



Defense Logistics Agency Directive (DLAD) 4145.41
Department of Army Regulation (AR) 700-143/TBD*
Naval Supply Corps System Command Instruction
(NAVSUPINST) 4030.55C
Air Force Instruction (AFI) 24-210(I)
Marine Corps Order (MCO) 4030.40/TBD*

Releasability: Unlimited.

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[Change 3:](#) April 1, 2010

Packaging of Hazardous Material

1. SCOPE.

1.1. Applicability. This directive is applicable to the Military Services and the Defense Logistics Agency (DLA), referred to as Department of Defense (DOD) components in this directive.

1.2. Purpose. This directive establishes uniform policy for packaging Hazardous Materials (HAZMAT) for safe, efficient, and legal storage, handling, and transportation, to include Certifications of Equivalency (COE) and Competent Authority Approvals (CAA).

2. APPLICABLE DOCUMENTS. The documents listed in this section are specified in sections 3 through 7. The documents form a part of this document to the extent specified herein. Unless other specified, the issues of these documents are those cited in the solicitation or contract.

2.1. Government Directives, Standards, and Instructions.

2.1.1. MIL-STD-129, Standard Practice, Military Marking for Shipment and Storage.

2.1.2. AFMAN 24-204 (I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAI 4145.3, Preparing Hazardous Materials for Military Air Shipments.

2.1.3. AR 700-15/NAVSUPINST 4030.28D/AFMAN 24-206(I)/MCO 4030.33D/DLAR 4145.7, Packaging of Materiel.

2.1.4. DLAI 4140.55/AR 735-1I-2/SECNAVINST 4355.18/AFJMAN 23-215, Reporting of Supply Discrepancies.

2.1.5. DLAD 4145.41/AR 700-143/AFJI 24-210/NAVSUPINST 4030.55A/MCO 4030.40A, January 14, 2000, superseded.

2.2. Other Government Documents, Drawings, Web Sites and Publications.

2.2.1. Title 49, Code of Federal Regulations, Parts 100-180, Transportation.

2.2.2. Defense Transportation Regulation (DTR) 4500.9-R-Part II, Cargo Movement.

2.2.3. Certification of Equivalency (COE), Department of Transportation (DOT) Exemptions, and Competent.

2.2.4. CAA DOT exemptions available at <http://hazmat.DOT.gov/exempapp/approvals/exsys.htm>.

* Final approval by the DLA precedes final acceptance and directives system validation by these participating organizations.

2.1.5. Surface Deployment and Distribution Command (SDDC) SafetyNet Program as cited in the DTR, Part II, Chapter 204, paragraph H at http://www.transcom.mil/j5/pt/dtrpart2/dtr_part_ii_204.pdf.

2.1.6. DOD Performance-Oriented Packaging (POP) Program available at <http://www.ddc.dla.mil/pop/>.

2.3. Non-Government publications.

2.1.1. ASTM D 4919 - Specification for Testing of Hazardous Material Packaging.

2.1.2. International Civil Aviation Organization (ICAO) Technical Instructions.

2.1.3. International Maritime Dangerous Goods (IMDG) Code.

2.1.4. International Air Transport Association (IATA) Regulations.

3. DEFINITIONS. Refer to 49 CFR 171.8 for definitions and abbreviations provided by the DOT. The following terms and definitions are in addition to the DOT terms.

3.1. Certification. The act of confirming and verifying the completed package meets the requirements of the applicable modal regulation.

3.2. Certifier. One who physically recognizes the correctness of a package construction or has access to test data for that package and who then verifies in writing that it will perform to the level required. A certifier may perform one or more of the following acts of certification:

3.2.1. Performs a packaging operation in compliance with instructions prepared by a package designer.

3.2.2. Determines that the packaging and/or container has been manufactured, assembled, and marked in accordance with requirements.

3.3. Closures. Devices, which close an opening on a receptacle.

3.4. Excepted Quantities. Excepted quantity, when specified in a section of 49 CFR for a particular material, is small amount of certain HAZMAT that are not subject to the other requirements of 49 CFR 173, when they meet the criteria of 49 CFR 173.4.

3.5. In-House Testing. HAZMAT packaging testing conducted at a DOD packaging test facility.

3.6. International Maritime Dangerous Goods (IMDG) Code. Regulatory document which implements the requirements of the IMO.

3.7. Preparer. Synonymous with Certifier.

3.8. Self-Certifier. Organization or person who acts as a certifier in their own packaging regard that is approved by the Competent Authority.

3.9. Transitional Packaging. Packages recognized as permissible prior to an effective date of a requirement which may continue to be legally used until an established expiration date.

3.10. UN Committee Of Experts On The Transport Of Dangerous Goods. Panel responsible for the development of recommendations dealing with the multi-modal transport of dangerous goods.

4. POLICY.

4.1. General. DOD-managed HAZMAT shall be provided packaging protection at the lowest overall cost without compromising established DOD safety standards. Packaging shall provide adequate continuous protection to the packaged HAZMAT and shall prevent any release of the HAZMAT into the environment. When HAZMAT is shipped, the packaging and marking shall conform to the applicable modal regulations (See 2.2). Modal regulations include the International Civil Aviation Organization (ICAO) Technical Instructions, the International Air Transport Association (IATA) Regulations, the International Maritime Dangerous Goods (IMDG) Code/International Maritime Organization (IMO), Title 49, Code of Federal Regulations (49 CFR) and AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAI 4145.3, Preparing Hazardous Materials for Military Air Shipments. HAZMAT packaging, which has been tested and passed the United Nations (UN) performance specification requirements, will be applied to HAZMAT for domestic shipments consistent with Title 49 CFR, Parts 100-199, except for Class 2 and 7.

4.2. Procurement. DOD components will specify in procurement documents and contracts packaging requirements based upon UN Specification packaging unless the HAZMAT is exempted under paragraph 4.11 or as directed by the DOD component Headquarters. Modal requirements, especially air movement, will be taken into consideration during procurement or contracting of hazardous materials. Closing instructions required by Title 49 CFR, 178.2 must be provided with procured or contracted hazardous materials.

