

**DEPARTMENT OF TRANSPORTATION****Pipeline and Hazardous Materials Safety Administration****49 CFR Parts 171, 172, 173 and 175**

[Docket No. RSPA-02-11654 (HM-228)]

RIN 2137-AD18

**Hazardous Materials: Revision of Requirements for Carriage by Aircraft**

**AGENCY:** Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

**ACTION:** Final rule.

**SUMMARY:** This final rule amends the requirements in the Hazardous Materials Regulations (HMR) for the transportation of hazardous materials by aircraft. This final rule clarifies the applicability of part 175; clarifies the exceptions from regulation for operator equipment and supplies, special aircraft operations, and passengers and crewmembers; revises separation distances for the shipment of radioactive materials by cargo aircraft; and updates the regulations to comply with security requirements for explosive special permits. These changes are being made to finalize outstanding petitions for rulemaking, convert certain special permits into regulations, and promote international harmonization, where appropriate.

**DATES:** The effective date of these amendments is October 1, 2006. Voluntary compliance is authorized April 21, 2006.

**FOR FURTHER INFORMATION CONTACT:** Deborah Boothe, Office of Hazardous Materials Standards, (202) 366-8553, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 400 Seventh Street SW., Washington, DC 20590.

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**I. Background**

The Hazardous Materials Regulations (HMR; 49 CFR parts 171-180) govern the transportation of hazardous materials in commerce by all modes of transportation, including aircraft. Parts 172 and 173 of the HMR include requirements for classification and packaging of hazardous materials, hazard communication, and training of employees who perform functions subject to the requirements in the HMR. Part 175 contains requirements applicable to all aircraft operators transporting hazardous materials by air, and outlines exceptions allowing passengers and crew members to carry hazardous materials aboard aircraft under certain conditions. In addition, aircraft operators must comply with the FAA hazardous materials training requirements in 14 CFR parts 121 or 135, as appropriate.

In this final rule, the Pipeline and Hazardous Materials Safety Administration (PHMSA), with the concurrence of the Federal Aviation Administration (FAA), is adopting amendments to part 175 and other sections of the HMR applicable to the transportation of hazardous materials by aircraft. These amendments will:

- (1) Modify or clarify requirements to promote compliance and enforcement;
- (2) Enhance the security of transportation of explosives by aircraft; and

(3) Facilitate international commerce. On February 26, 2002, the Research and Special Programs Administration (RSPA)—the predecessor agency to PHMSA—published an advance notice of proposed rulemaking (ANPRM; 67 FR 8769) inviting public comments on how to improve the clarity of the HMR requirements for transporting hazardous materials by aircraft. We received 26 comments in response to the ANPRM. On November 10, 2004, RSPA published a notice of proposed rulemaking (NPRM; 69 FR 76044) proposing specific changes to the HMR sections applicable to the transportation of hazardous materials by aircraft. On January 21, 2005, (70 FR 3179) in response to requests from interested parties, we extended the comment period on the NPRM until March 18, 2005.

We received 24 comments addressing issues raised by the NPRM from the following: Air Line Pilots Association, International (ALPA); United Parcel Service, Inc. (UPS); Air Transport Association (ATA); FedEx Express; trade associations such as the International Association of Airport Duty Free Stores; individual air carriers; and others involved in the transportation of hazardous materials by aircraft. Most commenters were supportive of PHMSA's efforts to revise part 175 in order to clarify certain requirements and make the part more user-friendly.

In this final rule, we are adopting most changes proposed in the NPRM. Relevant portions of the comments are discussed in the following sections of the preamble.

**II. Section-by-Section Review****A. Sections 175.1 and 175.5 Purpose, Scope and Applicability**

Part 175 of the HMR prescribes requirements for all aircraft operators transporting hazardous materials in commerce in the United States. The requirements in part 175 are in addition to requirements contained in parts 171, 172, and 173 (see § 175.1). Part 175 applies to the acceptance for

transportation, loading, and transportation of hazardous materials in any aircraft within the United States and aircraft of United States registry anywhere in air commerce (see § 175.5). Part 175 includes exceptions from the requirements of the HMR for those aircraft under the direct, exclusive control of a government and not used for commercial purposes (see § 175.5).

In this final rule, we are modifying § 175.1 to indicate part 175 applies to any person who performs, attempts to perform, or is required to perform a function subject to the HMR, including:

(1) Air carriers, indirect air carriers, and freight forwarders and their flight and non-flight employees, agents, subsidiary and contract personnel (including cargo, passenger and baggage acceptance, handling, loading and unloading personnel); and

(2) Air passengers that carry any hazardous material on their person or in their carry-on or checked baggage.

In its comments, the Council on Radionuclides and Radiopharmaceuticals, Inc. (CORAR) requests clarification of the applicability of part 175 to multi-modal ground carriers and their shippers who offer or transport packages by ground before or after transport by air. If part 175 applies to these entities, CORAR suggests this will subject a significant number of persons within the network of distribution of radiopharmaceuticals to these regulations (e.g. reporting deficiencies and training). CORAR also suggests PHMSA should provide additional time before the effective date of the final rule for the total impact to be assessed and for necessary actions such as training or implementation.

Part 175 currently applies to all persons who accept and prepare shipments for air transportation, including persons who accept packages for air transportation. Ground handling crews, contracted employees, and air freight forwarders that accept packages for air transportation are subject to part 175. As are subsidiary companies formed by aircraft operators to build pallets and handle, load, and unload hazardous materials in air transportation. In this final rule, we are clarifying the applicability of the HMR to air shipments. All functions performed to prepare hazardous materials shipments for air transportation must be performed by a hazmat employee trained in accordance with the HMR, just as was required prior to this rulemaking. We do not feel more time is necessary to allow training to be conducted for hazmat employees currently covered under part 175.

