosure.

C. APPLICABILITY AND SCOPE. This instruction applies to the United States Air Force (USAF), the United States Navy (USN), the United States Marine Corps (USMC) and the Defense Logistics Agency (DLA), referred to collectively as " Services" or "Agencies," engaged in the acquisition, accountability, identification, possession and handling, storage, shipment and transport, transfer and disposal of radioactive commodities within the DoD Supply System. Where there is conflict between the provisions of this instruction, Federal regulations, the host nation, or Status of Forces Agreements (SOFA) utilized by the Service, the more stringent requirement shall apply. This instruction does not apply to Services or Agencies responsible for nuclear reactors and nuclear weapons or unique radioactive material used in research, test or production devices except for components and ancillary equipment common to other end items of supply. It is not intended to replace or supercede relevant military Service/Agency or DoD publications.

D. DEFINITIONS

1. Department of Defense Supply System. The DoD Supply System is a comprehensive level of organized supply (including wholesale and retail supply) linking the producer to the DoD user through an elaborate system of materiel management actions (including provisioning, cataloging, requirements determination, acquisition, distribution, maintenance, and disposal) for both principal items (items of such importance that central inventory control is required) and secondary items (consumable and repairable items) of supply.

2. Hazardous Characteristics Code (HCC). A two-digit alphanumeric code that is used to provide a means of categorizing hazardous materials

(HAZMAT). Reference A8 of the enclosure provides the official definition for each HCC.

3. Radioactive Commodity. Any item or device composed in whole or in part of radioactive material that a National Stock Number (NSN), trade or supply name, Commercial and Government Entity (CAGE) number or part number has been assigned.

4. Radiological Focal Point. A qualified individual, designated by the military Service or Agency responsible for categorizing, identifying and assigning radiological hazardous characteristics codes for entry into the Hazardous Material Information Resource System (HMIRS). Focal points are listed in paragraph E5c of this instruction.

5. Radioactive Material. Any material that spontaneously emits ionizing radiation.

6. Transfer. The exchange of a radioactive commodity between Nuclear Regulatory Commission (NRC) licensees or service authorization holders and may include transfer of physical possession and/or custody.

7. "Shall," "Will," "Should," and "May." The words "shall" or "will" are used in an imperative manner; "should" is used in a recommendatory manner; and "may" is used in a permissive manner. It may be necessary to use "will" in cases where simple futurity is required, i.e., "Power for the motor will be supplied by the ship." In addition, unless the context requires otherwise, words imparting the singular include the plural and vice versa.

E. PROCEDURES. The Services or Agencies shall:

1. Comply with all applicable Federal laws and applicable DoD directives, instructions and regulations pertaining to radiation safety, radiological environmental effects, possession, distribution, storage, handling, transportation and disposal of radioactive material and waste.

2. Require coordination with the procurement Contracting Officer/Agency, Research and Development Agencies, Inventory Control Point (ICP), Department of Defense (DoD), Integrated Material Manager (IMM) and authorized Service or Agency radiological focal point to properly identify and control commodities containing radioactive material incorporated as components and ancillary equipment common to kits, sets, assemblies and end items into automated data processing and DoD supply systems.

3. ACQUISITION. The Service or Agency shall:

a. Ensure contracts for items containing radioactive materials include the special clause(s) specified in the Federal Acquisition Regulation (FAR) and appropriate FAR supplements.

b. Require coordination with the applicable NRC licensee or service authorization holder prior to each procurement or re-procurement to

ensure compliance with the possession limits and conditions of the applicable license or authorization.

c. Ensure procurement contracts specifying Material Safety and Data Sheet (MSDS) submission are IAW the appropriate contract clause and reference A9 of the enclosure or latest version and that MSDSs are provided prior to award. MSDS for radioactive commodities shall contain, to the extent practical, the information specified in subparagraph 5b, below.

d. Ensure non-radioactive or less radioactive (i.e., less quantity, less radioactivity, or less hazardous) substitutes are incorporated into items whenever feasible and do not create greater potential personnel hazards than does radioactive material.

e. Prohibit the procurement, distribution, use, introduction, or development of items containing radium into the DoD supply system unless a non-radioactive substitute or a less hazardous substance cannot feasibly be used based on risk assessment analysis. This requirement does not apply to commodities currently in the supply system.

