Joint Service

# REGULATION

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| Defense Logistics Agency (DLA) | DLAR (JP) 4145.08 |
| Department of the Navy | NAVSUPINST 4000.34C |
| Department of the Air Force | AFJI 23-504 |
| United States Marine Corps | MCO P4400.105E |
| | Effective Date: March 28, 2018 |

Accountable Office: Headquarters DLA, Technical and Policy Division, J344

SUBJECT: Radioactive Commodities in the Department of Defense Supply System

References: Refer to Enclosure 1.

1. PURPOSE.

a. By the authority in Enclosure 1 (a), this Issuance reissues Enclosure 1 (b) to update policies, responsibilities, and procedures for the Radioactive Commodities in the Department of Defense (DoD) Supply System.

b. Provides control and guidance of radioactive material in the DoD Supply System, in accordance with (IAW) Enclosure 1(a).

c. Provides uniform procedures for the acquisition, accountability, identification, possession and handling, storage, shipment, transport, transfer and disposal of radioactive commodities by DLA and DoD.

d. Serves as a source of information, awareness, knowledge and technical guidance to manage radioactive materials.

e. Serves as a source of technical knowledge to use with other procedures, laws, manuals and guidance supporting safety and environmental management of radioactive material.

f. Applies to packaged items supplied with regulated dangerous ingredients as compounds, mixtures or pure substances. By this Instruction; a dangerous material is a chemical, bare item, or article controlled by:

(1) Title 10, Chapter I, Part 40, Section 40.4 - Nuclear Regulatory Commission (NRC)

(2) Title 29, Subtitle B, Chapter XVII, Part 1910, Subpart A, Section 1910.6 – Occupational Safety and Health Administration (OSHA)

(3) Title 40, Chapter I, Part 2, Subpart B, Section 2.306 – Environmental Protection Agency (EPA)

(4) Title 49, Chapter I, Part 171, Section 171.8 – Department of Transportation; International Maritime Organization (IMO)

(5) International Air Transport Association (IATA), International Civil Aviation Organization (ICAO)

(6) AFMAN 24-204(I)

(7) TM 38-250

(8) NAVSUP PUB 505

(9) MCO P4030.19

(10) DLAI 4145.3, Preparing Hazardous Materials For Military Air Shipment

g. Aids personnel in ensuring the proper control of items containing radioactive material during all stages of commodity life cycle control management.

h. Strengthens safety and environmental compliance with regulatory requirements regarding control of radioactive items. Supports the delivery of supply requisitions consistent with the customer's needs.

i. Ensures distribution is efficient, effective, safe and compliant during radioactive materials processing.

2. APPLICABILITY.

a. This regulation applies to:

(1) The United States Army, the United States Air Force, the United States Marine Corps (USMC), the United States Navy, and the Defense Logistics Agency (DLA). In this regulation referred to collectively as "Services" or "Agencies" that engage in the acquisition, accountability, identification, possession and handling, storage, shipment, transport, transfer and disposal of radioactive commodities within the DOD Supply System.

b. Where there is conflict between the rules of this issuance, Federal laws, laws of the host nation, or Status of Forces Agreements used by the Services, the more strict requirement shall apply.

c. This Regulation is not applicable to Services or Agencies responsible for: Nuclear reactors, nuclear weapons, or unique radioactive material used in Research, and Test or production items, except for items and ancillary equipment common to other end items of supply. It is not to replace or supersede relevant Military Service, Agency, or DoD publications.

3. DEFINTIONS. See Glossary.

4. POLICY. It is the Military Services and Agency policy to:

a. Use nonradioactive substitutes to replace radioactive items where possible. Give priority to supply nonhazardous substitutes without impacting customer needs and to track and ensure safety and security for proper control for these items.

b. Activities responsible for life cycle controls engage in and promote: Sound personnel and occupational safety, environmental protection, and community relations about the proper acquisition, storage, handling, and disposal of radioactive items.

c. Obtain, develop, and complete the Safety Data Sheet (SDS) or product information sheet and enter into the Hazardous Materials Information Resource System (HMIRS), before the first delivery arrives at its first destination.

d. Manage on-hand quantities to comply with the DOD shelf life policy and practices (DOD 4140.27-M).

e. Minimize generating of dangerous waste to within DOD guidelines in (DOD 4160.21-M).

f. Facility operators engage in and promote sound personnel and occupational safety, environmental protection, and community relations about the proper storage, handling, and management of dangerous material.

g. Move dangerous materials by the most direct means possible with the least amount of handling, to minimize product and facility damages and possible harm to personnel and the environment.

h. Protect Service and Agency personnel from accidental death, injury, or occupational illness IAW Enclosure 1 (i).

i. Obey policies and procedures involving radioactive commodities or materials IAW the guidelines in the references, enclosures, DoD directives, instructions, rules, Nuclear Regulatory Commission and International, Federal, State, and local regulations.

j. Provide information on all changes to policy, laws, and guidance involving radioactive commodities or material to the Radiological Program Manager (PM), DLA HQ Installation Support, DS-O.

5. RESPONSIBILITIES. Refer to Enclosure 2.

6. PROCEDURES. Refer to Enclosure 3.

7. INFORMATION REQUIREMENTS. None.

8. INTERNAL CONTROLS. The DLA HQ Storage and Handling of Hazardous Materials Program Manager (J344) is responsible for receiving, reviewing, and coordinating changes or possible changes to this Issuance in order to ensure compliance with International, Federal, State and local laws.