ATA indicates that the proposed applicability statement in § 175.1 is too broad and should be further defined to clarify its non-applicability to employees whose functions are unconnected to air commerce, such as ground delivery personnel of a cargo air carrier who are subject to part 177. ATA suggests adding “who are engaged in air operations” to § 175.1(b)(1) to clarify its applicability.

We disagree. In a final rule published on July 28, 2005 (HM–223A (70 FR 43638)), we defined a “person who offers or offeror” to mean any person who performs or is responsible for performing any pre-transportation function required by the HMR or who tenders or makes the hazardous material available to a carrier for transportation in commerce. As we said in HM–223A, a carrier is not an offeror when it performs a function as a condition of accepting a hazardous material for transportation in commerce or when it transfers a hazardous material to another carrier for continued transportation without performing a pre-transportation function. We also clarified there may be more than one offeror of a hazardous material or more than one party regulated by the HMR concerning a shipment and each offeror or such party is responsible only for the specific pre-transportation function it performs or is required to perform. In addition, we clarified each offeror or carrier may rely on information provided by a previous offeror or carrier unless the offeror or carrier knows or a responsible person acting in the circumstances and exercising responsible care, would have knowledge indicating the information provided is incorrect.

Currently, some packaging, shipping, and freight forwarding facilities accepting hazardous materials for air transportation appear to believe they are not subject to the requirements in part 175 because they are not air carriers. However, the HMR require each person who offers, accepts, or transports packages by air to comply with all applicable regulatory requirements. Though an air carrier is responsible for compliance with the applicable requirements in part 175, packaging, shipping, and freight forwarding facilities are also subject to the requirements in part 175 when accepting hazardous materials for air transportation.

Therefore, in this final rule we are adopting the proposed provisions to clarify the requirements of the HMR applicable to the transportation of hazardous materials aboard aircraft apply to those persons who offer,

accept, or transport hazardous materials in commerce by aircraft to, from, or within the United States. We are relocating § 175.5(a)(1) to § 175.1(b), relocating § 175.5(a)(2) to § 173.7(f), and eliminating § 175.5(a)(3). In addition, we are modifying § 175.1 to clarify part 175 applies to any person who performs, attempts to perform, or is required to perform any function subject to this subchapter, including—

(1) Air carriers, indirect air carriers, and freight forwarders and their flight and non-flight employees, agents, subsidiary and contract personnel (including cargo, passenger and baggage acceptance, handling, loading and unloading personnel); and

(2) Air passengers that carry any hazardous material on their person or in their carry-on or checked baggage are not exempted from the HMR in accordance with § 175.10(a). On February 28, 2003 RSPA clarified the applicability of the HMR to airline passengers (see Notice No. 03–2; 68 FR 9735).

#### *B. Section 175.3 Unacceptable Hazardous Materials Shipments*

No amendments were proposed or adopted for this section and no comments were received.

#### *C. Section 175.10 Exceptions*

Section 175.10(a)(2) excepts certain hazardous materials required to be aboard an aircraft in accordance with applicable airworthiness requirements and operating instructions from the HMR. However, items of replacement for such materials and other company materials (COMAT) of an airline that are hazardous materials must be properly classed, described, marked, labeled, packaged, handled, stored, and secured in accordance with the HMR. These requirements are discussed in an advisory notice on COMAT published on December 13, 1996 (61 FR 65479). In § 175.10(a)(2) the HMR provide the following limited exceptions for COMAT:

(1) Items of replacement for installed equipment containing hazardous materials are subject to all relevant provisions of the HMR and are only excepted from the packaging requirements of the HMR if they are contained in specialized packaging providing at least an equivalent level of protection to that of the required packaging;

(2) Aircraft batteries are excepted from the quantity limitations in §§ 172.101 and 175.75(a); and

(3) An aircraft tire assembly is not subject to the HMR if it is not inflated

to a gauge pressure exceeding the maximum rated pressure for the tire.

Other hazardous materials such as paint, chemicals for corrosion removal, automotive batteries, wastes, and engine-powered ground equipment containing fuels do not qualify for this limited relief.

Section 175.10 also identifies other hazardous materials which are excepted from the HMR. The materials include: (1) certain personal items of passengers or crew members, such as toiletries, alcoholic beverages, and medicinal items; and (2) certain hazardous materials for special aircraft operations, such as avalanche control flights, aerial applications, and sport parachute jumping. We are reorganizing current exceptions in § 175.10 into three different sections:

(1) § 175.8 covering operator equipment and items of replacement (including COMAT);

(2) § 175.9 covering special aircraft operations (crop-dusting, parachuting, etc.); and

(3) § 175.10 covering exceptions for passengers, crewmembers, and air operators.

In addition, § 175.8 clarifies the exceptions for aircraft spares (COMAT) is applicable only to an operator transporting its own equipment.

Most commenters agree with the proposal to reorganize this section into three separate sections focused on COMAT, emergency response, and passenger related areas, respectively. Some commenters express concern to the exceptions for quantity limits on small arms ammunition, COMAT, batteries in wheelchairs, self-heating hair curlers, and self-defense spray. In addition, commenters requested clarification of the difference between carry-on vs. checked baggage. The comments submitted on those issues and our responses are discussed below.