4. ACCOUNTABILITY. The Service or Agency shall:

a. Maintain control and accountability of all radioactive commodities held in physical custody under an NRC license or Service Authorization issued to the Service or Agency from acquisition to disposal.

b. Report defective radioactive commodities to the NRC Licensee or Service/Agency authorization holder.

c. Notify other Services or Agencies when the amendment or issuance of a new NRC License or Service Authorization may affect the possession limits of another NRC License or Service Authorization.

d. Maintain responsibility for accountability and control of radioactive commodities in their physical custody and in transport until received at the receiving activity. Transfer of license responsibility occurs at the time of receipt by a Service/Agency authorized to possess the radioactive commodity under an NRC license or service authorization. A radioactive commodity in the possession of a storing activity is considered to be under the custody and control of the storing activity NRC license or service authorization. In this situation, the possessing activity (i.e., the Service/Agency which controls the life cycle aspects of the commodity) must abide by the requirements of the storing activity's NRC licensee or service authorization. This situation requires the possessing activity to be cognizant of the storing activity's NRC license or service authorization. When a transfer is requested by the storing activity or commodity developer/owner, the storing activity is responsible for properly coordinating, packaging, identification and maintenance of the radioactive commodities under its purview.

e. Ensure the receiving activity is authorized to possess the radioactive commodities transferred to them.

5. IDENTIFICATION. The Service or Agency shall:

a. Ensure that the critical data for identifying radioactive commodities are developed and entered into the applicable Service/Agency system(s) [(e.g., Federal Logistics Information System (FLIS), Hazardous Material Information System (HMIRS)], IAW Service/Agency directives. Detailed physical characteristics concerning the radioactive properties of specific items can be found in HMIRS as described in references A5 and A6 of the enclosure and Service or Agency data systems. The Service or Agency will ensure that all radioactive commodities are identified in a manner required by the Hazardous Communication Program, Title 29, Code of Federal Regulations (CFR). Data for each different item will be coordinated with and developed by the appropriate Service or Agency Radiation Safety focal point or NICP/DODIMM for entry into the HMIRS or other Service/Agency applicable system(s). Data maintained in the HMIRS shall be processed IAW Service/Agency directives.

b. Require each radioactive commodity's hazardous data to be incorporated into the HMIRS IAW Service/Agency directives. As a minimum the critical data shall include the:

(1) Radionuclide (name of the radioactive material in the NSN item; e.g., Cobalt-60).

(2) Radioactivity in becquerels (Bq) and microcuries ( $\mu\text{Ci}$ ).

(3) Physical form of radioactive source (Sealed/Unsealed)

(4) Hazard characteristic code for each radioactive commodity.

(5) NSN.

(6) Commercial and Government Entity (CAGE).

(7) Item manager and/or Nuclear Regulatory Commission (NRC) license(s) or service authorization.

(8) Part Number (PN) (i.e., the module or matrix containing the radioactive material).

(9) Item name (i.e., nomenclature of the radioactive component in the NSN assembly).

(10) Replacement NSN.

(11) End item (name of the end item or assembly NSN containing radionuclide).

(12) Any additional information deemed necessary to clearly identify radioactive material item(s) and device(s) upon receipt by Service or Agency.

c. Forward the MSDS, to appropriate HMIRS Service/Agency focal point as required by reference A4 of the enclosure. The HMIRS Service/Agency focal points should coordinate all MSDS for items containing radioactive material to the appropriate radiological focal point listed below:

(1) For Defense Logistics Agency: Director, Headquarters, Defense Logistics Agency, ATTN: DSS-E, 8725 John J. Kingman Road, Suite 2639, Fort Belvoir, VA 22060-6221.

(2) For the Department of the Air Force: 2402 E. Drive, Brooks Air Force Base, TX 78235-5114, AFIERA/ADR.

(3) For the Department of the Navy: Naval Sea Systems Command Detachment, Radiological Affairs Support Office (RASO), NWS P.O. Drawer 260, Yorktown, VA 23691-0260.

d. Ensure that the same NSN is not assigned to both radioactive and non-radioactive commodities in the Federal supply system. Similar items that are exempt from licensing, generally licensed, or specifically licensed for distribution, shall also be assigned separate NSNs to discriminate them from each other as well as from non-radioactive material.

e. Require identification of all radioactive commodities and components of kits, sets, assemblies and end items containing radioactive material.

f. Ensure that radioactive commodities found not properly procured and identified, per this instruction, are brought to the attention of the appropriate item manager or program manager for evaluation and resolution. The hazard communication program radiological focal point for the Service or Agency shall ensure the development and maintenance of required minimum critical data on radioactive commodities managed by their respective Service or Agency, as specified in subparagraph c, above.

g. Provide a method for reporting discrepancies in published data (Service Technical Bulletins for Radioactive Commodities; references A5 and A6 of the enclosure) concerning radioactive commodities and data determined by physical examination. Discrepancy reports shall be routed to the activity responsible for maintenance of the published data with copy furnished to the Service or Agency radiological focal point.