4.3. Multi-Use HAZMAT Packaging. Containers designed for multiple inner components will be tested and certified to their maximum capacity as stated in the applicable regulation. This testing will be sufficient for the containers when loaded to less than their maximum capacity. Any void space must be completely filled with approved cushioning material.

4.4. Marking. Marking of hazardous materials packaging will be in accordance with the latest revision of MIL-STD-129, and the applicable modal regulation(s).

4.4.1. Packaging that successfully pass DOD hazardous materials packaging testing will be marked with the logo "USA/DOD." Activity-specific logos in Appendix A may be used by DOD test activities if directed by the owner of the code.

4.4.2. DOD components are authorized to mark the applicable DOD UN HAZMAT packaging logo on Federal or Military Specification containers that pass DOD HAZMAT packaging testing. DOD-tested vendor packs may be marked by DOD personnel with the applicable DOD UN HAZMAT packaging logo.

4.4.3. DOD logos and test reports may be provided to vendors, at the discretion of the procuring activity, only if the containers are Government Furnished Equipment (GFE), or if the containers are strictly controlled by configuration control drawings, first article tests are performed, and inspection procedures are followed by Government quality assurance personnel that validate compliance.

4.5. Foreign Hazardous Materials Packaging. Foreign manufacturers exporting to the United States and utilizing packages certified to UN specifications by a nation other than the United States may be accepted into the Defense Transportation System (DTS) when the packaged markings are in English.

4.6. Testing Requirements for HAZMAT Packaging. Testing of hazardous materials packaging will be in accordance with Title 49 CFR, instructions authorized by the Competent Authority, and any differences designated by ICAO, IMDG, and IATA (See 2.2.2 and 2.3). Use of ASTM-D-4919, Standard Specification for Testing of HAZMAT Packaging, is recommended to ensure that tests can be repeated. HAZMAT packaging testing will be conducted according to the mode of transport, physical state of material, packing groups, weight, and container configuration rather than National Stock Numbers (NSN). Any other HAZMAT that is within the test parameters may be shipped in that certified container.

4.6.1. DOD components shall ensure that hazardous materials are in containers that have successfully passed the required test standards, unless that packaging is exempted under paragraph 4.10 of this directive. This may be accomplished by procuring the HAZMAT in certified containers, by performing in-house testing through the use of a DOD test facility, or by the use of a DOT-approved third-party contractor certified by DOT to perform UN Certified 3rd party testing of non-bulk POP. DOD components may require vendors to submit test reports and configuration control drawings when procuring hazardous materials in packaging conforming to UN specifications. Vendors may be asked to submit test reports by Data Item Description DI-PACK-81059 (Hazardous Materials POP Test Report Format) or other applicable contractual packaging requirements. The decision to procure test data from a vendor is at the discretion of the Contracting Officer. An example of when procurement of vendor test data may be appropriate is when the packaging data for the item is also being procured.

4.6.2. Hazardous materials packaging testing shall include all Title 49 CFR requirements or the applicable Competent Authority decisions for the affected item's hazard class. The following guidance applies to DOD component hazardous materials packaging testing:

a. Prior to initiating a request for hazardous materials packaging testing, DOD components will research the DOD POP program (see 2.2.2) to determine if a tested package/configuration already exists.

b. DOD components shall identify related families of hazardous items and use a single test report to package and certify a related family to the maximum extent possible in accordance with the instructions published and authorized by the Competent Authority.

c. In order to qualify for air shipment, inner receptacles of a combination packaging containing liquids must be capable of withstanding without leakage, an internal pressure differential standard and all other requirements of ICAO, IATA and AFMAN 24-204(I) as applicable. Inner receptacles that do not meet this requirement must be packed in supplementary packaging that meets the pressure differential requirement, as well as all other requirements of the applicable modal regulation. Mark the outer pack or overpack "Air Eligible" in accordance with AFMAN 24-204 (I) or MIL-STD-129.

d. UN Performance packaging tests will be conducted on affected HAZMAT packaging, regardless of tests that may be required by the Federal or Military container specification. If the specification requires the same tests as those required for UN testing specifications, the tests need not be duplicated if documented test results are available. UN Performance packaging tests will be conducted to the requirements of the most stringent mode of transportation anticipated.

e. Limited quantities, to be offered for air shipment, while not requiring UN Specification must successfully pass tests required by ICAO, Technical Instructions, Part 3, Chapter 4 and AFMAN 24-204 (I), Attachment 19.

4.7. DOD Testing/Retesting. The following applies to hazardous materials packaging testing/retesting:

4.7.1. The United States DOT is the United States Competent Authority and considers all of DOD as one entity (container manufacturer). Therefore, once a HAZMAT packaging configuration has been tested by one DOD activity, other DOD shippers need not test the same package configuration.

4.7.2. For reparable hazardous items, the cognizant packaging design activity is responsible for the development of Special Packaging Instructions (SPI) or configuration control drawings and the required hazardous materials packaging testing of the reusable packaging.

4.7.3. Periodic retesting will be accomplished on packaging configurations in production by DOD activities as required by Title 49 CFR or the Competent Authority. The Military Service/Agency having item management responsibility for the hazardous item is responsible for ensuring the periodic retesting is performed as required.

4.8. Providing Test Reports to Vendors. DOD HAZMAT packaging test reports will not be provided to vendors except as otherwise provided in paragraph 4.4.3.

4.9. Reuse of Containers.

4.9.1. The reuse of tested fiberboard containers (Fast Packs) designed for reuse, PPP-B-1672, Box, Shipping, Reusable with Cushioning, is authorized contingent upon the requirements of Title 49 CFR, part 173.28. Reuse is authorized for domestic, international air, and military air. For international surface shipments, reusable fiberboard containers may not be used unless they are shipped inside intermodal transport containers.