#### 1. Quantity Limits on Small Arms Ammunition

The NPRM proposed to limit the amount of small arms ammunition allowed in checked baggage to 5 kg per person. Alaska Airlines, Alaska Air Carriers Association (AACA), and Customs and Border Protection, Port of Portland express concern regarding the quantity limits and clarification on "other packagings" authorized to carry small arms ammunition. Alaska Airlines and AACA state limiting the amount of small arms ammunition would result in serious economic harm to the tourist industry or hunters who travel to remote areas of the Alaska wilderness to hunt and fish, as well as those persons who live in remote areas who need small

arms ammunition for their personal use. They do not support the proposed quantity limits on small arms ammunition. AACA suggests limiting it to 30 kg, a limit consistent with ORM-D packaging. AACA states, "Many rural Alaskan residents rely on subsistence hunting as part of their lifestyle and to support their diet. They are regular consumers of small arms ammunition but Alaskan villages may typically have only one or two small retail stores with limited amounts of ammunition, and some villages do not have any regular options for purchase of small arms ammunition." AACA further states, "Alaska's tourism industry also relies on air transportation of hunters to remote wilderness areas where there are no options for re-supply of ammunition. Recreational hunters often travel to remote locations for extended trips lasting from 7 to 21 days or more. Such hunters typically carry more than one kind of weapon and their combined ammunition for all weapon types can easily exceed the 5 kg limit." Alaska Airlines requests a blanket exemption for carrying these products and states, "For Alaska to support the proposed rule as written, we must know we will be able to get a blanket exemption permitting our passengers at any of our United States locations to check in baggage the 50 pounds per person they have been doing safely for years (still employing the proven packaging requirements)." ATA supports the 5 kg (11 pound) limit as proposed for small arms ammunition carried in checked baggage. ATA states "this limit aligns the HMR with [the International Civil Aviation Organization Technical Instructions (TIs)] and places bounds on the previous "personal use" exception. Some carriers that serve hunting destinations may individually wish to seek higher limits through exemptions."

Though we agree with ATA international harmonization is beneficial, we are compelled to account for the concerns raised by Alaska Airlines and AACA. Therefore, after reevaluating our proposal to limit small arms ammunition to 5 kg (11 pounds), we have decided not to adopt the proposed small arms ammunition limit. In addition, we would like to note that even though we are not adopting this provision, § 171.11 provides air carriers with the option of following the ICAO Technical Instructions which limits the amount of small arms ammunition to 5 kg per passenger.

Customs and Border Protection (CBP) suggests the proposed changes need further clarification as to what constitutes "other packagings specifically designed to carry small

amounts of ammunition." According to CBP, many Federal law enforcement officers are experiencing difficulties with inconsistent enforcement of these requirements. According to CBP:

In the recent past TSA and airline policies on the transport of "duty" ammunition by these officers have been inconsistent and non-uniform. TSA Screeners and airlines at one airport would allow an officer to transport his duty ammunition in the firearms magazine or clip (removed from the weapon). Upon the officers return trip from a different airport the local policy would require the ammunition to be transported in the original "off the shelf" styrofoam and cardboard box. This causes problems when an officer is suddenly advised he can not fly unless he has original type packaging material. The proposed changes to new § 175.10(a)(8) do not clearly address this situation.

In addition, CBP suggests magazines and clips are designed to safely transport ammunition and to protect the primer end of the round from impacts may result in accidental discharge; according to CBP, store packaging of ammunition in thin cardboard boxes with a styrofoam insert provides no such protection of the primers. CBP states, "If a magazine or clip is not deemed suitable for transport then specifics on packaging for small amounts of ammunition must be clearly outlined to facilitate a uniform national interpretation of the standards."

The current requirement to securely package small arms ammunition for personal use in boxes or other packages specifically designed to carry ammunition provides a flexible packaging standard may be met using a variety of different packaging configurations. Similarly, the requirement for clips and magazines to be securely boxed is sufficiently descriptive to provide a variety of safe shipping options for shippers and carriers. Section 173.63 provides similar requirements for "Cartridges, small arms" and "Cartridges, power devices" shipped as ORM-D materials. Those provisions have an established history of safety and we are confident the adoption of proposed revisions to this paragraph will have similar results. In addition, we recognize the vast majority of persons transporting ammunition aboard an aircraft (i.e., sportsmen, law enforcement officers, military personnel, and competitive shooters) are knowledgeable about ammunition safety. Many will choose to transport and store their ammunition in hardened plastic cases intended to provide protection. Others will choose to transport their ammunition in the manufacture's original packaging, clips, or magazines—all of which can be safely

transported provided they completely and securely enclose the ammunition (see letter of interpretation dated April 12, 2005 from Mr. John Gale to Mr. Marc Joyeuse). The intention of this change is not to develop a new packaging for ammunition; it is to ensure a limited amount is transported safely, in secure packages that provide adequate protection from the conditions normally incident to transportation aboard an aircraft.

## 2. COMAT

The NPRM clarified exceptions applicable to COMAT shipments apply only to an airline transporting "its own" replacement items. ATA asks PHMSA to delete the proposed change in new § 175.8(b). ATA notes carriers have had reciprocal arrangements where they obtain replacement items from each others' inventories in order to expedite movement of the item to the location where it is needed. ATA states "it is irrelevant for safety purposes whether ownership of the replacement item has actually passed to the carrier that transports it for use as a replacement."

We do not agree the exception for COMAT materials should be expanded to include the transportation of replacement parts by one airline for another airline. COMAT consists of spares and supplies intended for the repair or replacement of parts by the air carrier on which it is transported. Parts and supplies transported for other airlines must be transported in accordance with the HMR. To clarify the COMAT exception and the exception for installed equipment, in this final rule, we moved the exception from paragraph (b) of § 175.8 to paragraph (a) and have replaced the proposed text of paragraph (a) with the text currently in § 175.10(a)(1) and (a)(2).

ATA also asks PHMSA to adopt a similar special provision to the proposed Special Provision A59 on tire assemblies for aircraft batteries. ATA suggests this will further align the HMR with ICAO Special Provision A51 for batteries, just as the proposed Special Provision A59 for tire assemblies aligns with ICAO Special Provision A59 for tire assemblies. ATA states "this change will make it clear that carriers may continue their current practices regarding COMAT shipment of aircraft batteries." ATA's comment is beyond the scope of this rulemaking. We will consider the addition of a special provision in a future rulemaking as suggested by ATA.