6. STORAGE AND HANDLING. The Service or Agency shall:

a. Ensure storage and handling of radioactive commodities in the supply system is performed such that personnel exposures are maintained as low as reasonably achievable (ALARA).

b. Require radioactive commodities to be stored in centralized/consolidated locations both locally and regionally to the extent practical to enhance the control of radioactive material.

c. Ensure radioactive commodities are stored and segregated IAW reference A8 of the enclosure. Radioactive material shall not be stored in the same warehouse section with explosives (other than depleted uranium ammunition and Promethium-147 Light Anti-Tank Weapon (LAW) rocket sights), flammable materials, photosensitive items (e.g., photographic film), food products or other incompatible items unless provided for and approved by the appropriate Service or Agency.

d. Require areas where radioactive commodities are stored to be posted IAW reference A10 of the enclosure, Service or Agency directives or other Federal regulations.

e. Preclude unnecessary or inadvertent personnel access or unauthorized removal of items from storage areas.

f. Respond to emergencies involving radioactive commodities stored or handled under the control of an NRC license or service authorization issued to that Service or Agency.

#### 7. SHIPMENT AND TRANSPORT

a. The Service or Agency shall ensure that radioactive commodities are shipped and transported IAW references in enclosure, paragraph B, as appropriate.

b. When transferring radioactive commodities, the NRC licensee or service authorization holder directing the transfer shall ensure the receiving activity is authorized to receive the material.

#### 8. DISPOSAL. The Service or Agency shall:

a. Screen radioactive items for resale, transfer, donation or sale, IAW reference A3 of the enclosure.

b. Identify components on all turn-in documents of the end item(s) containing radioactive material.

c. Ensure radioactive commodities are not physically transferred to Defense Reutilization and Marketing Office(s) (DRMOs). Item(s) controlled by an NRC or agreement state license shall require the agency and/or licensee to state, in writing, on the Disposal Release Order, that the transfer, sale or donation is restricted to LICENSED recipients only.

d. Ensure the disposal of radioactive material is IAW the reference A11 of the enclosure, Service or Agency directives, reference A10 of the enclosure and burial site criteria, if applicable.

e. Once the radioactive commodity has been declared as unwanted by the appropriate authority/item manager, the owning activity shall contact the applicable Service Low Level Radioactive Waste (LLRW) disposal office listed below:

(1) For Defense Logistics Agency: Director, Headquarters, Defense Logistics Agency, ATTN: DSS-E, 8725 John J. Kingman Road, Suite 2639, Fort Belvoir, VA 22060-6221.

(2) For the Department of the Air Force: 2402 E. Drive, Brooks Air Force Base, TX 78235-5114, AFIERA/ADR.

(3) For the Department of the Navy: Naval Sea Systems Command Detachment, Radiological Affairs Support Office (RASO), NWS P.O. Drawer 260, Yorktown, VA 23691-0260.

F. RESPONSIBILITIES. The Service or Agency shall:

1. Be responsible for issuing detailed procedures to ensure proper control of acquisition, accountability, identification, handling, storage, shipment, transport, possession, use, transfer and disposal of radioactive commodities within the DoD supply system as described in paragraph E, above.

2. Ensure that when required by Federal or Service regulations, the responsible commands or organizations obtain NRC licenses(s) or service authorization(s) before radioactive material requiring an NRC license or service authorization is obtained, possessed, stored, processed or used.

3. Utilize Federal Logistical Information System (FLIS) to identify radiological characteristics of Federal items of supply.

4. Utilize the HMIRS as a tool to provide identification, general and technical for radioactive commodities in the DoD supply system. Each Service, through the radiological focal points, shall ensure the proper identification of radioactive commodities under their cognizance in the HMIRS system.

5. Utilize to the extent practical, the Unique Item Tracking (UIT) program as documented in reference A2 of the enclosure to help maintain the visibility and ensure proper control of radioactive commodities in the DoD Supply Systems. Coordination and use of this program shall be through the UIT committee service representative.