9. RELEASABILITY. UNLIMITED. This joint publication is approved for public release and is available on the Internet from the DLA Issuance Internet Website at http://www.dla.mil/issuances/.

10. EXPIRATION DATE : This Regulation will be reissued or canceled by the third anniversary of its publication date. If not, it will automatically expire effective March 28, 2021.

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Enclosures(s)
Enclosure 1 – References
Enclosure 2 – Responsibilities
Enclosure 3 – Procedures
Glossary

ENCLOSURE 1

REFERENCES

(a) DoD 4140.1-R, "DoD Supply Chain Material Management Regulation" May 23, 2003
(b) DLA Instruction 4145.8/NAVINSPINST 4000.34C/AFJI 23-504/MCO P4400.105E, "Radioactive Commodities in the Department of Defense Supply Systems, " March 10, 2004
(c) DoD 4160.21-M, Volume 4, "Defense Material Disposition: Instructions for Hazardous Propety and Other Special Processing Material" October 2015
(d) DoDI 6050.05, "DoD Hazard Communication (HAZCOM) Program" August 15, 2006 (certified current as of May 15, 2011)
(e) DLA Instruction 4145.11/TM 38-410/NAVSUP PUB 573/AFJMAN 23-209/MC) 4450.12A, "Storage and Handling of Hazardous Material"
(f) FED-STD 313 (current version), "Federal Standard: Material Safety Data, Transportation Data, and Disposal Data for Hazardous Materials Furnished to Government Activities"
(g) Title 10, Code of Federal Regulations, Energy
(h) Title 29, Code of Federal Regulations, Part 1910, "Occupational Safety and Health Standards"
(i) DoD 4715.6-R, "Low Level Radioactive Waste Disposal Program," January 17,2001
(j) DTR 4500.9-R, "Defense Transportation Regulation, Part II, Cargo Movement." May 2014 (Includes changes through 30 June 2014)(k)
(k) DoD Directive 4715.1E, "Environment, Safety, and Occupational Health (ESOH)". March 19, 2005
(l) DoD 6055.05-M, "Occupational Medical Examinations and Surveillance Manual,". May 2, 2007 (Incorporating changes through September 16, 2008)
(m) DoD Directive 5230.16, "Nuclear Accident and Incident Public Affairs (PA) Guidance," December 20, 1993
(n) DoD Instruction 6055.08, "Occupational Ionizing Radiation Protection Program,". December 15, 2009
(o) DoD 6055.05-M, "Occupational Medical Examinations and Surveillance Manual,"May 2, 2007 Incorporating changes through September 16, 2008).
(p) DoD Directive 5230.16, "Nuclear Accident and Incident Public Affairs (PA) Guidance," December 20, 1993
(q) AFMAN 24-204(I)/DLAI 4145.3/TM 38-250/NAVSUP PUB 505/MCO P4030.19I, "Preparing Hazardous Materials for Military Air Shipments"
(r) AFI 40-201, "Management of Radioactive Materials in the US Air Force" April 13, 2007
(s) AFMAN 48-125, "US Air Force Personnel Ionizing Radiation Dosimetry," October 4, 2011 (changes through August 20, 2013)
(t) AFI 91-204, "Safety Investigations Reports". February 12, 2014
(u) AR 700-141, "Hazardous Materials Information Resource System"

(v) TM 38-400/NAVSUP PUB 572/AFMAN 23-210/MCO 4450.14/DLAM 4145.12, "Joint Service Manual (JSM) for Storage and Materials Handling"
(w) DLA Instruction 4110, "Personnel Dosimetry and Recordkeeping,". June 3, 2008
(x) OPNAVINST 6470.3A, "Navy Radiation Safety Committee"
(y) NAVSEA S0420-AA-RAD-010 (RAD-010), "Radiological Affairs Support Program Manual"
(z) Title 32, Code of Federal Regulations, "National Defense"
(aa) Title 40, Code of Federal Regulations, "Protection of the Environment"
(ab) Title 41, Code of Federal Regulations, Part 50-204, "Safety and Health Standards For Federal Supply Contractors"
(ac) Title 49, Code of Federal Regulations, "Transportation"
(ad) Title 48, Code of Federal Regulations, Chapter 1, Subpart 2.1
(ae) Title 39, Code of Federal Regulation, Chapter I, 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
(af) International Air Transport Association (IATA) Dangerous Goods Regulations
(ag) United Parcel Service Guide for Shipping Hazardous Materials
(ah) International Maritime Organization Technical Instructions
(ai) International Civil Aviation Organization Technical Instructions for Safe Transport of Dangerous Goods by Air
(aj) International Atomic Energy Agency Regulations
(ak) MIL-STD-129, "Department of Defense Standard Practice for Military Marking for Shipment and Storage"
(al) MIL-STD-882, "System Safety Program Requirements"
(am) Deputy Under Secretary of Defense (Environmental Security) Memorandum, August 21, 1997, Charter for Low Level Radioactive Waste Disposal Program
(an) MCO 5104.3B, "Marine Corps Radiation Safety Program"
(ao) DOD Demilitarization Manual 4130.28M Vol 1-3
(ap) DOD 4160.28M, Vol 2, Defense Demilitarization: Demilitarization Coding

ENCLOSURE 2

RESPONSIBILITIES

1. DIRECTOR, DEFENSE LOGISTICS AGENCY (DLA). By the authority, direction, and control of the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD (AT&L)), through the Assistant Secretary of Defense for Logistics and Materiel Readiness (ASD (L&MR)), shall:

a. Be responsible for overseeing and staff supervision of the DLA program for: Storage, Handling, Receipt of Radioactive Commodities at U.S. Government locations throughout the world.

b. Be responsible for writing the policy, receiving, reviewing, updating, and coordinating with the Services information about changes or possible changes to this Issuance IAW International, Federal, State and local laws.