Regional Airline Association (RAA) requests clarification as to which exceptions apply to "will not carry" operators. For example, RAA suggests

"will not carry" operators should be permitted to carry limited hazardous material COMAT if packaged in a manner acceptable to FAA and provided the operator's training and procedures are acceptable to FAA. RAA suggests air carriers incur a significant cost due to the current hazmat rules for "will not carry" operations. RAA also requests clarification of exceptions for passengers and crewmembers on "will not carry" airlines.

A "will not carry" operator is one who makes a business decision not to carry hazardous materials and indicates this decision in item 23 of its operations manual, in accordance with 14 CFR Subpart G—Manual Requirements (§ 121.135). The FAA does not prohibit "will not carry operators" from transporting those materials excepted in § 175.10(a). The HMR does not apply to those materials transported in accordance with § 175.10.

## 3. Batteries in Wheelchairs

ATA requests revisions to certain aspects of the provisions in part 175 applicable to non-spillable batteries. According to ATA, "Most wheelchairs that carriers check as baggage or examine in recent years have non-spillable batteries; spillable batteries have become relatively rare. Wheelchair design has changed in ways that make it very difficult for carriers to comply with the existing visual inspection and battery disconnection requirements, which PHMSA proposes to carry over to the new section § 175.10(a)(15)." Therefore, ATA requested PHMSA modify the proposed § 175.10(a)(15)(ii) and (iii) to recognize the current state of wheelchair technology.

ATA further states:

Visual inspection and disconnection of a non-spillable battery should not be required if both of the following are satisfied: (1) the wheelchair has a disconnect mechanism, and carrier personnel use that mechanism to disconnect the power source, and (2) carrier personnel are able to verify, without disassembling the chair to view the battery itself, that the battery is non-spillable. If a carrier cannot satisfy either of these requirements, it is appropriate to require visual inspection to determine whether the battery is non-spillable. If the carrier performs a visual inspection and verifies that the battery is non-spillable, the carrier should be permitted to use a disconnect mechanism if the chair has one, or to disconnect the battery if the chair does not have a disconnect mechanism. ATA agrees that spillable batteries pose both an electrical and chemical safety risk, and the current visual inspection and disconnection requirements for them should be maintained.

ATA suggests these modifications will increase convenience for traveling

disabled passengers by decreasing the time for carriers to return checked chairs to passengers. In addition, ATA suggests these modifications would decrease the damage to wheelchairs.

ATA's comments are beyond the scope of this rulemaking. However, we will consider the revisions suggested in a future rulemaking.

## 4. Carry-On vs. Checked Baggage

RAA requests further clarification of the terms "carry-on baggage" and "checked baggage." According to RAA, "there seems to be the implication that carry-on baggage is stowed in the passenger cabin and accessible to persons during flight and that checked baggage is stowed within a cargo hold; that is not the case for regional airplane operations." RAA asks PHMSA to clearly define these terms. As RAA states:

Most "carry-on" bags on regional airplanes are stowed in the cargo hold; they are thoroughly checked by TSA as carry-on bags but are brought to the gate by the passengers and then loaded planeside into the cargo holds since there is no room for them in the passenger compartment. Placement of many carry-on bags that are taken to the gate for flights on very large airplanes (e.g. Boeing and Airbus) are also loaded planeside in the airplane's bulk cargo hold because they may not fit in an overhead compartment or there simply isn't enough room in the passenger compartment. We therefore see no distinction then between the two types of bags once they are placed onboard the airplane.

The HMR do not include definitions for "checked" or "carry-on" baggage. In the absence of a definition in the HMR, a term has the same meaning as in a dictionary or other source. Thus, when the HMR refer to "checked baggage," the term means items of baggage offered to an airline for transportation in the hold of an aircraft inaccessible to the passenger during the flight for which the airline issues a claim check. When the HMR refer to "carry-on baggage," the term means baggage for which no claim check is issued and can be carried into the passenger cabin of an airplane by a passenger or crewmember. These issues have not been addressed by this rulemaking; therefore, they are beyond its scope.

## 5. Self-heating Hair Curlers

The HMR include an exception for hair curlers containing hydrocarbon gas allowing no more than one hair curler per passenger or crew member, provided the safety cover is securely fitted over the heating element. This section is clarified by including the North American term "curling iron" to describe hair curlers and by citing "butane" as an example of a

hydrocarbon gas. ATA suggests the self-heating hair curlers referred to in § 175.10(a)(6) should include devices using liquid fuel as well as hydrocarbon gas fuel. We disagree. The current exception permits self-heating hair curlers to be transported in carry-on or checked baggage and includes curling irons using a hydrocarbon gas rather than electricity for power. This exception provides travelers with an option when the use of curlers heated by electricity is not an option. Allowing a flammable liquid burning heating source to be transported in carry-on or checked baggage poses an unnecessary flight safety risk.

6. Self-defense Spray

ATA asks PHMSA to delete the proposed § 175.10(a)(9) allowing the carriage of a self-defense spray in checked bags. According to ATA, this would harmonize the HMR with ICAO and IATA, which provide no exception for self-defense sprays in checked bags.

We recognize the current HMR exception for self-defense spray is not consistent with ICAO and IATA. However, harmonization is not always appropriate. The exception is used frequently by passengers and crewmembers to ensure their safety at destination. We do not agree permitting one container of self-defense spray in checked baggage poses a flight safety risk. Passengers traveling internationally should note that many foreign countries do not allow self-defense spray to be transported in checked or carry-on luggage.

7. Reformatting of Exceptions in § 175.10

Based on the comments received, we are adopting the amendments to divide

the current exceptions in § 175.10 into three different sections: §§ 175.8, 175.9, and 175.10. Each section will cover a category of exceptions. Section 175.8 will cover operator equipment and items of replacement (including COMAT); § 175.9 will cover special aircraft operations (crop-dusting, parachuting, etc.); and § 175.10 will cover exceptions for passengers, crewmembers, and air operators. Separating and categorizing these exceptions will make the regulations easier to use and minimize confusion concerning the applicability of certain paragraphs.