G. EFFECTIVE DATE. This publication is effective immediately.

H. INFORMATION REQUIREMENTS. (Reserved for future use.)

BY ORDER OF THE DIRECTOR, DEFENSE LOGISTICS AGENCY AND THE SECRETARIES OF THE NAVY, THE AIR FORCE AND MARINE CORPS

Enclosure  
References

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COORDINATION: J-1, J-3, DSS-E, NAVY, AIR FORCE, MARINE CORPS,



Enclosure  
DLAI 4145.8  
NAVSUPINST 4000.34C  
AFJI 23-504  
MCO P4400.105E

#### REFERENCES

##### A. CITED

1. DLAI 4145.8/AR 700-64/NAVINSPIINST 4000.34B/AFR 67-8/MCO P4400.105C, Radioactive Commodities in the DoD Supply Systems, 15 Feb 00, superceded.
2. DoD 4140.1-R, DoD Supply Chain Materiel Management Regulation.
3. DoD 4160.21-M, Defense Materiel Disposition Manual.
4. DoDI 6050.5, DoD Hazard Communication Program.
5. DoD 6050.5-LR, DoD Hazardous Materials Information System Hazardous Item Listing.
6. DoD 6050.5-L, DoD Hazardous Materials Information System Hazardous Item Listing.
7. DoD 6050.5-M, DoD Hazardous Materials Information System Procedures.
8. DLAI 4145.11/ TM 38-410/ NAVSUP PUB 573/ AFJMAN 23-209/ MCO 4450.12A, Storage and Handling of Hazardous Material.
9. FED-STD-313D, Material Safety Data, Transportation Data, and Disposal Data For Hazardous Materials Furnished To Government Activities.
10. Title 10, CFR, Energy.
11. Title 29, CFR, Part 1910, Occupational Safety and Health Standards.
12. DOD 4715.6-R, Low-Level Radioactive Waste Disposal Program.
13. DoD 4500.9-R, Defense Transportation Regulation, Part II, Cargo Movement.

##### B. RELATED REFERENCES

1. DoD 6055.5-M, Occupational Health Surveillance Manual.
2. DoDD 5230.16, Nuclear Accident and Incident Public Affairs (PA) Guidance.

3. DoDI 6055.8, Occupational Radiation Protection Program.
4. AFI 24-204/DLAI 4145.3/TM 38-250/NAVSUP PUB 505/MCO P4030.19, Preparing Hazardous Materials for Military Air Shipments (Packaging and Materials Handling).
5. AFI 40-201, Management of Radioactive Materials in the USAF.
6. AFI 48-125, USAF Personnel Dosimetry Program.
7. AFI 91-204, Investigating and Reporting U.S. Air Force Mishaps, Chapter 10.
8. AR 700-141, Hazardous Material Information System.
9. TM 38-400/NAVSUP PUB 572/AFMAN 23-210/MCO 4450.14/DLAM 4145.12, Joint Service Manual (JSM) for Storage and Materials Handling.
10. DLAR 1000.28, Occupational Ionizing Radiation Personnel Dosimetry
11. DLAI 1000.30, Personnel Dosimetry Guidance and Dose Recording Procedures for Personnel Occupationally Exposed to Ionizing Radiation.
12. OPNAVINST 6470.3, Navy Radiation Safety Committee.
13. Radiological Affairs Support Program Manual, NAVSEA S0420-AA-RAD-010 (RAD-010).
14. Title 32, Code of Federal Regulations, National Defense.
15. Title 40, Code of Federal Regulations, Protection of the Environment.
16. Title 41, Code of Federal Regulations, Part 50-204, Safety and Health Standards For Federal Supply Contractors.
17. Title 49, Code of Federal Regulations, Transportation.
18. Title 48, Code of Federal Regulations, Chapter 1, Subpart 2.1.
19. Title 39, Code of Federal Regulation, Chapter 1, Part 138 U.S. Postal Service Regulations for Shipment by mail and US Postal Service Publication No.6 and 52 in the US Postal Manual.
20. International Air Transport Association Dangerous Goods Regulations.
21. United Parcel Service Guide for Shipping Hazardous Materials.
22. International Maritime Organization Technical Instructions.
23. International Civil Aviation Organization Technical Instructions for Safe Transport of Dangerous Goods by Air.

- 24 International Atomic Energy Agency Regulations.
25. MIL-STD-129, Department of Defense Standard Practice For Military Marking for Shipment and Storage.
26. MIL-STD-882, System Safety Program Requirements.
27. Deputy Under Secretary of Defense (Environmental Security) Memorandum dated 21 August 1997, Charter for Low Level Radioactive Waste Disposal Program.
28. MCO 5104.3, Marine Corps Radiation Safety Program.