

CHAPTER 9

INSPECTION OF SHIPMENTS BY AIRCRAFT

NOTES

CERTIFYING HAZARDOUS MATERIALS

A17.1. Shipper's Certification. Unless specifically exempted in this manual, a shipper's certification is required for all military air shipments of hazardous materials. Complete the certification form according to this attachment.

A17.1.1. Forms Required. Complete shipper's certification on the "Shipper's Declaration for Dangerous Goods" commercial form. Two styles of commercial forms may be used. One style is designed for computerized completion with the "Nature and Quantity of Dangerous Goods" section left open for continuous computer printing. The other style is designed in a columnar format for manual completion, with the "Nature and Quantity of Dangerous Goods" section blocked and formatted with headings specifying each key entry (figure A17.4). **NOTE:** Certifiers do not generate locally developed FORMS on computers, but may use automated products (spreadsheets, dbase, word-processing) when submitting required reports/documents.

A17.1.2. Certification Authority. Except as identified in this paragraph, certify on the Shipper's Declaration for Dangerous Goods to a packaging reference in this manual. Hazardous material may be certified to the ICAO Technical Instruction, IATA Dangerous Good Regulation, or Title 49 CFR under the following conditions:

- Comply with all requirements of the certifying document.
- Do not exceed the passenger quantity limitations of the certifying document (also see A17.1.5.) If the passenger quantity limitations of the certifying document are exceeded or the material is forbidden on passenger aircraft, then the shipment must be certified to this manual.
- Include handling instructions identified in this manual for specific proper shipping names on the certification form in the "Additional Handling Information" block.
- Include the packaging paragraph from this manual on the certification form in the "Additional Handling Information" block.
- Certify vehicles and support equipment to this manual.

A17.1.3. Copies Required. Complete and sign an original and at least one copy of the certification form. Attach the original certification form to the copy of the manifest that is placed on the aircraft. An original signature is required on the original Shipper's Declaration for Dangerous Goods. Attach a copy to the station file manifest. The original attached to the aircraft manifest and the copy attached to the station file manifest must have the vertical red hatch border. Additional copies may be placed in a waterproof envelope and attached to the number one piece of the shipment. Vertical red hatch border is not required for any additional copies.

A17.1.4. Single Items With Multiple Hazards. Only one Shipper's Declaration for Dangerous Goods is required when shipments involve a single item with multiple hazards. Certify to the highest hazard. All additional hazards will be identified by PSN, hazard class, and net quantity in "Additional Handling Information" (Key 19). Additionally, the same form may be used for one or more items with the same PSN and identical hazards.

A17.1.5. Packages Containing Different Proper Shipping Names. For packages containing items with different proper shipping names, prepare individual Shipper's Declarations for Dangerous Goods for each different PSN in the overpack. This is required for military airlift, regardless of the certification document used. Pieces of hazardous cargo with different proper shipping names, thus different Shipper's Declarations, cannot be shipped under the same transportation control number (TCN). General cargo and hazardous cargo may be shipped under the same TCN and only one original Shipper's Declaration for Dangerous Goods is required (see DoD 4500.32-R).

A17.1.6. Not Enough Space In a Key. If the Shipper's Declaration for Dangerous Goods does not contain sufficient space in any one key to accommodate all of the required information, use an additional Shipper's Declaration as an extension page. Each page must show the page number and total number of pages (Key 4). All pages must have the vertical red hatch border.

A17.1.7. Classified Information. If the information to be entered on the Shipper's Declaration is classified, follow the procedures outlined in A17.5.3.

A17.1.8. Not Enough Copies or No Copies. In instances where there are not enough copies of the Shipper's Declaration for Dangerous Goods, a certified "true copy" may be placed with the station file manifest. When making a true copy:

- Annotate all the information verbatim from the original Shipper's Declaration for Dangerous Goods.
- Use the information in the signature block from the original form and annotate it on the true copy, (i.e., John Doe, 2 Oct 90). On the reverse side of the form, type or clearly print the words "True Copy" and the name of the individual who is certifying the form to be a true copy. This official must sign the form in longhand above the typed or printed name. The individual preparing a "true copy" need not be qualified according to 1.17.4 to certify the Shipper's Declaration for Dangerous Goods is a true copy.

A17.1.9. Multiple Mode Shipments. Shipments certified to the ICAO, IATA, or 49 CFR that do not exceed the passenger quantity limitations of the certifying document may use the same Shipper's Declaration for Dangerous Goods for both the

commercial and military segment of transport. Include any information required by A17.1.2. For shipments that exceed the passenger quantity limitations of the ICAO, IATA, or 49 CFR, complete a Shipper's Declaration for Dangerous Goods according to the ICAO, IATA, or 49 CFR for the commercial segment and a separate Shipper's Declaration for Dangerous Goods according to this manual for the military segment. Place copies of the Shipper's Declaration for Dangerous Goods needed for subsequent movement in a waterproof envelope on the number one piece of the shipment. DoD aerial port personnel will remove the copies of the Shipper's Declaration for Dangerous Goods from the waterproof envelope and obliterate the "cargo aircraft only" label if not required for military transport.