New § 175.8 incorporates the exceptions for operators covering:

- Aviation fuel and oil
- Hazardous materials required for airworthiness
- Oxygen supplied by the operator
- Dry ice used by the operator in food service
- Alcohol, perfume, and lighters carried for use or sale by the operator
- Spares (COMAT) for installed equipment
- Tire assemblies.

New § 175.8 also clarifies the exceptions for aircraft spares (COMAT) are applicable only to an operator transporting its own equipment. The paragraph on COMAT deletes the references to tires as this exception already exists in § 173.307(a)(2). Also, current § 175.10(a)(7) dealing with the stowage of oxygen cylinders is moved to the new § 175.501 (See § 175.8(b)(1)).

We are revising § 173.307(a)(2) to reference § 175.8(b)(4) for tires transported by aircraft. Section 175.8(b)(4) deals with serviceable and undamaged tires versus unserviceable and damaged tires. It also requires tires

and their valve assemblies to be protected from damage during air transport.

New § 175.9 incorporates exceptions for the following special aircraft operations:

- Aerial seeding, crop dusting, spraying, etc.
- Release devices, lights, and life-jackets for parachuting operations
- Smoke grenades, flares, pyrotechnics, affixed to aircraft during air shows
- Weather control, environmental protection, forest preservation, and avalanche control.

Also added to this new section are exceptions for operations dedicated to firefighting and prevention, air ambulances, and search and rescue operations. We have edited references to FAA approvals throughout this section to reflect either the FAA Flight Standards District Office or the FAA Principal Operations Inspector, whichever is more appropriate. Emergency services not performed under dedicated operations must comply with the HMR. The exceptions in § 175.9 are not for general transportation. In addition, applicable FAA operating specifications and Federal Aviation Requirements apply.

New § 175.10 contains exceptions for hazardous materials carried by passengers and crewmembers. These provisions have been edited for clarification. The most common edit was to put the name of the excepted article at the beginning of the sentence so it is easy to find.

The following table lists the provisions in the current § 175.10(a) and indicates the new location of the provision as adopted in this final rule.

Old paragraph 175.10(a)	New paragraph
(a)(1) aviation fuel and oil in tanks .....	175.8(a).
(a)(2) operator equipment, spares .....	175.8(a) and (b), 173.307(a)(2).
(a)(3) aerial seeding, crop dusting, etc. ....	175.9(a).
(a)(4) medicinal/toilet articles, 2.2 aerosols .....	175.10(a)(1)—self defense spray (a)(9).
(a)(5) small arms ammunition .....	175.10(a)(8).
(a)(7) oxygen furnished by operator .....	175.8(b).
(a)(8) implanted medical devices .....	175.10(a)(3).
(a)(9) parachuting devices .....	175.9(b).
(a)(10) safety matches/lighters .....	175.10(a)(2).
(a)(11) pyrotechnics affixed to aircraft .....	175.9(c).
(a)(12) hazmat dispensed, environmental .....	175.9(e).
(a)(13) dry ice .....	175.10(a)(10), 175.8(d).
(a)(14) transport incubator .....	175.10(a)(13).
(a)(15) alcohol, etc., carried by operator .....	175.8(b).
(a)(16) duty free perfume, etc. ....	175.10(a)(5).
(a)(17) alcoholic beverages .....	175.10(a)(4).
(a)(18) gas cylinders for mechanical limbs .....	175.10(a)(12).
(a)(19) wheelchair, nonspillable battery .....	175.10(a)(16).
(a)(20) wheelchair, spillable battery .....	175.10(a)(17).
(a)(21) hair curlers, butane .....	175.10(a)(6).
(a)(22) mercurial barometer/thermometer .....	175.10(a)(14).
(a)(23) heat-producing articles .....	175.10(a)(15).

Old paragraph 175.10(a)	New paragraph
(a)(25) lifejacket with gas cartridges .....	175.10(a)(11).
(a)(26) small mercury thermometer .....	175.10(a)(7).
(a)(27) lithium batteries and cells .....	175.10(a)(17).

Section 175.10(a)(1) is edited to change the maximum net quantity of inner packaging for medicinal/toilet articles from 473 ml to 500 ml for consistency with other even metric quantities. Self-defense spray has been reassigned to its own paragraph since it has little in common with medicinal and toilet articles.

Section 175.10(a)(2) has been revised to clarify that safety matches and lighters may be carried on one's person or in carry-on baggage. This change stems from a February 13, 2003 memorandum from Mr. Edward Mazzullo to Mr. William Wilkening addressing the current allowance for safety matches or a lighter to be carried on one's person. The memo clarifies the phrase "one's person" to include the passenger and his carry-on baggage.

Section 175.10(a)(6) is clarified by including the North American term "curling iron" to describe hair curlers and by citing "butane" as an example of a hydrocarbon gas.

Section 175.10(a)(8) is the new location for the small arms ammunition exception. This sub-paragraph is clarified to indicate ammunition clips and magazines must be securely boxed.

Section 175.10(a)(9) is the new location for the self-defense spray exception. It had previously been included in the quantity limits for medicinal and toilet articles. In its previous location the exception was difficult to locate; the move to this subparagraph makes it more visible.