2. SECRETARIES OF THE MILITARY DEPARTMENTS. The Secretaries of the Military Departments shall:

a. Fulfill the needs of this issuance and its enclosures.

b. Be responsible for overseeing and staff supervision of Service program (s) for: Use, Handling, Maintenance, Reconditioning, and Storage of Radioactive Commodities.

c. Conduct inspections as needed, and keep accurate records of such inspections.

3. COMMANDERS OF DLA AND DOD STORAGE ACTIVITIES. The Commanders of DLA and DoD Storage and Using Activities that Furnish Special Support shall:

a. Implement this issuance and its enclosures.

b. Ensure that all people under their command who store, receive, issue, handle, and keep Radioactive Commodities are aware of and comply with the rules of this Joint Regulation and its enclosures.

c. Provide guidance as needed to all under their command that use, handle, preserve, and store Radioactive Commodities. Ensure all uphold an acceptable and constant safety and quality control program.

d. Conduct inspections as needed, and keep concise records of such inspections.

e. Review yearly the quality control and related technical contents of this issuance and its

enclosures, and in collaboration with DLA HQ, keep the correct principle parts current.

f. Assign condition codes, and report IAW the requirements of this Regulation and its enclosures.

4. THE DIRECTOR, DLA DISPOSITION SERVICES. Shall: Receive and process: Serviceable, Unserviceable, and Condemned, Radioactive Commodities from approved activities IAW DoD 4160.21-M, Enclosure 1 (c).

a. Ensure that all persons under their command are aware that all Defense Logistics Agency Disposal Offices are prohibited from physically receiving any property containing radioactive material. Property containing radioactive material can be accepted only under a "wash-post" basis only as accountability of record in place for Re-utilization and Transfer. Property containing radioactive material will not be offered for Sale or Donation.

b. Provide guidance as needed to all activities under their command concerning the prohibition of receiving any property containing radioactive material.

c. Conduct inspections as required herein, and maintain concise records of such inspections to ensure that any DLA Disposition Office/site does not store any property containing radioactive materials.

d. Review the quality control and related technical aspects of this Regulation and its enclosures annually and, in collaboration with HQ DLA, maintain appropriate constituent parts current.

e. Report in accordance with the requirements of this Regulation and its enclosures.

5. THE SERVICES OR AGENCIES. The Services or Agencies shall:

a. Implement the requirements of this Regulation and its enclosures.

b. Ensure proper control of radioactive commodities within the DoD supply system as described in Enclosure 3 "PROCEDURES".

c. Ensure personnel within their command who: use, handle, preserve, recondition, and store Radioactive Commodities are aware of and comply with this Joint Regulation and its enclosures.

d. Provide needed guidance to activities under their command that: Use, handle, preserve, and store Radioactive Commodities to ensure that they keep a satisfactory, constant safety and quality control program.

e. Conduct inspections as needed, and keep concise records of such inspections.

f. Review the quality control and related technical items of this Regulation and its

enclosures yearly and, in collaboration with HQ DLA, keep this regulation current.

g. Assign condition codes, and report IAW with the requirements of this Regulation and its enclosures.

h. When needed by NRC, Federal or Service regulations, responsible Commands or Organizations get NRC license (s) or Service Authorization (s) before receiving radioactive material needing an NRC license or Service Authorization to possess, store, process or use.

i. Use Federal Logistics Information System (FLIS) and the Services or Agencies automated data systems to identify radiological characteristics of Federal items of supply or major end items.

j. Use HMIRS as a tool to provide both general and technical identification and characteristics for radioactive items in the DoD supply system. Radiological focal points shall ensure the proper identification of radioactive materials or components and load items under their control in the HMIRS system.

k. Use the Unique Item Tracking System in Enclosure 1 (a), to help ensure proper control of items containing Licensed or Service Authorized radioactive components in the DoD Supply Systems. Coordination and use of this program shall be through the Unique Item Tracking Committee Service or Agency representative (s).

l. Ensure OSHA, 29 CFR, Part 1910 subpart I-I-1919.120, subpart L-1910.156, subpart Q-1910.252, subpart Z-1910.1027, subpart Z-1910.1096 guidelines are followed.

m. Ensure compliance with Enclosure 1(aa) subchapter C part 172.310 (marking), part 172.403 (labeling), and part 172.556 (placarding).

n. Ensure training and certification compliance with Enclosure 1 (j and ac). In addition to normal processing training and certification requirements, DLA distribution employees responsible for storage, handling and movement of radioactive materials are required to be trained IAW the Environmental Hazardous Material/Hazardous Waste Training Plan which is maintained by the Agency's environmental and safety office (http://www.resources.hr.dla.mil/downloads/trn/courses/environmental.pdf)

o. Train employees IAW the requirements of Enclosure 1(h) Training Requirements.