A17.1.10. **Exceptions for Chapter 3 Operations.** Except as specified below, prepare the Shipper's Declaration for Dangerous Goods according to this manual for tactical or contingency operations.

- **Key 1.** Show the address of the station where the cargo was certified and the telephone number of the certifier's assigned unit.
- **Key 2 and Key 9.** Show worldwide mobility.
- **Key 5.** Show the mobility transportation control number (TCN). Refer to DoD 4500.32-R, *Military Standard Transportation and Movement Procedures*, for completing TCN.
- **Key 7.** Although the label is not required on the cargo, Key 7 must have the "Passenger and Cargo Aircraft" block deleted if the material is cargo aircraft only.

A17.2. Certification Requirements for Specific Items:

A17.2.1. **Competent Authority Approvals (CAA).** If the shipment is packaged and transported under the authority of a CAA, cite the CAA number in Key 17. Mark the shipping papers, "PACKAGING AUTHORIZED BY COMPETENT AUTHORITY OF THE UNITED STATES OF AMERICA (USA)." A copy of the CAA must accompany the shipment.

A17.2.2. **Engines Internal Combustion, Fuel Devices, and Other Equipment.**

- For engines, internal combustion prepared according to A13.5, show the PSN, hazard class, and net quantities of flammable fuel (and any other additional hazards) in Key 19. Identify by name and quantity any non-hazardous fuel in vehicles or equipment tanks. Enter the flash point for flammable and non-hazardous fuel in Key 19. When an item is completely drained (but not purged) so that the quantity of fuel is below 500 ml (17 ounces), the shipper's estimate of the quantity of fuel remaining in the unit may be entered. Include the statement "non-hazardous battery installed" if applicable. Reference to the technical directive used to prepare the item for military air shipment is not required.
- Drained and purged repairable engines and fuel devices prepared according to A13.7.1 and A13.7.2 are not hazardous for transportation. A Shipper's Declaration for Dangerous Goods is required. Complete Keys 1 through 8, 17, and 19 through 22. Annotate "Drained and Purged" in Key 19. Items prepared according to A13.7.3 and A13.7.4 do not require a Shipper's Declaration for Dangerous Goods.
- Certification is not required for movement of wheelchairs with patients.

A17.2.3. **Life-Saving Appliances.** For life-saving appliances, Class 9, prepared according to A13.11, show the PSN, hazard class and net quantity of each hazard within the shipping containers in Key 19.

A17.2.4. **Bombs.** Bombs with flammable liquid prepared according to A5.16 must contain the following statement in Key 19: "Warning! This item contains ethylene oxide. If ethylene oxide odor or leakage is detected, the area must be kept well ventilated. Remove the item from transportation as soon as practical. Prolonged exposure to ethylene oxide fumes is hazardous to health."

A17.2.5. **Cryogenic Liquids.** For cryogenic liquids prepared according to A6.12 provide venting instructions in Key 19. This is not required if venting procedures are provided in a separate instruction accompanying the shipment. Include the location and description of the vent valve. Also, include one of the following statements for venting the unit:

- "Vent container to outside of aircraft."
- "Unit is empty and purged, and does not require venting."
- "Container is excepted from venting."

A17.2.6. **Excepted Quantities.** A Shipper's Declaration for Dangerous Goods is not required for excepted quantities prepared according to A19.2. The shipping papers (air manifest) must be annotated "Dangerous Goods in Excepted Quantities."

A17.3. Completing the Certification Form:

A17.3.1. **Manual and Mechanical Completion of the Certification Form.** The Shipper's Declaration for Dangerous Goods may be completed either manually (hand printed) or mechanically (typewriter, computer, etc.). The Shipper's Declaration for Dangerous Goods may be completed by a combination of manual and mechanical means, as required, providing all entries are clear and legible. However, when possible, the Shipper's Declaration for Dangerous Goods should

be completed entirely manually or entirely mechanically by the shipping activity. Incorrect punctuation or entries contacting column separating lines on the form is not justification for frustrating hazardous cargo.

A17.3.2. **Pen and Ink Changes.** Pen and ink changes may be made to any key. Except for Keys 2, 3, 8, 9, and 19, the certifying official must sign above the change. Key 2, 3, 8, 9, and 19 may be changed by someone other than the certifier without effecting the certification. Personnel making a change to these keys must sign above the change. All entries must be durable, clear, and legible on all copies. Shipments may be frustrated if any entry on the Shipper's Declaration for Dangerous Goods is not clear and legible. If the Shipper's Declaration for Dangerous Goods is rejected, the correction must be accomplished as described in this paragraph or an entirely new form must be completed and presented to the shipping activity.

A17.3.3. **Responsibility for Completion.** Except for Key 3, all entries must be made by the shipping activity. The excepted key may be completed by air freight terminal personnel. Also, air terminal personnel may enter "DOT-E 7573" on the Shipper's Declaration for Dangerous Goods form when contract commercial aircraft is used according to attachment 25.