Section 175.10(a)(10) is the new location for the dry ice exception. The exception, currently located in § 175.10(a)(13), includes two different net quantities allowed for dry ice—2 kg (4.4 pounds) and 2.3 kg (5 pounds)—depending on how it is carried. In addition, it is unclear whether the marking requirements are to be applied only to checked baggage or if they must be applied to both dry ice in cargo and checked baggage. The new subparagraph maintains the current quantities by allowing 2.3 kg (5 pounds) to be carried in checked baggage and 2 kg (4.4 pounds) to be carried in carry-on baggage. In addition, the new subparagraph clarifies the marking requirements are for checked baggage only. We had proposed to limit the amount of dry ice in checked and carry-on baggage to 2.0 kg (4.4 pounds); however, due to international changes

we decided to maintain the current allowance. The exception for dry ice used in food service by the operator is moved to § 175.8(b)(2). The 2.3 kg (5 pounds) exception for dry ice transported as cargo is now incorporated in § 173.217. However, the maximum amount of dry ice allowed on board a flight is established by airworthiness requirements and operating specifications. FAA's Advisory Circular 91-76 dated September 30, 2004 outlines currently authorized limits.

Section 175.10(a)(11) is modified. Self-inflating life jackets may be carried with two cartridges of CO<sub>2</sub> (or other suitable Division 2.2 gas), as adopted in a final rule issued under docket HM-215E (68 FR 44991; July 31, 2003).

Section 175.10(a)(15) is clarified by replacing the term "underwater torch" with the North American term "diving lamp".

Section 175.10(a)(17) is replaced. Old § 175.10(a)(27) was adopted in an interim final rule published under Docket HM-224E (69 FR 75207; December 15, 2004). The new section provides an exception for lithium batteries in consumer electronic and medical devices (watches, calculators, cameras, cellular phones, lap-top computers, camcorders, and hearing aids, etc.) containing lithium cells or batteries, and spare lithium batteries and cells for these devices, when carried by passengers or crew members in carry-on or checked baggage for personal use. In addition, each installed or spare battery must conform to the following:

(1) The lithium content of the anode of each cell, when fully charged, is not more than 5 g; and

(2) The aggregate lithium content of the anodes of each battery, when fully charged, is not more than 25 g.

New § 175.10(b) includes the provisions adopted in HM-215E authorizing carriage of these excepted hazardous materials in passenger baggage unintentionally separated from the flight carrying the passenger (misrouted).

#### D. Section 175.20 Training

Section 175.20 requires aircraft operators to comply with all applicable requirements in Parts 106, 171, 172, and 175. In addition, hazmat employers must ensure all hazmat employees receive training in accordance with Part

172. Initial training under the HMR must be conducted within 90 days after employment begins or a change in the employee's job function. Recurrent training must be conducted at least every three years. Section 175.20 also refers to the FAA's hazardous materials training requirements in 14 CFR 121.401, Part 121 Subpart Z, 135.323, and Part 135 Subpart K (as amended in FR Vol. 70, No. 194; published October 7, 2005). The FAA requirements prescribe additional training for air carriers. Aircraft operators may substitute training provided in accordance with 14 CFR for training required by Part 172 to the extent that the training provided under 14 CFR satisfies requirements in Part 172.

A "hazmat employee" is defined in § 171.8 to mean a person "who in the course of employment performs functions that directly affect hazardous materials transportation safety." This does not include every person who works around an area where, for example, hazardous materials are loaded, unloaded, handled, and stored. The employee's functional relationship to hazardous materials transportation safety, rather than incidental contact with hazardous materials in the workplace, is the primary factor in determining whether an individual is a "hazmat employee."

We received no comments regarding the proposed revision to this section; therefore, it is adopted as proposed in the NPRM. This final rule thus clarifies the HMR (including training) apply to any person who performs, attempts to perform, or is required to perform any function subject to this subchapter, including air carriers, indirect air carriers and freight forwarders and their flight and non-flight employees, agents, subsidiary and contract personnel that accept hazardous materials for air transportation.

#### E. Sections 175.25 and 175.26 Notification at Air Passenger and Cargo Facilities of Hazardous Materials Restrictions

The HMR currently require notices to be posted at air passenger facilities and cargo facilities. The notices contain specific language warning offerors of cargo and passengers of the requirements applicable to offering or carrying hazardous materials and the penalties for failure to comply with

those requirements. Section 175.25 requires aircraft operators to display notices warning passengers against carrying hazardous materials aboard aircraft in their checked or carry-on luggage and on their persons, and prescribes the information to be contained in each notice. Section 175.26 requires each person who engages in the acceptance of, or the transportation of, cargo by aircraft, to display notices in prominent locations at each facility where cargo is accepted. Display of notices are not required at unattended locations if there is a general notice prominently displayed advising customers shipments of hazardous materials at the location are prohibited. In addition, notices are not required to be displayed at a shipper's facility where packages of hazardous materials are accepted.

In a final rule published July 10, 1998 (63 FR 37454), we revised §§ 175.25 and 175.26 to reflect changes in the statutory citations and penalties, and to provide carriers greater flexibility. These notices are intended to inform customers of hazardous material identification procedures, the requirement to comply with the HMR, and the penalties for failure to comply with the HMR. Therefore, signs must be in prominent view of passengers and persons who accept or offer cargo. Sections 175.25 and 175.26 also list the minimum information required to be contained on the notice.

In some cases, cargo terminals are co-located with passenger terminals. To make it easier for the industry to comply with signage requirements, FAA and RSPA stated in a final rule published September 27, 1993 (58 FR 50496) display of separate passenger and cargo notices is not required at these passenger terminals.

We did not propose any amendments to the signage requirements in §§ 175.25 and 175.26. However, in an effort to further clarify these requirements and provide consistency with § 175.26, we did propose to revise the terminology in § 175.25 by changing "each aircraft operator" to "each person."

ATA supports PHMSA's efforts to educate shippers and the public about hazardous materials restrictions. For clarity, ATA suggests revising the opening sentence of § 175.25 to add the word "air," as follows: "Each person who engages in for-hire air transportation of passengers \* \* \*" We agree the suggested change provides further clarity and are adopting it in this final rule. We will also continue to work with the airlines and the airports to ensure the passengers and shippers of cargo aboard aircraft are aware of the

dangers and the regulations for shipping hazardous materials.