4.9.2. Packaging may be reused if free from incompatible residue, rupture, or other damage (e.g., tears, cuts, etc.) that would reduce structural integrity, other requirements of Title 49 CFR, part 173.28 are complied with and package is closed in a like manner as the original package.

4.9.3. Single containers and/or single packaging of HAZMAT where a portion of the contents have been consumed must be repackaged as prescribed by original closing instructions. Comply with Title 49 CFR; Part 173.28 prior to re-filling single containers (except UN Specification jerricans shipped by military vehicles or aircraft may continue to be reused/filled provided they are otherwise serviceable).

4.10. Exceptions to Hazardous Materials Packaging Testing. The following HAZMAT does not require UN performance specification packaging provided the provisions of the applicable modal regulations are met:

4.10.1. Carbon Dioxide, Solid (Dry Ice).

4.10.2. Magnetized material with a field strength of less than 0.00525 gauss at 4.527 meters (15 feet).

4.10.3. Life Support Equipment.

4.10.4. Class 2 Compressed Gas Cylinders.

4.10.5. Class 7 Radioactive Material.

4.10.6. A packaging with a capacity over 450L (119 gallons) as a receptacle for liquids or items weighing over 400 kg (882 pounds) and a capacity greater than 450L as a receptacle for solids (except intermediate bulk containers or large packaging as defined in reference 3, part 171.8).

4.10.7. Limited quantities.

4.10.8. Excepted quantities.

4.10.9. Consumer commodities.

4.10.10. Items, by modal regulations, requiring only a strong outside packaging.

4.10.11. Large and robust explosive articles meeting Title 49 CFR, 173.60(b)(14) prepared IAW Service packaging instructions/drawings.

4.11. Class 1 (explosives) Exceptions. Class 1 (explosives) materials owned by the DOD, packaged prior to January 1, 1990, are excepted from the UN specification packaging requirements of Part 173.62 of Title 49 CFR and the associated packaging and marking requirements of Part 178. The packaging must have maintained their integrity. Shipping papers must identify the material as government owned goods packaged prior to 1990 as required by the DOD 4500.9R, Defense Transportation Regulation, Part

II. Marking and labeling requirements of the most current Title 49, Part 172 must be complied with except that marking boards may be used for palletized loads in lieu of remarking and re-labeling each individual item/package. When an individual item/package is removed from the palletized load and offered for transport, it must be marked and labeled as required by current 49 CFR, Part 172.

4.12. DOT Special Permits (DOT Exemptions). A DOT Special Permit (DOT-SP, formally DOT-E) is authority to deviate from specific requirements of Title 49 CFR without further testing of the packaging. The government or commercial shipping activities must submit DOT SP requests through the DOD Component listed in Appendix D who in-turn, will submit the request to the SDDC Operations Center. Follow the submission time frames provided in the DTR, Part II, Chapter 204, paragraph H. The application requirements for submitting a SP are specified in Title 49 CFR; Part 107.105. The SP number shall be annotated on shipping papers and marked on exterior containers. A copy of the SP shall accompany the shipment. DOT SPs may be used for international shipments if the item is listed in paragraph 4.11. Approved SPs and exemptions are available on the DOT web site, <http://hazmat.DOT.gov/exempapp/approvals/exsys.htm>.

4.13. Competent Authority Approvals (CAA). A CAA is a written approval for specific hazardous material which by modal directive requires approval of the hazard classification or the packaging by a National Competent Authority prior to shipment. The Department of Transportation (DOT) is the Competent Authority for the United States. The shipping activity that requires a packaging CAA must forward the CAA request containing the information outlined in Appendix B to their Military Service/Agency focal point listed in Appendix D. A copy of the CAA must accompany each shipment. A CAA issued for international shipments may also be used for domestic shipments. SDDC will maintain copies of all CAAs. A CAA issued for approval of a hazard classification may also be used as a packaging approval if the packaging description/method is included in the document. Shipping papers shall be annotated with the CAA number. If required by the CAA, the number shall also be marked on the shipping container. A copy of the CAA shall accompany all shipments.

4.14. Certificate of Equivalency (COE). A COE is an approval issued by DOD In Accordance With (IAW) procedures prescribed in Appendix C in instances where a packaging design differs from the prescribed regulations in 49 CFR. A COE certifies that the proposed packaging design equals or exceeds the comparable requirements of 49 CFR for the commodity being shipped. Requests for COE's must be submitted to the DOD Component listed in Appendix D. The following information applies to COEs:

4.14.1. A COE may be used for domestic shipments of HAZMAT. A COE may be used for international shipments if the airport of destination is a DOD activity and the material will not leave the activity.

4.14.2. A COE is issued by the DOD Component listed in Appendix D. A request for a COE must include the requirements defined in Appendix C and be forwarded to the responsible DOD Component listed in Appendix D. Examples of supporting data required for a COE are included in Appendix C. A Certification Control Number (CCN) will be issued to identify the service issuing the COE using the following prefixes:

DLA - DL
Army - AY
Air Force - AF
Navy - NA
Marine Corps - MC

Combine these prefixes with the current calendar year to construct the CCN; for example, DL-98-XXX. The CCN must be annotated on shipping papers according to the DTR, Part II and the exterior of containers. A copy of the COE must also accompany the shipment.

4.15. Packaging Waiver for Military Air. DOD Hazardous Material focal points may issue packaging waivers for DOD military controlled airlift in accordance with AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAI 4145.3, Preparing Hazardous Materials for Military Air Shipments.

4.16. Opening Non-Bulk Packages for Inspection. DOD components may open, inspect and subsequently reship packages only when the configuration of HAZMAT remains unchanged and the package is closed using manufacturer or shipper provided instructions. See AFMAN 24-204 (I) for additional restrictions for military airlift.