A17.3.4. **Blank Keys.** Leave blank any key that does not require an entry (i.e., Key 15 when there is no subsidiary risk).

A17.4. Completing the Shipper's Declaration for Dangerous Goods. Figure A17.1 provides detailed instructions on accomplishing the certification form for nonradioactive shipments. Figure A17.2 provides guidance to determine if a Shipper's Declaration for Dangerous Goods is required for radioactive shipments. Figure A17.3 outlines certification requirements for radioactive shipments.

<p>Key 1. Shipper. Enter the address and telephone number where the hazardous material was certified.</p> <p>Key 2. Consignee. Enter the six-digit Department of Defense Activity Address Codes (DODAAC) and/or the in-the-clear geographical location of the ultimate consignee (if known.)</p> <p>Key 3. Air Waybill No. The aircraft manifest number to which the Shipper's Declaration for Dangerous Goods will be attached may be entered in this key. This number need not be entered by the shipper. It may be entered by the accepting operator at the time it is assigned. This key may also be left blank.</p> <p>Key 4. Page...of...Pages. Enter the page number and total number of pages of the Shipper's Declaration for Dangerous Goods form. Enter "Page 1 of 1 Pages" or leave blank if there are no extension pages.</p> <p>Key 5. Shipper's Reference Number. Enter the 17-character transportation control number (TCN).</p> <p>Key 6. Optional Block. Leave blank.</p> <p>Key 7. Shipment Within Passenger Aircraft and Cargo Aircraft Limitations. If the shipment is acceptable for movement on both passenger and cargo aircraft, delete "Cargo Aircraft Only." If the shipment is allowed on cargo aircraft only, delete "Passengers and Cargo Aircraft."</p> <p>Key 8. Airport of Departure. Enter the three-digit Port of Embarkation (POE) and/or the in-the-clear geographical location of the airport of departure.</p> <p>Key 9. Airport of Destination. Enter the three-digit Port of Debarkation (POD) and/or the in-the-clear geographical location of the airport of destination.</p> <p>Key 10. Shipment Type. Delete "Radioactive" since the shipment contains no radioactive material.</p> <p>Key 11. Proper Shipping Name. Enter the PSN as it appears in table A4.1. Enter the following information, if applicable, in association with the basic description:</p> <ul style="list-style-type: none">• The word "POISON" for a liquid or solid Class 6.1 PG I or II material if the PSN does not identify the material as a poison.• For materials which are poisonous by inhalation, enter the words "POISON-INHALATION HAZARD" and "ZONE A", "ZONE B", "ZONE C", or "ZONE D" for gases, or "ZONE A" or "ZONE B" for liquids, as appropriate. If already identified, the word "POISON" need not be repeated. Enter "INHALATION HAZARD" and the appropriate zone.• The word "Dangerous When Wet" when a material meets the definition of a dangerous when wet material. <p>Key 12. Class and Division. Enter the hazard class and division number given in column 3 of table A4-1. For Class 1 material, include the compatibility group letter and the inhabited building distance (if applicable). For a single item with more than hazard, enter the hazard class number of the item's highest or primary hazard.</p> <p>Key 13. UN, NA, or ID No. Enter the United Nations (UN), North American (NA), or identification number (ID) given in column 4 of table A4.1. Include the UN, NA, or ID prefix and the number.</p> <p>Key 14. Packing Group. Enter the applicable Packing Group (PG) given in column 5 of table A4.1.</p> <p>Key 15. Subsidiary Risk. When more than one hazard label is required, enter the subsidiary risk hazard class and division number corresponding to the subsidiary risk labels required. Do not enter the hazard class and division number of the primary hazard in this key. Only list the hazard class and division number of additional (subsidiary) labels required. If a "Cargo Aircraft Only" label is required, do not annotate it in this key.</p>
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Figure A17.1. Continued

Key 16. Quantity and Type of Packing. Enter:

- The number of packages (of same type and content) and their type of packaging (i.e., (1) fiberboard box, (2) metal drums, (4) cylinders). If applicable, enter the specifically named self-propelled vehicle and mechanical apparatus.
- The weight (pound, oz, gm, kg, etc.), volume (pint, quart, cc, liter, etc.), or measure of the actual hazardous material (per package). Do not include any nonhazardous content of the shipment. The net quantity must be entered in metric measurement units. The equivalent English unit of measure may be entered in parenthesis immediately following the metric unit. Show the quantity immediately following the number and type of package (i.e., 2 wooden boxes x 4.5 kg (10 pounds); 1 fiberboard box x 5 L(1.3 gallons)). For explosives, Class 1.1, 1.2, and 1.3, enter the "Net Explosive Weight (NEW)" in kilograms (pounds) per package or per pallet (i.e., 3 wooden boxes x 120 kg (264.6 pounds) NEW; 5 metal boxes x 200 kg (441 pounds) NEW). Unless otherwise required by status, either N/A or the NEW may be entered for Class 1.4, 1.5, 1.6 explosives. Italy and the United Kingdom require the NEW for all explosives entering their country. Annotate kilograms (pounds) in association with the NEW (abbreviations may be used).
- Express in kilograms (pounds), not pounds per square inch, the quantity of compressed gas unless otherwise specified in this instruction. When certifying to A6.3 "Compressed Gases, Limited Quantities," A6.9 "Fire Extinguishers," and A6.11 "Cigarette Lighter or Other Similar Devices Charged with Fuel," other units of measure; (i.e., fluid ounces, gallons, or ounces) are specified and may be shown on this form.