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

ENCLOSURE 3

PROCEDURES

1. The Services and Agencies shall:

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

1. Supply processing of radioactive items using automated tools such as: FLIS, Distribution Standard System (DSS), and HMIRS in order to manage radioactive materials and their associated SDS, IAW NRC License or Service Authorization and DOD requirements.

2. DEMIL: United States Munitions List: DEMIL code F (USML) items require physical DEMIL IAW ref 1 (ao) and (ap). Item managers, product specialists and or, equipment specialists shall furnish special demil instructions.

b. ACQUISITION. Acquisition – Acquiring radioactive items is IAW the FAR.

1. Coordinate the buy of items containing radioactive material with an NRC license or Service Authorization holder from the correct Service once a decision is reached that a less dangerous substitute is not possible.

2. Require an SDS or Product Information Sheet (PIS) when buying radioactive items for early identification of the radionuclide and its radioactivity.

3. Ensure contracts for items containing radioactive materials include the special Clause (s) named in the FAR and correct FAR supplements.

4. Before each buy or reprocurement, coordinate with the responsible NRC license or Service authorization holder (s), to ensure compliance with the possession limit (s) and condition (s) of the applicable NRC license (s) or authorization (s).

5. Ensure procurement contracts specifying SDS (s) or PIS (s) are IAW: The correct contract clause and Enclosure 1 (i) or latest version, Provide SDS (s) or PIS (s) before award, and SDS (s) or PIS (s) for radioactive items must contain the information named in Enclosure 3 (e), (a through l).

6. Ensure: Nonradioactive, Less radioactive, and Less dangerous substitutes are used in items whenever possible and do not create greater potential personnel hazards than does radioactive material.

7. Restrict: procurement, distribution, use, introduction, and development of items containing radium into the DoD Supply System, unless a nonradioactive substitute or a less

dangerous substance is not possible. Does not apply to items currently in the supply system. Items containing radium shall be replaced and disposed of or otherwise eliminated to the extent practicable.

c. ACCOUNTABILITY and IDENTIFICATION. The accountability and identification of radioactive items ensure the control of the items occurs at all phases of the life cycle management. Develop critical item data for identifying items and entry into the correct automated system (s) IAW Service or Agency directives. Detailed physical characteristics for specific items are located in HMIRS and are necessary to ensure compliance with the Hazardous Communication Regulations. Identification of all radioactive items, parts of kits, sets, assemblies and end items containing radioactive material is necessary to ensure the safety of personnel and the environment.

1. Report defective items to the NRC Licensee or the Service or Agency authorization holder.

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

3. Uphold responsibility for accountability and control of radioactive items in their physical care and in transport until received at the receiving activity.

a. Transfer of license responsibility occurs at time of receipt by a Service or Agency approved to possess the radioactive item under an NRC license or service authorization.

b. Possession of a radioactive item by a storing activity is considered to be under the custody and control of the storing activity's NRC license or service authorization.

c. The Service or Agency, which controls the life cycle of the radioactive item, must meet the requirements of the storing activity's NRC licensee or service authorization.

d. The holding activity needs to be aware of the storing activity's NRC license or service authorization.

e. When the managing activity, item developer or owner requests a transfer, the storing activity is responsible for properly coordinating, packaging, identification and maintenance of the radioactive items under its scope.

4. Ensure the recipient is authorized to possess the radioactive item before transfer. The NRC licensee or Service holder/item manager ensure the recipient is authorized to receive the radioactive item before starting the Material Release Order (MRO) to the storing activity.

5. Require each radioactive item's major end item's hazardous data in HMIRS, IAW Service or Agency directives. Data for each different item will be coordinated with and developed by the appropriate Service or Agency Radiation Safety focal point or ICP/DOD IMM

for entry into HMIRS or other Service/Agency applicable system (s). As a minimum the critical data shall include:

a. Radionuclide (name of the radioactive material in the National Stock Number (NSN) Item: e.g., Cobalt-60).

b. Radioactivity in Becquerels (Bq) and microcuries (uCi).

c. Physical form of radioactive source (Sealed or Unsealed).

d. Hazard characteristic code for each radioactive item.

e. NSN

f. Commercial and Government Entity (CAGE).

g. Item Manager's, NRC licensee (s) or Service Authorization.

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

i. Item Name (i.e., nomenclature of the radioactive item in the NSN assembly).

j. Replacement NSN

k. End item (name of the end item or assembly containing radionuclide (s). The end item must cover the same information as showed in Enclosure 3 (e) (a through k).

l. Any additional information deemed necessary to identify any radioactive material item (s) on receipt by a Service or Agency.

6. Forward the SDS or PIS, to HMIRS's Service or Agency focal Point (s) as needed by, Enclosure 1(d). The HMIRS Service or Agency focal points shall coordinate all SDSs or PISs for items containing radioactive material to the correct radiological focal point listed below:

a. For Defense Logistics Agency: Director, Headquarters, Defense Logistics Agency, ATTN: J344/ HMIRS, 8725 John J. Kingman Road, Suite 2639, Fort Belvoir, VA 22060-6221.