4.17. Repackaging. Items removed from original UN Specification Packaging for distribution in different quantities or packaging configurations must be packaged using the DOD POP program in conjunction with a Special Packaging Instruction (SPI), or a Service approved drawing. DOD shippers may apply UN Specification markings specified in the instruction being used to prepare or package the HAZMAT. When commercial packaging (authorized for the material being packaged) is used, the manufacturer provided packing or closing instructions must be used. Services and DOD agencies may not repackage an item IAW a CAA or Exemption unless the DOD is party to the CAA or Exemption.

4.18. Noncompliant Hazardous Materials Packaging.

4.18.1. New Procurement. When DOD components determine that a vendor's certified HAZMAT packaging does not comply with contractual HAZMAT packaging requirements, suspend the receipt in materiel condition code "L." Follow the procedures in DLAI 4140.55/AR 735-1I-2/SECNAVINST 4355.18/AFJMAN 23-215, Reporting of Supply Discrepancies, and promptly notify the applicable procuring activity. The procuring activity will coordinate a review of the discrepancy report and provide written disposition instructions to the activity holding the discrepant material.

4.18.2. Station Returns and Receipts from Other DOD Activities. When DOD components determine that another DOD Activity's certified HAZMAT packaging does not comply with Title 49 CFR and/or modal requirements, suspend the receipt in materiel condition code (CC) J or K, (for USAF assets, use CC: J only). Follow the procedures in DLAI 4140.55, and promptly notify the applicable managing activity. The managing activity will coordinate a review of the discrepancy report and provide written disposition instructions to the activity holding the discrepant material.

5. RESPONSIBILITIES.

5.1. The Office of the Deputy Under Secretary of Defense, Logistics & Material Readiness, ODUSD(L&MR), will act as the Program Manager for DOD Hazardous Materials Packaging.

5.2. The Commanders or Directors of DOD Components will:

5.2.1. Comply with the policies, objectives, and guidelines in this directive.

5.2.2. Designate individual focal points to coordinate the following:

a. Coordinate purchase requests for UN testing that are performed by a DOT-approved third party test facility.

b. Coordinate HAZMAT packaging testing to avoid redundant testing and to maintain DOD component serialization of Tests.

5.2.3. Ensure that copies of all hazardous materials packaging test reports are forwarded to the Defense Distribution Center as outlined in paragraph 5.3(b).

5.2.4. Develop internal operating procedures to handle organizational needs concerning proper HAZMAT packaging.

5.2.5. Participate in the DOD Hazardous Materials Packaging Working Group (HMPWG) as defined in Appendix E.

5.3. The Defense Logistics Agency (DLA), (J-334) will:

5.3.1. Publish and keep this directive current.

5.3.2. Manage and maintain the DOD POP Program, including pertinent information related to HAZMAT packaging testing. Activities will ensure that copies of all test reports, whether developed in-house or on behalf of the DOD by a DOT-approved third party test facility, are forwarded to the Defense Distribution Center located at:

DEFENSE DISTRIBUTION CENTER
ATTN: DDC-J3/4-TPR (POP Team)
2001 Mission Drive
Building 81E
New Cumberland, PA 17070

5.3.3. Provide, through DDC-J3/4, DLA HAZMAT packaging training on the use of the DOD POP Program to Military Services and DLA activities if requested. Military Services' training will involve a cost to the requesting activity for materials, travel and per diem for the DLA instructors.

6.0. EFFECTIVE DATE. This publication is effective immediately.

7.0. INFORMATION REQUIREMENTS. Reserved for future use.

BY ORDER OF THE DIRECTOR, DEFENSE LOGISTICS AGENCY.

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PATRICK J. DULIN
Director, DLA Enterprise Support

AND WITH APPROVAL AUTHORITY FROM

KEVIN J. SULLIVAN, Lt General, USAF
DCS/Logistics, Installations and Mission Support

Appendixes:

- A. POP Identification Codes
- B. Procedures for Submitting Requests for CAA
- C. Procedures for Submitting Requests for COE, Hazardous Materials Data Package, and Data Item Descriptions (DID)
- D. Respective Military Service When Submitting Requests for Exemptions, CAAs, and COEs
- E. HMPWG Charter

COORDINATION: CAHS, DALOSMP, NAVSUP/NAVICP, AF/ILT, CMC LPP-2, DLSC-LDT, LOGSAPSCC, AFMC LSO/LOT

Appendix A

Performance-Oriented Packaging Identification Codes

NOTE: These codes are for the identification of the activities listed and are not to be applied to any packaging unless directed by the specific activity represented by the code.

Packaging Design Activity Code

Defense Logistics Agency Fort Belvoir, VA	USA/DOD/DLA
Defense Supply Center Columbus Columbus, OH (CAGE 16236 & 14933)	USA/DOD/DLC
Defense Energy Support Center Fort Belvoir, VA (CAGE 52838)	USA/DOD/DLF
Defense Supply Center Richmond Richmond, VA (CAGE 13873)	USA/DOD/DLG
Defense Industrial Supply Center Philadelphia, PA (CAGE 14153)	USA/DOD/DLI
Armament, Research, Development and Engineering Center (ARDEC) (AMSRD-AAR-AIL-P) Picatinny Arsenal, NJ (CAGE 19200)	USA/DOD/AYD
Armament, Research, Development and Engineering Center (ARDEC) (AMSRD-AAR-AIL-TP(R)) Rock Island, IL (CAGE 59678)	USA/DOD/AYA
Army Edgewood Chemical-Biological Center (ECBC) (AMSRD-ECB-END) Rock Island IL, (Cage 86021)	USA/DOD/AYR
Army Edgewood Chemical-Biological Center (ECBC) (AMSRD-ECB-ENA-P) Aberdeen Proving Ground, MD (Cage 86021)	USA/DOD/AYE
Army Foreign Systems Division (FSD) Aberdeen Proving Ground, MD	USA/DOD/FAD
Army Defense Ammunition Center and School (USADACS) McAlester AAP, OK (CAGE 28620)	USA/DOD/DEV
Army Communications-Electronics Command (CECOM) Fort Monmouth, NJ (CAGE 80063)	USA/DOD/AYC
Army Medical Materiel Agency Frederick, MD (CAGE 66732)	USA/DOD/AYS
Soldier Biological and Chemical Command Natick, MA	USA/DOD/AYN
Army Aviation and Missile Command (AMCOM) Huntsville, AL (CAGE 18876)	USA/DOD/AYM
Munitions Systems Division Eglin AFB, FL (CAGE 32231)	USA/DOD/AF18