Key 17. Packing Instructions. Enter the paragraph used to prepare the package for shipment.

- If the packaging has been approved by separate letter, message, or other instructions, cite that and the date of the letter or message, i.e., AFMC 24-204-92-09; COE NA-84-505; DOT-E 7052; etc.
- If a POP certified package is overpacked to meet air eligibility requirements, cite A3.1.10 and the applicable packaging paragraph for the material. Cite the applicable packaging paragraph for the material when packing inner containers into a 1A2 drum to meet air eligible and POP configuration requirements.

Key 18. Authorization. Enter the special provision number from table A4.1 ONLY if it pertains to the packaging. When applicable, enter the words "Limited Quantity" or "LTD. QTY."**Key 19. Additional Handling Information.** Enter:

- The PSN, hazard class, and net quantity of each additional hazard for items with multiple hazards.
- Handling instructions, when specified by a packaging paragraph.
- The name and quantity of non-hazardous fuel contained in tanks of vehicles or equipment. Include statement "non-hazardous battery installed" if applicable.
- The flash point in degrees Fahrenheit or centigrade when shipping flammable liquids or for any fuel identified in vehicle or equipment tanks. Show the letters "FP," the number, the degree symbol, and either "F" or "C" corresponding to the unit used. When known, enter the method of determining the flash point (i.e., Tag CC, Seta Flash, or Pensky-Martins).
- The packaging paragraph reference if required by A17.1.2.
- The 24-hour Emergency Response number for the hazardous material listed on the Shipper's Declaration for Dangerous Goods. Enter the words "EMERGENCY CONTACT:" followed by the number. See 2.8 for Emergency Response numbers used by DoD activities.

Key 20. Name/Title of Signatory. Enter the name and title of the official signing the form.**Key 21. Place and Date.** Enter the place and date the material was certified (i.e., Kelly AFB, 1 Jan 90).**Key 22. Signature.** The official who certifies that the shipment complies with the requirements of this instruction must sign the form in longhand.

Figure A17.1. Step-by-step Instructions for Completing Shipper's Declaration for Dangerous Goods for NONRADIOACTIVE SHIPMENTS.

Step 1. Determine the radionuclide and type of package. Turn to A11.4. Find the radionuclide, its name, and the maximum radioactive quantity (Ci) that can be shipped in a type A package. If a type B container is required, go to Step 3.

Step 2. Determine if a Shipper's Declaration for Dangerous Goods is Required. Turn to table A11.7. Determine the maximum quantity that can be shipped as a limited quantity. This amount will be a fraction of the quantity listed in table A11.1. If the item is a limited quantity, a Shipper's Declaration for Dangerous Goods is not required, but you must comply with A11.11, A11.12, A11.13, or 11.14. Go to Step 3 if the material is not a limited quantity.

Step 3. Enter the Information Required in Key 16. Make a note of the transport index, but do not enter it in Key 16.

Step 4. Determine the Proper Shipping Name (PSN). Select the applicable PSN from table A4.1. Complete the appropriate keys using the information found in table A4.1, columns 2 through 4. Do not complete Key 17 at this point. Make a note of all the basic paragraphs listed in column 8.

Step 5. Select the Packaging Paragraph. Determine the correct packaging paragraph from the list you made in Step 4 based on the type of package used (type A or type B). Determine the paragraph based on the particular container used. Enter this information as the first entry in Key 17.

Step 6. Determine the Label Requirements. Use the transport index, the surface reading, and fissile class, if appropriate, to determine the labels required by Attachment 15. Enter the label required as the category of package entry in Key 17, immediately following the packaging paragraph. Enter the transport index and any remaining information required to complete Key 17.

Step 7. Complete the Remaining Keys of the Shipper's Declaration for Dangerous Goods. Step-by-step instructions for completing the Shipper's Declaration for Radioactive Material are identified in figure A17.3.

Figure A17.2. Determining Certification Requirements for Class 7.

Key 1. Shipper. Enter the address and telephone number where the hazardous material was certified.

Key 2. Consignee. Enter the six-digit DODAAC and/or the in-the-clear geographical location of the ultimate consignee (if known).

Key 3. Air Waybill Number. The aircraft manifest number to which the Shipper's Declaration will be attached may be entered in this key. This number need not be entered by the shipper. It may be entered by the accepting operator at the time it is assigned. This key may also be left blank.