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

c. 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. For the Department of the Army: Low-Level Radioactive Joint Munitions Command Safety/Rad Waste Directorate AMSJM-SF, 1 Rock Island Arsenal, Rock Island, IL 61299-6000.

7. Do not assign the same NSN to radioactive and nonradioactive items in the Federal supply system. Assign similar items, free from licensing, generally licensed, or specifically licensed for distribution, separate NSNs to discriminate them from each other as well as nonradioactive material.

8. Require identification of, all radioactive items and items of kits, sets, assemblies and major end items containing radioactive material.

9. Bring radioactive items found not properly procured and identified, by this instruction, to the attention of the: Item manager, Product specialist, Supply planner, NRC License, Service holder, or Responsible program manager for evaluation and resolution. The radiological focal point for the Service or Agency shall ensure development and maintenance of minimum critical data on radioactive items managed by their respective Service or Agency, as named in Enclosure 3 (e) 5 (a through d).

10. Provide a method for reporting discrepancies in published data (Service Technical Bulletins for Radioactive Commodities) about radioactive items and item data determined by physical examination. Route discrepancy reports to the activity responsible for maintenance of the published data with a copy supplied to the Service or Agency radiological focal point (i.e., the licensee).

11. Confirm that all radioactive commodities have been assigned a Demilitarization (DEMIL) Code that will ensure that the radioactive component is removed or controlled for disposal. Further ensure that all radioactive commodities assigned a DEMIL Code of "F" have current DEMIL Instructions furnished to the TACOM-Unique Logistics Support Applications (TULSA) site.

d. STORAGE and HANDLING. Process radioactive items for storage by the Hazard Characteristics Code (HCC) and the SDS number. Accurately match of the item and its SDS or PIS at the receiving point. Perform periodic (e.g. monthly, quarterly) surveys and physical inventories IAW Service or Agency directives and NRC license requirements. Achieve compliant storage IAW these practices. An NSN item may include items from different manufacturers or formulators. Receiving activity take care to ensure the SDS for the item precisely matches the item delivered. Confirm the item and its SDS or PIS. The operating automated system will assign a precise SDS number and storage location IAW the needs set forth by this policy.

1. Ensure storage, handling and shipment of radioactive items in the DoD and DLA Supply Systems keep personnel exposures as low as reasonably achievable (ALARA).

2. Store radioactive items in centralized, consolidated or approved locations, both locally and regionally, to improve the control of radioactive material.

3. Store and separate radioactive items, IAW Enclosure 1(h). Do not store radioactive material 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. combustibles and photographic film), food products or other incompatible items unless provided and approved by the correct Service or Agency.

4. Properly store, identify and post radioactive items IAW Reference 1(g) of the enclosure, Service or Agency directives or other Federal laws.

5. Prevent unnecessary or unintended personnel access or unauthorized removal of items from radioactive storage areas. Prevent unauthorized removal by designing and building two separate physical controls, using the increased rules of EA 05-090 and 07-305. (Physical Security) as applicable.

6. 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.

e. SUBPROCESS FOR STORAGE AND HANDLING:

1. Describe sub processes in general and high-level terms, to present the process as a standard and consistent with other hazardous materials. The sub processes refer to the requirements associated with new radioactive items. Enter the new item into the automated data system and it quickly recognizes following shipments for the same item when the package markings and shipping documentation are clear and accurate. The process:

a. Accounts for the general movement of the items with their safe and compliant handling requirements.

b. Addresses storage and handling where radioactive materials may become a difficulty because of: Accidental damages, Expired shelf life, or other reasons, resulting in the release of unsafe amounts of radioactive material.

2. Delivery of Radioactive Materials.

a. Deliver shipments containing radioactive materials only to the address identified in the shipping documentation.

b. Provide the recipient an Advance Shipment Notice (ASN) before delivery (prenotification) of the type and amount of material involved. Sometimes the ASN is not provided, and the receiving activity may be unaware the shipment contains radioactive material.

c. Coordinate and notify the licensee before shipment of these items occur to ensure the licensee knows about the movements and locations of these items.

3. Process Radioactive Material through Conveyance Control. Security personnel control the entry of conveyances and provide direction on where the shipments are to be delivered. Review the driver's shipping papers and or placards to find if radioactive materials are included in the shipment. Security personnel review the documents and decide where to direct the shipment. Dependent on the type of radioactive commodities, these items may be delivered to Central Receiving or Specialized Radioactive Material Storage area appointed for receipt and storage. Route shipments (full loads or partial loads) that contain exclusive radioactive materials directly to the Hazardous Materials Storage or Radioactive Material Storage area (only applicable to storage type facilities).

4. Process Radioactive Material through Central Receiving. Identify radioactive items received at Central Receiving from nonhazardous items. Screen the shipment for radioactive items, and process for receiving. Move items of concern to health directly to the Hazardous Materials Storage or the Specialized Radioactive Materials storage area. Identify, separate and move radioactive items to specialized storage areas where trained and qualified personnel can safely process them. (This is only applicable to storage type facilities).

5. Process Radioactive Material at Storage Facility. Delivered items to a storage facility may be recognized, not necessarily visibly identified, as radioactive items. Unload and handle these items as if they are radioactive or hazardous materials. Employee (s) will perform a visible inspection of all items or packages for possible release of radioactive material, damaged packages, missing items and other safety, security, and compliance concerns.