Rome Air Development Center Griffiss AFB, NY (CAGE 07877)	USA/DOD/AF17
Space Systems Division Los Angeles AFB, CA (CAGE 07868)	USA/DOD/AF19
Ogden Air Logistics Center Hill AFB, UT (CAGE 98747)	USA/DOD/AF70
Oklahoma City Air Logistics Center Tinker AFB, OK (CAGE 98748)	USA/DOD/AF71
Warner Robins Air Logistics Center Robins AFB, GA (CAGE 98752)	USA/DOD/AF84
AF Packaging Test and Evaluation Facility Wright-Patterson, AFB, OH (CAGE 0B275)	USA/DOD/AF69
Marine Corps, Washington, DC (CAGE 80372)	USA/DOD/MCH
Marine Corps Research, Development and Acquisition Command Quantico, VA (CAGE 5N998)	USA/DOD/MCQ
Naval Air Systems Command Washington, DC (CAGE 30003)	USA/DOD/NAA
Space and Naval Warfare Systems Command Washington, DC	USA/DOD/NAB
Naval Facilities Engineering Command Washington, DC (CAGE 80091)	USA/DOD/NAC
Naval Sea Systems Command Washington, DC (CAGE 53711)	USA/DOD/NAD
Navy Inventory Control Point (RIC N32) Philadelphia, PA (CAGE 80132)	USA/DOD/NAE
Navy Inventory Control Point (RIC N35) Mechanicsburg, PA (CAGE 67991)	USA/DOD/NAF

Appendix B

Procedures for Submitting Requests for Competent Authority Approval (CAA)

1. Shippers requesting a CAA must submit a request to their CAA Service/Agency focal point (item manager), which has DOT approval authority. Any request that does not contain all of the necessary information will be returned to the requestor for resubmission. A usage report for the previous year must be submitted with all CAA renewal requests. Each request will include a cover letter, which states why the CAA is being requested and identifies the mode(s) of transportation affected (Sample included herein). The information required below must be included as attachments to the cover letter. NOTE: When the information requested does not apply, write N/A on that line; e.g., 'Actual Item Drawings – N/A'

Attachment 1 - Information to Support Competent Authority Approval:

- (1) Product Nomenclature, National Stock Number(s) and/or Part Number(s), and EX-number (if assigned).
- (2) Hazard Class/Division. For Class 1 material, include the Storage Compatibility Group.
- (3) UN Identification Number.
- (4) UN Proper Shipping Name (ICAO and IMDG).
- (5) Item Description and Drawing Number. Include the item net and gross weight. For Class 1 material, also include the net explosive weight.
- (6) Packaging Description and Instructions/Drawing Numbers. If a COE and/or DOT-E/DOT-SP have been issued, include the number and description.
- (7) Difference between DOT and DOD containers.
- (8) Reports of Test(s) Conducted. List and provide a short description of the tests conducted on the container (i.e. MIL-STD-648, FED-STD-101C, MIL-R-8583A, Hazardous Materials Packaging Tests, Transportation and Handling Vibration Test, etc.).

Attachment 2 - Actual item drawings.

Attachment 3 - Actual item test reports.

Attachment 4 - Actual container drawings.

Attachment 5 - Actual container test reports.

Attachment 6 - Certification of Equivalency (if applicable).

Attachment 7 - Hazard Classification (if applicable).

2. Figure 1 depicts an approved CAA from the Department of Transportation.



U.S. Department
of Transportation

400 Seventh Street, S.W.
Washington, D.C. 20590

Pipeline and
Hazardous Materials
Safety Administration

APPROVAL CA2001120001
(THIRD REVISION)
ISSUED BY THE COMPETENT AUTHORITY OF THE UNITED STATES
EXPIRATION DATE: JULY 31, 2007

1. **APPROVAL HOLDER:** The Department of the Army
Military Surface Deployment and
Distribution Command (SDDC)
661 Sheppard Place
Fort Eustis, VA 23604-1644
2. **REGULATORY AUTHORITY:** Packing Instruction 200 of the
International Civil Aviation Organization's Technical
Instructions for the Safe Transport of Dangerous Goods by
Air (ICAO TI).
3. **SYNOPSIS:** This approval authorizes the transportation of the
Submarine High Data Rate (HDR) / Advanced Communications Mast
(ACM) configured with a non-DOT specification pressure
vessel containing anhydrous ammonia.
4. **BASIS:** This approval is issued in response to the
Department of the Army's application dated July 11, 2005 and
additional information dated July 25, 2005.
5. **PERIOD OF VALIDITY AND CONDITIONS OF APPROVAL:** This
approval does not provide relief from any requirements of
the Hazardous Materials Regulations or the ICAO TI except as
stated herein. This approval is valid until the posted
expiration date above or unless terminated by the Associate
Administrator for Hazardous Materials Safety.
 - a. **Approved Material(s):**

Proper shipping name, Hazard class or division, and
Identification number: Ammonia, anhydrous, 2.3, UN1005.
 - b. **Packaging:** The HDR/ACM mast is configured with an
integral cooling system consisting of metallic heat pipes
containing reagent grade anhydrous ammonia as the working
fluid. The cooling system contains a total quantity of 120
grams of anhydrous ammonia at a working pressure of 667

psia. The mast is packaged for shipment using either a wooden box conforming to Drawing(37895) 995653 or a reusable plastic/aluminum shipping container conforming to drawing (49956) H279020, submitted with the application.

c. For both ACM and HDR, anhydrous ammonia is encased in Swales Thermal Systems heat pipes. The heat pipes are mounted inside a two-piece coldplate assembly. The coldplate assembly is mounted inside titanium housing. There are two different heat pipes in the coldplate assembly. The physical construction of the heat pipes for the two systems is identical. The amount of anhydrous ammonia in each assembly is 136.4 grams. The ACM and HDR design must conform to drawings H328877-1 and G745289-1, submitted with the application.