Key 4. Page...of...Pages. Enter the page number and total number of pages of the Shipper's Declaration form. Enter "Page 1 of 1 Pages" or leave blank if there are no extension pages.

Key 5. Shipper's Reference Number. Enter the 17-character TCN.

Key 6. Optional Block. Leave blank.

Key 7. Shipment Within Passenger Aircraft and Cargo Aircraft Limitations. If the shipment is acceptable for movement on both passenger and cargo aircraft, delete "Cargo Aircraft Only." If the shipment is allowed on cargo aircraft only (dagger or theta coded items), delete "Passenger and Cargo Aircraft."

Figure A17.3. Continued.

Key 8. Airport of Departure. Enter the three-digit POE and/or the in-the-clear geographical location of the airport of departure.

Key 9. Airport of Destination. Enter the three-digit POD and/or the in-the-clear geographical location of the airport of destination.

Key 10. Shipment Type. Delete "Nonradioactive" since the shipment contains radioactive material.

Key 11. Proper Shipping Name. Enter the PSN as it appears in table A4.1, Alphabetical Listing of Items. Make sure the spelling is exact since some chemical names have similar spellings.

Key 12. Class and Division. Enter the hazard class and division number given in column 3 of table A4.1. For a single item with more than one hazard, enter the hazard class and division number of the item's highest hazard.

Key 13. UN, NA, or ID No. Enter the United Nations (UN) number given in column 4. Include the UN prefix and the number.

Key 14. Packing Group (PG). The PG does not apply.

Key 15. Subsidiary Risk. When more than one hazard label is required, enter the subsidiary risk hazard class and division number corresponding to the subsidiary risk labels required. Do not enter the hazard class and division number of the primary hazard in this key. Only list the hazard class and division number of additional (subsidiary) labels required. If a "Cargo Aircraft Only" label is required, do not annotate it in this key.

Key 16. Quantity and Type of Packing. Enter:

- Name or symbol of the radionuclide in the material.
- Description of the physical and chemical form of the material, if it is not in special form (generic chemical description is acceptable for chemical form). If special form, enter "Special Form."
- The number of packages (of same type and content), the type of package, and the activity contained in each package in terms of Ci, mCi, or uCi.

Key 17. Packing Instruction. Enter the following information in Key 17 (see figure A17.2, Steps 5 and 6, for assistance):

- Paragraph used to prepare the shipment.
- Category of the package (i.e., "white-I," "yellow-II," or "yellow-III").
- The transport index, preceded by the prefix "Ti", assigned each package having a "Radioactive Yellow-II" or "Radioactive Yellow-III" label and dimensions of each package (including dimensional units).
- The fissile class. If the package is exempt enter the words "Fissile Exempt."
- Maximum allowable number of packages for loading on one aircraft (for fissile class III shipments only).

Key 18. Authorization. Enter Approval Identification Markings (if relevant). List the package identification markings of any of the documents listed below issued by a competent authority. Include the words "attached" to indicate that the documents are attached to the declaration form.

- Special form approval certificate.
- Type B package design approval certificate.
- Type B(M) package shipment approval certificate.
- Fissile material package design approval certificate.
- Fissile material package shipment approval certificate.
- Special arrangement approval certificate.
- Any similar documents.

Figure A17.3. Continued.

Key 19. Additional Handling Information. Enter:

- The PSN, hazard class, and net quantity of each additional hazard for items with multiple hazards.
- Handling instructions, when specified by a packaging paragraph.
- The 24-hour Emergency Response number for the hazardous material listed on the Shipper's Declaration for Dangerous Goods. Enter the words "EMERGENCY CONTACT:" followed by the number. See 2.8 for Emergency Response Numbers used by DoD activities.

Key 20. Name/Title of Signatory. Enter the name and title of the official signing the form.

Key 21. Place and Date. Enter the place and date the material was certified (i.e., Kelly AFB, 1 Jan 90).

Key 22. Signature. The official who certifies that the shipment complies with the requirements of this instruction must sign the form in longhand.

Figure A17.3. Step-by-step Instructions for Completing the Shipper's Declaration for Dangerous Goods for RADIOACTIVE SHIPMENTS.

SHIPPER'S DECLARATION FOR DANGEROUS GOODS

(Provide at least two copies to the airline.)

Shipper 1	Air Waybill No.	3
	Page of Pages	4
	Shipper's Reference Number <i>(optional)</i>	5

Consignee 2	6
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Two completed and signed copies of this Declaration must be handed to the operator

TRANSPORT DETAILS

This shipment is within the limitations prescribed for: *(delete non-applicable)* 7

Airport of Departure

PASSENGER AND CARGO AIRCRAFT	CARGO AIRCRAFT ONLY
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8

Airport of Destination:

9

WARNING

Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties. This Declaration must not, in any circumstances, be completed and/or signed by a consolidator, a forwarder or an IATA cargo agent.