#### *F. Section 175.30 Accepting and Inspecting Shipments*

Section 175.30 prohibits any person from carrying a hazardous material aboard an aircraft unless the package is inspected by the aircraft operator to ensure the integrity of the package has not been compromised. In response to a request from an airline to clarify its hazardous material acceptance responsibility, we issued a formal interpretation on the acceptance of hazardous materials on June 4, 1998 (63 FR 30411). We stated a carrier's acceptance and transportation of hazardous materials can involve several different situations. For example, a shipment may be "declared" by the shipper to contain hazardous materials by shipping documentation, marking, labeling, or other means. In such cases, the shipment must comply with all applicable HMR requirements, including the use of an authorized packaging. Conversely, an "undeclared" or "hidden" shipment is a shipment of hazardous materials not declared, intentionally or unintentionally, by the offeror to contain hazardous materials, and there is no attempt to comply with the HMR.

The responsibility to reject any shipment of hazardous materials not fully in full compliance with the HMR stems from the authority in 49 U.S.C. 5123 to assess a civil penalty against any person who "knowingly violates" any requirement in the HMR. Section 5123(a) provides a person "acts knowingly" when: (A) the person has actual knowledge of the facts giving rise to the violation; or (B) a reasonable person acting in the circumstances and exercising reasonable care would have that knowledge. A carrier knowingly violates the HMR when the carrier accepts or transports a hazardous material with actual or constructive knowledge that a package contains a hazardous material not properly packaged, marked, labeled, or described on a shipping paper as required by the HMR. To ignore readily apparent facts indicating either: (1) A shipment declared to contain a hazardous material is not properly packaged, marked, labeled, placarded, or described on a shipping paper; or (2) a shipment actually contains a hazardous material governed by the HMR despite the fact it may not be properly marked, labeled, placarded, or described on a shipping paper as containing a hazardous material, would not represent reasonable care.

Section 175.30(d) excepts materials classed as ORM-D from the inspection requirements. In the NPRM, we proposed to remove this exception. Materials reclassified as ORM-D should be subject to the inspection requirements of § 175.30(b) and (c) to ensure all packages containing hazardous materials are in proper condition for transportation aboard aircraft.

ATA; UPS; Association of Hazmat Shippers (AHS); and FedEx Express ask PHMSA to leave the exception provided in § 175.30(d) for consumer commodities and not remove it as proposed. ATA states removing the exception would result in inconsistency with the ICAO acceptance procedures in part 7;1.1.1(b) for similar shipments under Packing Instruction 910. ATA suggests PHMSA provided no safety justification for removing the exception, noting the break down and rebuilding a unit load device (ULD) containing ORM-D materials provides more opportunity to damage those packages. In addition, ATA suggests removal of the exception could lead to international consistency and competitive issues where foreign operators will offer their customers expedited processing while U.S. carriers will have to spend more time processing their packages individually. UPS and AHS also comment there is no incident history to justify removal of the exception and the increased handling could lead to greater costs for U.S. operators and increased damages during handling.

We disagree with the commenters and are adopting the proposal to remove the exception in § 175.30(d) for materials classed as ORM-D. Today's transportation environment also warrants inspection of materials reclassified as ORM-D to ensure the safety and security of the hazardous material shipment. Inspection is one of the only means available to ensure packages containing hazardous materials are in proper condition for transportation aboard aircraft. In addition, the change is consistent with international regulations. International regulations do not provide an ORM-D hazard class; therefore, international transportation of ORM-D materials is not permissible.

ATA, UPS, AHS, FedEx Express, and Express.net Airlines, LLC request, for international consistency, PHMSA remove the proposed requirement for an operator to inspect overpacks to determine "that a statement indicating the inside packages comply with the prescribed specifications appears on the outside of the overpack when specification packagings are

prescribed.” ATA commented under HM–215G, final rule, ICAO Technical Instructions no longer require such a statement on overpacks. ICAO Technical Instructions require overpacks be marked “Overpack.” The commenter stated the proposed inspection requirement under this rule would only create confusion in international shipments.

We agree, the text should be revised to be consistent with the final rule adopted under docket HM–215G (69 FR 76044; December 20, 2004). Therefore, the proposed text is altered to require the operator to ensure the word “OVERPACK” appears on the outside of the overpack when specification packages are required. Note, however, the use of a statement indicating the inside packages comply with prescribed specifications is also authorized until October 1, 2007.

Express.net Airlines requests a revision to § 175.30(e)(1)(iii) to explain whether the “one package” limitation refers to a one cargo aircraft only package contained with other shipments acceptable on passenger aircraft, or the “one package” refers to the limitation only one package (total) may be overpacked.

We believe proposed § 175.30(e)(1)(iii) clearly indicates the operator is excepted from taking steps to establish an overpack does not contain a package bearing the “CARGO AIRCRAFT ONLY” label if the overpack contains a single package. The exception refers to a package, not a single package labeled with the “CARGO AIRCRAFT ONLY” label. Therefore, we are not altering the proposed language.