6. Identify the Radioactive Items. Identify all radioactive items by their National Stock Number (NSN), Contracting and Government Entity (CAGE), Part Number (PN) and or Trade Name. The product package may contain information. When not enough information is available to confirm the identity of any item, isolate and secure it for further research of item data information.

7. Matching the Radioactive Items to the SDS.

a. This is a "critical" step in properly receiving and processing safely and effectively radioactive items into a storage facility. Do not include items in the operating system, until an exact match is proved between the item identified in DSS (or applicable Service system) and the SDS that applies to it in HMIRS. An NSN identified item may have more than one SDS; therefore it is important to deliver the items with complete and accurate item data information that properly identifies the radioactive items. Since the SDS number assigned by HMIRS and the SDS or PIS, provided by the supplier, has no complementary identifying number or marking on the item received, the process depends on a well trained and qualified distribution workforce.

b. The accuracy depends on the receiving personnel handling the radioactive items judgement. Choices for the precise SDS or PIS sheet can be difficult to decide. Scrutiny of the item data information may need several hours or days to ensure an exact match between the item

and its SDS or PIS. Until this step is accurately completed, the facility and workers are potentially at unknown risks associated with these items.

c. To ensure a flawless distribution process for hazardous materials, consider future systems and, development of new emerging technologies like the following: Automatic Identification Technology (AIT), Radio Frequency Identification (RFID), Global Trade Item Number (GTIN) or other commercial developments with national and international application, systems and apply as rapidly as possible.

8. Loading SDS Number and Hazard Characteristic Code (HCC) in DSS. Confirm an exact match for an item and its SDS and add the SDS Number and the HCC to the automated system that supports the process. At this point, the item is properly identified and the automated system will complete the receipt processing.

9. Stow Radioactive Materials by the HCC and SDS Number. Complete the receiving action and input the item into the supporting automated system. The system can provide a stow action based on the HCC and SDS number that is assigned in HMIRS. This is a "critical step" for the proper storage separation of radioactive materials in the storage area.

10. Radioactive Material Storage. A specific storage location for each item IAW storage segregation and separation requirements set up by law and programmed in automated supporting systems. The process ensures compliance with storage compatibility standards and improves the effectiveness of emergency response personnel when responding to accidental releases or damages of radioactive items. Stow hazardous items by the SDS number to avoid the danger of incompatible materials in the same storage location at the same time. All items in these separated locations are consistent with the depot storage standards, security, and shelf life requirements. Perform facility radiological surveys and physical inventories periodically (e.g. monthly, quarterly), IAW standard warehousing practices and NRC license requirements. Deteriorating, damaged and dangerous items found will be processed by specialists through the local Radiation Protection Officer or Radiation Safety Office. Respond to, and report any radioactive incident in a manner consistent with the license procedures, NRC requirements and processes. Warehouse workers are normally not qualified or trained to process damaged and leaking items containing radioactive materials, and shall seek the help of the local Radiation Protection Officer. The managing Inventory Control Point (ICP) or licensee may direct a need for special testing. Unsalvageable items must be: Properly packaged, marked, labeled, and processed for proper disposition IAW the DOD disposal requirements for radioactive waste.

f. Shipment and Transport:

1. The Service or Agency shall ensure that radioactive items are shipped and transported IAW Enclosure 1 (a through ap) and DOT Special Permits, as suitable.

2. When transferring radioactive items, the NRC licensee or service authorization holder directing the transfer shall, ensure the receiving activity is approved to receive the material and will comply with the items unique needs if applicable.

3. There is no NRC exempt, quantity for alpha emitters, regardless of activity. Depending on the number of items in a shipment, even though each device may be NRC exempt, the total activity within the shipment may exceed DOT regulatory thresholds and be considered a "limited quantity" or "excepted quantity". Refer to 49 CFR for direction, and use DOT shippers for hazardous materials Class 7 materials.

4. Materials containing radionuclides where either the activity concentration (specific activity) or the total activity in the consignment does not exceed the values specified in the table in 49 CFR §173.436 or values derived according to the instructions in § 173.433) are not controlled by DOT for the purposes of transportation.

5. Some materials are exempt from regulation during transportation and are subject to licensing needs of NRC, or an Agreement State on: use, possession, materials control, waste disposal, and Environmental Protection Agency (EPA) requirements as a hazardous substance or hazardous waste. Also, some materials may be NRC exempt, but may be regulated by the DOT for transportation purposes. In other words, an item may be considered exempt under one regulatory authority but may not by exempt under another regulatory authority.

6. Perform radiation surveys and radiological wipes for outgoing shipments and incoming shipments. Properly trained (successful completion of certified instructor and online required courses) and certified personnel shall certify shipments IAW 49 CFR 172.700 of Hazardous Material Regulation (HMR) and DoD 4500.9-R.

7. Commercial passenger aircraft and cargo aircraft are not approved for transport of radioactive items or materials classified as any category above "Excepted Packages". Only use Military passenger aircraft and cargo aircraft for transporting radioactive items or materials when: The mission dictates, A risk assessment supports it, The MACOM and SDDC has agreed. See Reference 1 (q).