Shipment type: *(delete non-applicable)*

NON-RADIOACTIVE	RADIOACTIVE
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10

NATURE AND QUANTITY OF DANGEROUS GOODS *(see Subsections 6.6 and 8.1 of IATA Dangerous Goods Regulations)*

Dangerous Goods Identification

Proper Shipping Name	Class or Division	UN or ID No.	Packing Group	Subsidiary Risk	Quantity and Type of packing	Packing Inst.	Authorization
11	12	13	14	15	16	17	18

Additional Handling Information

19

24 hr. Emergency Contact Tel. No. _____

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Name/Title of Signatory

20

Place and Date

21

Signature

(see warning above)

22

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doors may be cleated in an open position.

[Amdt. 174-26, 41 FR 16092, Apr. 15, 1976, as amended by Amdt. 174-68, 55 FR 52685, Dec. 21, 1990]

§ 174.810 Special handling requirements for wet electric storage batteries.

(a) Electric storage batteries (wet) for shipment by rail must be completely protected so that short circuits will be prevented.

(b) Wet electric storage batteries, and electrolyte must be packed as required by §173.159 of this subchapter for transportation by rail and must be blocked and braced in the rail car so they cannot change position during transportation due to shocks normally incident to transportation. They must be loaded so that other freight cannot fall onto or slide against them. They may be transported in a gondola car or on a flatcar. However, they may not be transported in a hopper bottom car.

(c) Wet electric storage batteries are not authorized in refrigerator or "plug-door" type cars unless the cars are provided with vents which will prevent an accumulation of gas within the car.

[Amdt. 174-26, 41 FR 16092, Apr. 5, 1976, as amended by Amdt. 174-26A, 41 FR 40686, Sept. 20, 1976; Amdt. 174-26B, 41 FR 57072, Dec. 30, 1976; Amdt. 174-68, 55 FR 52685, Dec. 21, 1990]

§ 174.812 [Reserved]**Subpart M—Detailed Requirements for Class 9 (Miscellaneous Hazardous) Materials****§ 174.840 Special loading and handling requirements for asbestos.**

Asbestos must be loaded, handled, and unloaded, and any asbestos contamination of rail cars removed, in a manner that will minimize occupational exposure to airborne asbestos particles released incident to transportation. (See §173.216 of this subchapter.)

[Amdt. 174-33, 43 FR 56668, Dec. 4, 1978, as amended by Amdt. 174-68, 55 FR 52685, Dec. 21, 1990]

49 CFR Ch. I (10-1-95 Edition)**PART 175—CARRIAGE BY AIRCRAFT****Subpart A—General Information and Regulations**

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 - 175.5 Applicability.
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 - 175.20 Compliance and training.
 - 175.25 Notification at air passenger facilities of hazardous materials restrictions.
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 - 175.30 Accepting and inspecting shipments.
 - 175.31 Reports of discrepancies.
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- 175.75 Quantity limitations aboard aircraft.
- 175.78 Stowage compatibility of cargo.
- 175.79 Orientation of cargo.
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- 175.305 Self-propelled vehicles.
- 175.310 Transportation of flammable liquid fuel in small, passenger-carrying aircraft.
- 175.320 Cargo aircraft only; only means of transportation.
- 175.630 Special requirements for Division 6.1 (poisonous) materials and materials in Division 6.2 (etiologic or infectious substances).
- 175.640 Special requirements for Class 9 (miscellaneous hazardous) material.
- 175.700 Special limitations and requirements for Class 7 (radioactive) materials.
- 175.701 Separation distance requirements for packages containing Class 7 (radioactive) materials in passenger-carrying aircraft.
- 175.702 Requirements for carriage of packages containing Class 7 (radioactive) materials in a cargo aircraft only.
- 175.703 Other special requirements for the acceptance and carriage of packages containing Class 7 (radioactive) materials.
- 175.704 Plutonium shipments.

Research and Special Programs Administration, DOT**§ 175.78**

been unintentional release of hazardous materials from a package. Each operator making a report under this section shall send that report to the Research and Special Programs Administration, Information Systems Manager, Department of Transportation, Washington, DC 20590-0001, with a separate copy to the FAA facility indicated in paragraph (a) of this section.

(d) [Reserved]

[Amdt. 175-1, 41 FR 16106, Apr. 15, 1976, as amended by Amdt. 175-23, 47 FR 43066, Sept. 30, 1982; Amdt. 175-40, 52 FR 8592, Mar. 19, 1987; Amdt. 175-43, 54 FR 25813, June 19, 1989; Amdt. 175-46, 55 FR 39981, Oct. 1, 1990; Amdt. 175-47, 55 FR 52685, Dec. 21, 1990; Amdt. 175-54, 60 FR 49111, Sept. 21, 1995]

Subpart B—Loading, Unloading and Handling

§ 175.75 Quantity limitations aboard aircraft.