6. SPECIAL PROVISIONS:

a. A copy of this approval must accompany the shipment made under the terms of this approval.

b. This approval in no way affects the need to obtain any required authorizations from other agencies of the United States Government or from the competent authorities of the countries of transit and destination.

c. Transportation must be by cargo aircraft only.

7. GENERAL PROVISIONS:

a. Failure by any person to comply with the terms and conditions of this approval and the Hazardous Materials Regulations, 49 CFR Parts 171-180 or the ICAO TI may result in the modification, suspension or termination of that person's authority to use this approval. Failure to comply may also subject that person to penalties prescribed by 49 U.S.C. §§ 5123 and 5124. This approval may be modified, suspended or terminated in its entirety if that action is justified in light of changes in circumstances or additional information not available when this approval was issued. Unless immediate modification, suspension or termination is necessary to avoid a risk of significant harm to persons or property, before action is taken, that person will be notified and provided with an opportunity to show why the proposed action should not be taken.

b. Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this approval must be provided training on the requirements and conditions of this approval in addition to the training required by §§ 172.700 through 172.704.

c. Any person operating under the terms of this approval must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.

Issued in Washington, D.C.

Dated: July 27, 2005

Approved by:

601 

Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, D.C. 20590. Attention: PHH-32.

Figure 1. Competent Authority Approval (CAA) Example

Appendix C

Procedures for Submitting Requests for Certification of Equivalency (COE)

1. Shippers requesting a COE must submit a 'Hazardous Material Data Package' to the Military service responsible for preparing COEs. A COE is required for domestic shipments of a packaged design that equals or exceeds Title 49 CFR requirements. The Military service focal points are defined in Appendix D. The shipper must provide the following information:

HAZARDOUS MATERIALS DATA PACKAGE

NOTE: When the information requested does not apply, write N/A on the line.

(1) Requester or Petitioner:

- a. Name.
- b. Company or activity and location.
- c. Business telephone number.

(2) Proposed Dates of Initial Shipment.

(3) Title 49 CFR Provisions:

- a. Identify all regulatory provisions involved.
- b. Justify request for COE and specify why DOD and public interest is served by granting a COE.
- c. Identify why standard provisions of Title 49 CFR are not appropriate.
- d. Identify how the proposed deviation will provide an adequate and reasonable degree of safety.

(4) Item Description:

- a. Proper Shipping Name.
- b. Chemical Name.
- c. Common Name.
- d. Hazard Classification.
- e. Form (radioactive materials only).
- f. Quantity.
- g. Properties and characteristics.
- h. Composition and percentage (by volume and weight) of each chemical, if a solution or mixture.
- i. Igniter ground procedures.
- j. Net Explosive weight.
- k. Whether or not rocket motor is in a propulsive state.

(5) Packaging Data:

a. How the item is packed (drawing showing item/package interface) showing any containers, associated fill and relief valves, suspension system, cushioning media, shock indicators, amount of explosives and internal safety features, cutters, dimensions, materials, etc. Drawings must contain enough information to permit engineering comparison between proposed item and the specification requirements or to permit evaluation of the proposed container or shipping configuration.

- b. Number of items per inner package/quantity per unit pack.
- c. Number of inner packages per exterior pack or container.
- d. DOT specification number for containers (Class 2 or 7).
- e. Dimensional Size of pack and/or container.
- f. Marking and labeling.
- g. Container data that reflect relevant shipping or accident experience.
- h. Center of Gravity.
- i. Packaging procedures.
- j. Test results. State the regulation specifying the tests required and procedures to conduct these tests.
- k. Previous analogous certifications or approvals.

- l. Calculations or, preferably, test results of bursting strength and shatter characteristics of pressure vessels.
- m. Provisions for electrical grounding.

(6) Transportation Description: If the item, as packaged, is a transportability problem item, data required by a transportability report will form a part of this report. Where data are not generated by a transportability report, the following minimal action is required:

- a. Identify modes of transportation.
- b. Provide Drawings, sketches, or schematics showing different configurations:
 - (1) Blocking and bracing.
 - (2) Tie-down or restraint .
 - (3) Location of center of gravity.
 - (4) Consolidation on pallets or/in exterior shipping containers.
- c. Identify the most probable hazards involved with each handling operation, each mode, or each different type of carrier equipment. Show the need for:
 - (1) Briefing crews.
 - (2) Escorts (technical, security police, etc.).
 - (3) Personnel protective equipment.
 - (4) Protective environmental equipment/personnel.
 - (5) Alerting state, military, or government offices of incident or accident.
 - (6) Exclusive use of carrier equipment.
 - (7) Specialized materials, equipment, or procedures (non-sparking materials, explosive-proof motors, etc.).
 - (8) Arms, Ammunition and Explosives (AA&E) transportation security category if applicable as specified in DOD 5100.76-M.
- d. State what specific action is planned to satisfy each requirement identified in paragraph 6c.
- e. Provide reports of tests conducted to verify movement and handling safety.
- f. State what deviations or modifications or Title 49 CFR requirements are needed.

2. Examples of data item descriptions that may be used to acquire information for substantiating data required in the hazardous materials data package are:

- DI-L-3311 Explosive Hazard Classification Data
- DI-PACK-80880 Transportability Report
- DI-L-1903 Part, Component or Subsystem Test Plan
- DI-PACK-81059 Hazardous Material POP Test Report Format

3. The following information is required when the Military service focal point prepares the COE for use by the shipper. The hard copy COE must accompany the shipment. An example is noted in Figure 2 below.