8. DLA Distribution is approved to package, certify and ship radioactive items for the Services when:

a. The Service or Agency storage activities requests a requirement with DLA Distribution by:

1. A DoD Single Line Requisition System Document (DD Form 1348).

2. Requisition and Invoice, Shipping Document (DD Form 1149).

3. A Transportation Control and Movement Document (DD Form 1384).

Each shipment must include a reimbursable accounting line of data to apply material, labor, transportation fees and Service Transportation Account Code. When the item is delivered to the DLA Distribution depot for distribution services; including those items previously packaged and certified by the Service, the asking Service must properly identify the item by completing the attached forms and provide an SDS or PIS. The item must be ready for shipment when delivered

to DLA and may not be stored or held by the storage activity for future processing after DLA has packaged and certified for shipment. Specific processes may be further negotiated and defined between DLA Distribution and the Services or Agencies field activities needing distribution services.

Also, Issue radioactive items IAW standard depot processing protocol by DSS. Separate by the HCC during the issue process to the extent reasonable and practicable. Employees responsible for preparing radioactive items for shipment, must be properly trained to package, mark, label and or to prepare shipping papers and documents, or certify such items for shipment by the type of transportation planned for it.

a. Material Release Order (MRO) for Radioactive Materials. A customer's request will cause an MRO to be initiated by the storage facility for the item needed. When the MRO is received, the storage facility will select the item needed out of stock storage. The item will be prepared for shipping to the customer IAW the priority set by the storage facility and the customer's needs.

b. Selecting the Radioactive Item. Radioactive items are selected IAW customer's needs and with standard depot processing protocol of automated supporting supply systems. During this time, the separation of items by the HCC should be IAW the needs set by the licensee or local facility requirements.

c. Package or Packing of the Radioactive Material. This is a "critical" step to the proper package processing of radioactive materials. Move selected items to the packing area. Designate separate lines for radioactive materials or the HCCs involved. Package the items IAW DOT requirements for the types and quantities of radioactive items being transported. Products are normally bought in commercial prepackages and quantities. Sometimes the customer's need is less than the prepackage quantity in stock. In these instances, repackaging is needed to meet the customer's needs. The employees responsible for preparing radioactive items for shipment must be properly trained and qualified to prepare these items for the type of transportation for the shipment and certification.

d. Offering the Radioactive Materials for Transportation. Items that are packaged and certified are offered to transportation office or division for document preparation and final processing for shipment.

e. Preparing Shipping Documentation for Radioactive Materials. Shipping documentation includes preparing the shipping papers IAW the type of transportation. The employee in this area needs special training on the preparation of these documents. To certify these shipments, a person(s) must be designated by the facility to act as the agent of the facility and have a current Hazardous Material certification to certify the Dangerous Goods Certification and any additional documentation required for its shipment.

f. Shipment of Radioactive Items. Load radioactive items IAW modal compatibility tables and other controls. Seal the shipping container. Provide the driver with the correct

placards, if applicable, and place these placards on the shipment container. Provide the driver with the shipping papers that he or she needs to carry to his destination.

g. DISPOSAL.

1. Screen radioactive items for transfer, or reutilization IAW Enclosure 1 (c).

2. Identify all radioactive items on all turn-in documents of the end item (s) containing radioactive material (s) and ensure all requirements of the current DEMIL instruction are enforced.

3. DEMIL: United States Munitions List: Demil code F (USML) items require physical demil IAW ref 1 (ao) and (ap). Item managers, product specialists and or, equipment specialists shall furnish special demil instructions.

4. Do NOT transfer radioactive items to any Defense Logistics Agency Disposition Services site (DLADISPO). Item (s) controlled by an NRC or agreement state license shall; need the agency and or licensee to state in writing on the Disposal Release Order, that: the transfer or reutilization is restricted to LICENSED recipients only.

a. Accomplish disposal of radioactive items by the DOD Executive Agent for Low Level Radioactive Waste (DOD EALLRW) and the storing activity. Separate the items to be disposed from mission ready stock and arrange for pick up and disposal with DOD EALLRW. Radioactive items are PROHIBITED from being physically transferred to [any] DLA Disposition Services Office (DLA DISPO) for disposal action.

5. Ensure the disposal of radioactive material is IAW Enclosure 1 (i), Service or Agency directives, and burial site criteria, if applicable.

6. Once the radioactive item has been declared as unwanted by the correct Service, Agency, authority, item manager, product specialist or supply planner, the owning activity shall contact the correct Service or Agency Low Level Radioactive Waste (LLRW) disposal office listed below:

a. For Defense Logistics Agency: Director , Headquarters, Defense Logistics Agency, ATTN: DS-O, 8725 John J. Kingman Road, Suite 2639, Fort Belvoir, VA. 22060-6221.

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

c. 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. For the Department of the Army: Low-Level Radioactive Joint Munitions Command Safety/Rad Waste Directorate AMSJM-SF, 1 Rock Island Arsenal, Rock Island, IL 61299-6000.

h. ADDITIONAL INFORMATION.

1. The requirements of this instruction are based on the procedures of Joint publication: DLAI 4145.8/OPNAVINST 4460.X/AFJI 23-504/MCO P4400.105D/AR 700-ZZ, "Radioactive Commodities in the DOD Supply System". This Joint publication is implemented under the authority of DOD 4140.1-R, "DoD Supply Chain Materiel Management Regulation".