(a) Except as provided in § 175.85(c)(3), no person may carry on an aircraft:

(1) A hazardous material except as permitted by this subchapter:

(2) More than 25 kg (55 pounds) net weight of hazardous material (and in addition thereto, 75 kg (165 pounds) net weight of Division 2.2 (non-flammable compressed gas) materials permitted to be carried aboard passenger-carrying aircraft:

(i) In an inaccessible cargo compartment,

(ii) In any freight container within an accessible cargo compartment, or

(iii) In any accessible cargo compartment in a cargo aircraft only in a man-

ner that makes it inaccessible unless in a freight container;

(3) Packages containing Class 7 (radioactive) materials when their combined transport index number (determined by adding together the transport index numbers shown on the labels of the individual packages and/or overpacks):

(i) In passenger carrying aircraft, exceeds 50.0 or, for any single package, exceeds 3.0, or

(ii) In cargo aircraft only, exceeds 200.00 (for fissile Class 7 (radioactive) materials, see § 175.702(b)(2)(iv)) or, for any single package, exceeds 10.0.

(b) No limitation applies to the number of packages of Class 9 (miscellaneous hazardous) materials, or ORM-D materials aboard an aircraft.

[Amdt. 175-1A, 41 FR 40686, Sept. 20, 1976, as amended by Amdt. 175-13, 45 FR 20101, Mar. 27, 1980; Amdt. 175-25, 47 FR 54823, Dec. 6, 1982; Amdt. 175-29, 48 FR 50461, Nov. 1, 1983; Amdt. 175-47, 55 FR 52685, Dec. 21, 1990]

§ 175.78 Stowage compatibility of cargo.

(a) For stowage on an aircraft, in a cargo facility, or at any other area at an airport designated for the stowage of hazardous materials, packages containing hazardous materials which might react dangerously with one another may not be placed next to each other or in a position that would allow a dangerous interaction in the event of leakage. As a minimum, the segregation prescribed in the following Table must be maintained.

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TABLE 1

	A	B	C	D	E	F	G
A Explosives and Blasting Agents or ICAO Class 1	Note 3	Note 4	Note 4	Note 4	Note 4	Note 4	X
B Compressed gases or ICAO Class 2	Note 4						
C Flammable liquids or ICAO Class 3	Note 4					X	
D Flammable liquids and solids (labeled SPONTANEOUSLY COMBUSTIBLE) or ICAO Division 4.2.	Note 4					X	X
E Flammable solids (labeled DANGEROUS WHEN WET) or ICAO Division 4.3	Note 4					X	X
F Oxidizers or ICAO Division 5.1 and Organic peroxides or ICAO Division 5.2	Note 4		X	X	X	X	X
G Corrosive materials or ICAO Class 8	X			X	X	X	

Note 1: The letters across the top of the Table have the same meaning as the letters along the left side of the Table.
 Note 2: An "X" at the intersection of a row and a column in the Table means that packages containing the indicated classes of hazardous materials may not be stowed next to or in contact with each other, or in a position which would allow interaction in the event of leakage of the contents.
 Note 3: For import or export shipment, explosives other than explosives of ICAO Division 1.4, Compatibility Group S, that do not belong to the same compatibility group according to the ICAO Technical Instructions may not be stowed together, except that compatibility groups C, D and E may be stowed together. Explosives of ICAO Division 1.4, Compatibility Group S may be stowed with explosives of all compatibility groups with the exception of A and L.
 Note 4: Explosives, other than safety explosives (ICAO Division 1.4, Compatibility Group S) must not be stowed together with this class.

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(b) No person may stow a package labeled **BLASTING AGENT** on an aircraft next to, or in a position that will allow contact with a package of special fireworks or railway torpedoes.

[Amdt. 175-1, 41 FR 16106, Apr. 15, 1976, as amended by Amdt. 175-8, 44 FR 31184, May 31, 1979; Amdt. 175-22, 47 FR 24587, June 7, 1982; Amdt. 175-25, 47 FR 54823, Dec. 6, 1982; Amdt. 175-30, 48 FR 53713, Nov. 29, 1983; Amdt. 175-50, 58 FR 50505, Sept. 27, 1993]

§ 175.79 Orientation of cargo.

(a) A package containing hazardous materials marked "THIS SIDE UP" or "THIS END UP", or with arrows to indicate the proper orientation of the package, must be stored and loaded aboard an aircraft in accordance with such markings.

(b) A package containing liquid hazardous materials not marked as indicated in paragraph (a) of this section, must be stored and loaded with closures up (other than side closures in addition to top closures).

[Amdt. 175-25, 47 FR 54823, Dec. 6, 1982]

§ 175.81 Securing of packages containing hazardous materials.

(a) Packages containing hazardous materials must be secured in an aircraft in a manner that will prevent any movement in flight which would result in damage to or change in the orientation of the packages.

(b) Packages containing Class 7 (radioactive) materials must be secured in a manner that insures that the separation requirements of §§ 175.701 and 175.702 will be maintained at all times during flight.

[Amdt. 175-25, 47 FR 54823, Dec. 6, 1982, as amended by Amdt. 175-47, 55 FR 52685, Dec. 21, 1990]

§ 175.85 Cargo location.