- a. CCN.
- b. Authority.
- c. Issued by, with signature.
- d. Basis for certification.
- e. Packaging description.
- f. Mode(s) of transportation authorized.

The following are additional recommended items, but are not required:

- a. DOT hazard classification (Proper Shipping Name, Label, Marking).
- b. DOD hazard classification (Security Classification Guide, Division, UN Identification Number).
- c. Expiration date.

4. Requirements of this appendix are considered minimum essential information to substantiate issuing a COE. When any of the information changes or is revised, the COE must be amended at the time such information becomes available.



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS OKLAHOMA CITY AIR LOGISTICS CENTER (AFMC)
TINKER AIR FORCE BASE OKLAHOMA

MEMORANDUM FOR SEE DISTRIBUTION

11 December 2002

FROM: OC-ALC/LGI
3001 Staff Dr Ste 1AH85A
TAFB OK 73145-3047

SUBJECT: Certification of Equivalency (COE) for the ALCM, F-107 ALCM Turbine Engine with Starter Cartridge, Whittaker, P/N 1022951-117. (AF 02-229)

1. This COE is issued pursuant to Title 49 Code of Federal Regulations, paragraph 173.7 (a), of the Department of Transportation (DoT) Transportation Hazardous Materials and Air Force Joint Manual (AFJMAN) 24-204.

a. Commodity: Small starter cartridge and oxygen cylinder with electric squib assembly affixed on a turbine engine, containing a limited quantity of flammable liquid, in non-DoT specification packaging.

b. Packaging Requirements: USAF rotationally molded virgin high strength polyethylene type container constructed to AFALD/PTPP 80-7 specification and as described by Hardigg Industries, Inc. drawing D5210-1, Shipping and Storage Container, Engine CNU 368/E.

c. Proper Shipping Name: CARTRIDGES, POWER DEVICE

d. DOD Hazard Class/Div/SCG: 1.3C

e. United Nations number: UN0275

f. DoT Label: EXPLOSIVE 1.3C

g. N.EW: 0.655 Lbs.

h. Mode of Transportation Authorized: Motor Freight, Rail Freight, And Military Cargo Aircraft Only.

2. Each shipment must contain the following documentation:

a. Copy of Final Hazard Classification (FHC) from OO-ALC/WMCS dated 4 December 2002.

b. Copy of this COE.

Figure 2. Certificate of Equivalence (COE) example.

c. Shipping papers shall be plainly marked "Package IAW 49 CFR 173.7(a) by authority of COE AF 02-229".

3. Persons who receive packages covered by this COE may reship them pursuant to the provisions of U. S. DoT Title CFR, Part 173.22(a).

4. Safety Control Measures: The oxygen cylinder with electric squib assembly must be a steel cylinder made in compliance with Tavco, Inc. drawings 23111301, Rev D, or 23111368, or equivalent, and DoT-E-6974.

5. Shipper must comply with all other requirements of Title 49 CFR. Any incident or accident involving the use of this COE must be promptly reported to OC-ALC/LGITL, 7701 Arnold St, Ste 112, Tinker AFB OK, 73145-8912, Commercial (405) 739-3544 or DSN 339-3544.

6. Point of contact for this COE is Mr. Bill Schmidt, OC-ALC/LGITL, Commercial (405) 739-3544 or DSN 339-3544.

Pat Frederick
PAT FREDERICK, Deputy Chief
Materiel Management Division
Logistics Management Directorate

Figure 2. Certificate of Equivalence (COE) example (continued).

Appendix D

Respective Military Service When Submitting Requests for Exemptions, Certificate of Equivalency (COE) and Competent Authority Approval (CAA)

1. When a CAA is required, the managing activity for the affected item will prepare the request. For a hazard classification CAA, contact the respective Military Service identified below:

Air Force	
<p>AFMC LSO/LOT Attn: Mark Ferguson 5215 Thurlow Street, Suite 5 Bldg. 70, Area C Wright Patterson AFB, OH 45433-5540 Commercial: 937-257-1984 DSN: 787-1984 Email: mark.Ferguson@wpafb.af.mil</p>	<p>Explosive Classification CAAs HQ AFSC/SEW Attn: Kevin Carr 9700 G Ave SE Kirtland AFB, NM 87117-2662 Commerical: 505-846-2662 DSN: 246-2662 Email: kevin.carr@kirtland.af.mil</p>
Army	
<p>Chief US Army Logistics Support Activity Packaging, Storage, and Containerization Center Attn: AMXLS-AT (Mr. Mike Barnansky or Mr. Bruce Sampson) 11 HAP Arnold Blvd. Tobyhanna, PA 18466-5097 Commercial: 570-895-7174 DSN: 795-7144 Email: Michael.barnansky@us.army.mil Email: bruce.sampson@us.army.mil</p>	<p>Explosive Hazard Classification (CAA) SJMAG-ES Defense Ammunition Center Technical Center for Explosive Safety 1 C Tree Road, Building 35 McAlester, OK 74501-9053 DSN: 956-8919</p>
Navy	
<p>CAA/COE's (Ordnance) Director Naval Surface Warfare Center Indian Head Division Detachment Earle Attn: Code E421 201 Highway 24 South Colts Neck, NJ 07722-5023 Commercial: 732-866-2821 DSN: 449-2821 Email: robert.dress@navy.mil</p>	<p>Exemptions Commanding Officer Naval Ordnance Safety and Security Activity Attn: Code N55 Farragut Hall, Buidling D323 23 Strauss Avenue Indian Head, MD 20640-5555 Commercial: 301-744-6066 DSN: 354-6066 Email: Mario.harley@navy.mil</p>
<p>CAA/COEs (Non-Ordnance) Naval Inventory Control Point (NAVICP-Mech.) Code 0772.12 (Mr. Gerald Boyd) P.O. Box 2020 5450 Carlisle Pike Mechanicsburg, PA 17055-0788 Commercial: 717-605-2784 DSN: 430-2784 Email: Gerald.boyd@navy.mil</p>	<p>Explosive Hazard Classification CAA Commanding Officer Naval Ordnance Safety and Security Activity Attn: Code N82 Farragut Hall, Building D323 23 Strauss Avenue Indian Head, MD 20640-5555 Commercial: 301-744-6021 DSN: 354-6021 Email: ed.walseman@navy.mil</p>