2. Definition of Radioactive Material. Radioactive material is a hazardous material and is included in the definition of hazardous material in Federal Standard (FED STD) 313D (or latest revision), "Material Safety Data, Transportation Data and Disposal Data for hazardous Materials that is provided to Government Activities". Appropriate actions are taken as a part of the buying process to ensure radioactive items are bought with the proper identification markings, and the item specific SDS or PIS is provided to the receiving activity before its initial delivery and coordination with the correct licensee has occurred. The suppliers shall mark and label their products with standard visual and electronic markings that can properly be used to identify and discriminate radioactive items of supply by the amount and type of isotopes contained in the item. All shipments must be coordinated with the correct licensee.

3. Marking Requirements. Buying and delivering radioactive items that cannot be effectively recognized can put the handlers, users, and facility operations at risk. Requiring the supplier to correctly identify the radioactive material is done by requiring them to provide an SDS or PIS for items that meet the definition of hazardous materials in FED STD 313D (or latest revision). Products or articles shall be labeled in such a manner that can be exactly matched to the SDS or PIS that applies. Procedures that use Automated Identification Technology (AIT); such as, bar codes and RFID, can improve the overall efficiency and effectiveness of this process and should be aggressively pursued as a potential tracking module as this technology emerges through commercial and DOD applications.

4. Emergency Response. For emergency assistance associated with the release of radioactive material, call one of the following emergency response telephone numbers:

a. Army (703) 697-0218 (collect if necessary)

b. Air Force (202) 767-4011 (collect if necessary)

c. Navy and Marine Corps (757) 887-4692 (collect if necessary)

d. Defense Logistics Agency (717) 770-5283

# GLOSSARY

## PART I. ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| AFI | Air Force Instruction |
| AFJI | Air Force Joint Instruction |
| AFJMAN | Air Force Joint Manual |
| ALARA | As Low As Reasonably Achievable |
| AR | Army Regulation |
| Bq | Becquerels |
| CAGE | Commercial and Government Entity |
| CFR | Code of Federal Regulations |
| DEMIL | Demilitarization |
| DLA | Defense Logistics Agency |
| DLAI | Defense Logistics Agency Instruction |
| DLAR | Defense Logistics Agency Regulation |
| DoD | Department of Defense |
| DOT | Department of Transportation |
| FAR | Federal Acquisition Regulation |
| FLIS | Federal Logistics Information System |
| HAZCOM | Hazard Communication |
| HCC | Hazard Characteristic Code |
| HMIRS | Hazardous Materials Information Resource System |
| IAW | In Accordance With |
| ICP | Inventory Control Point |
| IMM | Integrated Material Management |
| LLRW | Low Level Radioactive Waste |
| MCO | Marine Corps Order |
| NAVSUPINST | Naval Supply Instruction |
| NRC | Nuclear Regulatory Commission |
| NSN | National Stock Number |
| PIS | Product Information Sheet |

| | |
|---|---|
| PLFA | Primary Level Field Activity |
| PN | Part Number |
| RASO | Radiological Affairs Support Office |
| SDS | Safety Data Sheet |
| uCi | Microcuries |
| USA | United States Army |
| USAF | United States Air Force |
| USMC | United States Marine Corps |
| USN | United States Navy |

## PART II. DEFINITIONS

Demil Code F. This code is normally assigned to DEMIL required property that presents environmental, safety, or health hazards as a result of DEMIL actions. Examples of such hazards include the presence of radioactive or toxic constituents, compressed gases, compressed springs, and batteries. DEMIL instructions for code "F" property are required to identify special provisions, required occupational expertise, and specific disposition directions.
a. Requirements. Items assigned DEMIL code "F" with an NSN shall have physical DEMIL instructions specific to the item available from the item manager or DEMIL administrator. The purpose of the instructions is to provide procedures on how to safely accomplish the DEMIL. The instructions must be entered into the DoD DEMIL code "F" instructions repository on the Army Electronic Product Support (AEPS) Website at https://aeps2.ria.army.mil/.

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 in which a central inventory control is required) and secondary items (consumable and repairable items) of supply.

Hazardous Characteristics Code (HCC). A two-digit alphanumeric code that is used to provide a means of classifying hazardous materials. Enclosure 1 (e) provides the official definition for each HCC.

Radioactive Commodity. Any item or device made in whole or part of radioactive material that an NSN, Management Control Numbers, Line Item Numbers, NonStandard Line Item Numbers trade or supply name, CAGE number or part number has been assigned.

Radiological Focal Point. A formally trained and qualified individual named by the Military Service or Agency responsible for classifying, identifying, and assigning radiological hazardous

characteristics codes for entry into the HMIRS. Focal points are listed in Enclosure 3, (e), (3), (a through d).

Radioactive Material. Any material containing radionuclides where the activity concentration and the total activity exceed the values named in table in 49 CFR §173.436 or values calculated according to instructions in 49 CFR §173.433."

Service Authorization Holder. The Service or Agency physically holding "any" device or item containing radioactive material, exempt from a general or specific license requirement (s) but for which the correct Military Service (s) or Agency (ies) has determined an "authorization or permit" is needed for receipt, transfer, ownership, possession, or use. Included are electron tubes, smoke detectors, or other items containing radioactive material not exceeding the NRC or Title 10, CFR (reference Encl 1 (g) license-exempt quantities.

Transfer. The exchange (may include physical possession and/or custody) of radioactive items between NRC licensees or Service authorization holders.