(a) Except as provided in § 175.10, no person may carry a hazardous material subject to the requirements of this subchapter in the cabin of a passenger-carrying aircraft or on the flight deck of any aircraft. Hazardous materials may be carried in a main deck cargo compartment of a passenger-aircraft provided that the compartment is inaccessible to passengers and that it meets all certification requirements for a

Class B aircraft cargo compartment as provided in 14 CFR 25.857(b).

(b) Each package containing a hazardous material acceptable only for cargo aircraft must be loaded in such a manner that a crew member or other authorized person can see, handle and when size and weight permit, separate such packages from other cargo during flight.

(c) Notwithstanding the provisions of paragraph (b) of this section:

(1) When packages of the following hazardous materials are carried on cargo aircraft only, they may be carried in a location which is inaccessible to a crewmember during flight and are not subject to the weight limitation specified in paragraph (a)(2) of § 175.75 of this subchapter.

(i) Class 7 (radioactive) materials,

(ii) Division 6.1 (poisonous) materials (except those labeled **FLAMMABLE**),

(iii) Materials in Division 6.2 (etiologic or infectious substances),

(iv) Class 3 (flammable liquid) materials with a flashpoint above 23 °C (73 °F) that do not meet the definition of another hazardous class,

(v) Class 9 (miscellaneous hazardous) materials, and ORM-D materials.

(2) When packages of hazardous materials acceptable for cargo-only or passenger-carrying aircraft are carried on cargo aircraft only where other means of transportation are impracticable or not available, packages may be carried in accordance with procedures approved in writing by the FAA Air Transportation Security Field Office responsible for the operator's overall aviation security program or the FAA Air Transportation Security Division in the region where the operator is located.

(3) When packages of hazardous materials acceptable for cargo-only or passenger-carrying aircraft are carried on small, single pilot, cargo aircraft only being used where other means of transportation are impracticable or not available, they may be carried without quantity limitation as specified in § 175.75 in a location that is not accessible to the pilot if:

(i) No person other than the pilot, an FAA inspector, the shipper or consignee of the material or a representative of the shipper or consignee so des-

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ignated in writing, or a person necessary for handling the material is carried on the aircraft;

(i) The pilot is provided with written instructions on characteristics and proper handling of the materials; and

(iii) Whenever a change of pilots occurs while the material is on board, the new pilot is briefed under a hand-to-hand signature service provided by the operator of the aircraft.

(d) [Reserved]

(e) No person may carry a material subject to the requirements of this subchapter that is acceptable for carriage in a passenger-carrying aircraft (other than magnetized materials) unless it is located in the aircraft in a place that is inaccessible to persons other than crew-members.

(f) Paragraphs (a) and (e) of this section do not apply to a person operating an aircraft under §175.310 which, because of its size and configuration, makes it impossible for that person to comply.

(g) No person may load magnetized material (which might cause an erroneous magnetic compass reading) on an aircraft, in the vicinity of a magnetic compass, or compass master unit, that is a part of the instrument equipment of the aircraft, in a manner that affects its operation. If this requirement cannot be met, a special aircraft swing and compass calibration may be made.

[Amdt. 175-1, 41 FR 16106, Apr. 15, 1976]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §175.85, see the List of CFR Sections Affected appearing in the Finding Aids section of this volume.

§ 175.88 Inspection of unit load devices.

A unit load device may not be loaded on an aircraft unless the device has been inspected and found to be free from any evidence of leakage from, or damage to, any package containing hazardous materials.

[Amdt. 175-25, 47 FR 54824, Dec. 6, 1982]

§ 175.90 Damaged shipments.

(a) Packages or overpacks containing hazardous materials must be inspected for damage or leakage after being un-

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loaded from an aircraft. When packages or overpacks containing hazardous materials are carried in a unit load device, the area where the unit load device was stowed must be inspected for evidence of leakage or contamination immediately upon removal of the unit load device from the aircraft, and the packages or overpacks inspected for evidence of damage or leakage when the unit load device is unloaded. In the event of leakage or suspected leakage, the compartment in which the package, overpack, or unit load device was carried must be inspected for contamination and any dangerous level of contamination removed.

(b) Except as provided for in §175.700, the operator of an aircraft shall remove from the aircraft any package subject to this subchapter that appears to be damaged or leaking. In the case of a package which appears to be leaking, the operator must insure that the remainder of the packages in the same shipment are in proper condition for transport aboard the aircraft and that no other package has been contaminated.

(c) No person shall place a package that is damaged or appears to be damaged or leaking aboard an aircraft subject to this part.

(d) If a package containing a material in Division 6.2 (etiologic or infectious substance) is found to be damaged or leaking, the person finding the package shall:

(1) Avoid handling the package or keep handling to a minimum;

(2) Inspect packages adjacent to the leaking package for contamination and withhold from further transportation any contaminated packages until it is ascertained that they can be safely transported;

(3) Comply with the reporting requirement of §171.15 of this subchapter; and

(4) Notify the consignor or consignee.

[Amdt. 175-25, 47 FR 54824, Dec. 6, 1982, as amended by Amdt. 175-47, 55 FR 52685, Dec. 21, 1990]