U.S. Marine Corps	
CAA/COE/Exemptions (Non/Ordnance) Commandant of the Marine Corps I&L Department, Code LPD-1 Attn: Mykia A. Baldwin Headquarters, United States Marine Corps, Room 2309 2 Navy Annex Washington, D.C. 20380-1775 Commercial: 703-695-6099/7930 Ext. 2466 Email: mykia.baldwin@usmc.mil	Explosive Hazard Classification CAA Commanding Officer Indian Head Division Naval Ordnance Safety and Security Activity Attn: Code N714 Farragut Hall, Building D323 23 Strauss Avenue Indian Head, MD 20640-5555 Commercial: 301-744-6021 DSN: 354-6021 E-Mail: ed.walseman@navy.mil
Defense Logistics Agency	
COE Defense Logistics Agency Attn: J-334 (Vickie Edgar) 8725 John J. Kingman Rd., Suite 4330 Fort Belvoir, VA 22060-6221 Commercial: 703-767-6582 DSN: 427-6582 E-Mail: vickie.edgar@dla.mil	Exemptions/CAA Defense Logistics Agency Attn: J-335 (Betty Yanowsky Slanta) 8725 John J. Kingman Rd., Suite 4330 Fort Belvoir, VA 22060-6221 Commercial: 703-767-3638 DSN: 427-3638 E-Mail: betty.yanowsky@dla.mil
Surface Deployment & Distribution Command	
SDDC Attn: SDSA 661 Sheppard Place Fort Eustis, VA 23604-1644 DSN: 826-8294 Commercial: 757-878-8294 FAX: 757-878-8205 Email: duganj@sddc.army.mil	

2. DOD agencies listed in the Department of Defense Explosives classification Procedures (TB 700-2/T.O. 11A-1-47/NAVORDINST 8020.3/ DLAI 8220.1) are authorized to assign Interim Hazard Classifications (IHC) to allow the transportation of Class 1 explosive materials that do not contain a final hazard classification, until that final classification is established. The DOT will not issue a packaging CAA through the process explained above without a final hazard classification. If a packaging CAA is required, the requester must prepare the package identified in paragraph 1, above. The request must include a copy of the IHC and supportive data used to determine that classification. The requester must validate the need for an IHC and indicate why the final hazard classification has not been established. Requests for a packaging CAA for these Class 1 items must be directed to the service focal points identified in paragraph 1, above. The focal points will work through HQ SDDC to the DOD Explosive Safety Board to obtain a CAA from DOT.

Appendix E

DoD Hazardous Material Packaging Working Group Charter

1. Objective. The DOD Hazardous Material Packaging Working Group (HMPWG) is a subcommittee of the Defense Packaging Policy Group (DPPG) as authorized by the DPPG Charter. The HMPWG is a decision-making team responsible for developing, recommending, and implementing changes to ensure the most efficient procedures, policy, and standardization of hazardous material packaging throughout the Military Services and Defense Agencies.

2. Functions. The HMPWG will develop and coordinate hazardous material packaging policy. The HMPWG members will provide and exchange information to modify/establish policies and procedures for the most effective use of DOD resources. Recommendations will be forwarded to the DPPG or applicable Service/DLA headquarters as required. Areas of primary interest include:

a. Hazardous Material Packaging. Modify or establish hazardous material packaging policies and procedures to meet military operational requirements while ensuring compliance with applicable modal regulatory directives. Ensure proper packaging and preparation methods for the safe and efficient storage, handling, and transport of hazardous materials.

b. Testing. Establish testing procedures to ensure UN specification performance requirements are met for Service/DLA managed items. Coordinate testing to prevent redundancy and provide the most efficient use of testing resources. Support and advise the DOD POP program as it pertains to each Service's requirements.

c. Compliance. Review and recommend changes to regulatory requirements. Develop and coordinate recommendations to ensure compliance with DOD and commercial modal regulations.

d. Training. Evaluate hazardous material packaging training issues.

e. Information. Develop effective means to distribute hazardous material packaging requirements to operating personnel.

f. Quality. Strive for continuous improvement through implementation of new packaging materials, processes, and procedures.

3. Procedures. The HMPWG will work together to ensure safe packaging of hazardous materials throughout the logistics cycle.

a. Organization. The HMPWG will consist of primary and advisory members. Primary members will include packaging policy representatives from each Service and DLA. Advisory members will include GSA, DDC and representatives of activities performing hazardous materials packaging testing. Primary members may invite guests as required.

b. Meeting. The HMPWG will as a minimum meet annually during the second quarter (FY) or as required by determination of the members. The Chair, in coordination with the primary members, will designate the dates and location of the meeting.

c. Agenda. Members will provide proposed agenda topics, with talking papers, to the Chair by the designated time established by the meeting announcement. The Chair will develop and distribute a final agenda with supporting talking papers to members prior to the meeting.

d. Travel Funds. Participating organizations will provide travel funds for members to attend HMPWG meetings.

Administrative Change History

Change 1: December 13, 2007, corrected Air Force publication number to be 24-210.

Change 2: September 25, 2008, amended Air Force publication number and syntax to be AFI 24-210(I) and added related approval authority information.

Change 3: April 1, 2010, amended Navy publication number and syntax to be Naval Supply Corps System Command Instruction (NAVSUPINST) 4030.55C.