#### *G. Section 175.31 Reports of Discrepancies*

Section 175.31 requires a person who discovers a discrepancy after acceptance of a package of hazardous materials (as defined by § 175.31(b)) to notify the nearest FAA Civil Aviation Security Field Office (CASFO) by telephone “as soon as practicable,” and provide certain information. This requirement permits early investigation and intervention to determine the cause for failure to either properly declare or prepare a hazardous materials shipment. A May 27, 1980, final rule under Docket HM–168 (45 FR 35329), adopted requirements in 49 CFR 175.31 for reporting discrepancies. In the preamble to the final rule, we stated:

A shipment containing a hazardous material must be offered to the carrier in accordance with the regulations. An offering occurs when (1) the package is presented, (2) the shipping paper is presented, (3) the

certification is executed, and (4) the transfer of the package and shipping paper is completed with no further exchange (written or verbal) between the shipper and aircraft operator, as usually evidenced by the departure of the shipper. At this point, it is clear the operator has accepted the shipment and the shipper has removed himself from a final opportunity to take corrective action that would preclude a violation of the HMR relative to transportation of hazardous materials aboard aircraft \* \* \* the requirement which has been adopted [in this final rule] limits required reporting to shipment discrepancies which are discovered [subsequent to] acceptance of the shipment for transportation and limits ‘reportable’ discrepancies to those discrepancies which are not detectable as a result of proper examination by a person accepting shipment under the acceptance criteria of § 175.30. This notification requirement will facilitate the timely investigation by FAA personnel of shipment discrepancies involving situations where inside containers do not meet prescribed packaging or quantity limitation requirements and where packages or baggage are found to contain hazardous materials after having been offered and accepted as other than hazardous materials.

We proposed the addition of § 175.31(a)(6) to require the address of the shipper or person responsible for the discrepancy, if known, to be reported by the air carrier. Currently, § 175.31(b)(2) requires air operators to notify FAA, in part, when baggage subsequent to its offering and acceptance is found to contain undeclared hazardous materials. When security screeners suspect checked baggage may contain an unauthorized hazardous material, they bring the item to the attention of the air carrier so the air carrier can make a determination if the item is authorized to be in the baggage. If the air carrier determines the item constitutes a discrepancy, it must notify the FAA.

In comments to the NPRM, ALPA expresses its disappointment with no amnesty program being proposed despite broad support for such a program. ALPA states if an amnesty program is considered in the future it should apply to carriers when they discover an undeclared hazardous material and not to shippers. ALPA stated, “There is a clear difference in culpability between a carrier that fails to discover an undeclared shipment during or after acceptance and the entity that prepares and offers that shipment.”

Though we did not propose an amnesty program under this rulemaking, as the primary agency delegated by the Secretary of Transportation to inspect and enforce the HMR in the air mode the FAA issued Advisory Circular 121–37, VOLUNTARY DISCLOSURE REPORTING PROGRAM—

HAZARDOUS MATERIALS, on January 31, 2006. Holders of certificates under 14 CFR parts 119 and 125 and foreign air carriers issued operations specifications under 14 CFR part 129 who accept hazardous material for transport by air may voluntarily disclose to the FAA violations of certain hazardous materials regulations under this voluntary disclosure reporting program. This applies to violations of 49 CFR part 175, which cover certain reporting, training, acceptance, loading, unloading, handling, and stowage requirements. The voluntary disclosure reporting program applies only when the air carrier discovers an apparent violation and notifies the FAA HAZMAT Branch Manager before it learns of the apparent violation.

In its comments, CORAR states proposed notification of any discrepancy without clarification implies simple discrepancies resulting from unintentional human error, such as a missing or illegible TI value on a Class 7 package label, would be subject to reporting. CORAR states, “[E]xpanding of resources required to make and respond to such a report is not warranted, particularly when the proposed rule also requires that the report include the address of the shipper or person responsible for the discrepancy, if known, by the air carrier.” CORAR disagrees with the proposal to add the requirement for the address of the shipper or person responsible for the discrepancy, if known, to be supplied by the air carrier. CORAR states, “It seems obvious that any investigation resulting from the report of a discrepancy will include a review of shipping papers, air bills and package labels that will provide the name of the consignor.” CORAR further states, “Any conclusion of fault or root cause should be the responsibility of the investigator and not the reporting party in order to avoid any wrongful allegation or potential shifting of accountability from another party with a vested interest in hazardous materials distribution.”

ATA suggests the volume of items now being removed from baggage has made it very burdensome for carriers to file discrepancy reports under the current § 175.31 procedures. ATA states it strongly opposes the proposal to require the passenger address, if known, suggesting there must be broader and more effective and efficient means of public outreach by FAA than requiring carriers to research and supply thousands of addresses on commonplace items, e.g., lighters, spray starch, oversized cans of hairspray, which FAA might or might not use in

an individual outreach letter. ATA states, “[R]esearching addresses could add to the already considerable burden of filing a report.” According to ATA, “To require carriers to provide addresses, if known, on all reports would only be providing considerable information that the FAA is unlikely to use.” Additionally, ATA states, “In the carrier’s view, individual outreach would be appropriate only in cases where a passenger was carrying hazardous materials that pose more significant safety risks, such as fireworks.”

We appreciate the points made by CORAR and ATA regarding the proposed requirement to include the address of the person responsible for the discrepancy in the discrepancy report. The address must only be included if it is known by the operator. In this final rule, we are adopting the proposed addition to § 175.31(a)(6) to require the address of the shipper or person responsible for the discrepancy, if known, by the air carrier. Currently, § 175.31(b)(2) requires air operators to notify FAA, in part, when baggage subsequent to its offering and acceptance, is found to contain undeclared hazardous materials. When security screeners suspect checked baggage may contain an unauthorized hazardous material, they bring the item to the attention of the air carrier accepting the baggage so the air carrier can make a determination if the item is authorized to be in the baggage. If the air carrier determines the item constitutes a discrepancy, it must notify the FAA. Since January, 2002, the FAA has received more than 44,000 discrepancy reports from air carriers in accordance with the § 175.31 reporting requirements. FAA and PHMSA have implemented numerous outreach initiatives intended to educate the public about the HMR. For example, PHMSA and FAA have: (a) Issued safety notices in the **Federal Register**; (b) deployed informational kiosks at major airports to alert passengers about the types of items not authorized to be transported in luggage; and (c) conducted over 1,000 outreach presentations each year. Despite these outreach efforts, the number of hazmat discrepancies reported by air carriers from checked baggage continue to grow. Therefore, PHMSA and FAA believe a more targeted outreach and education campaign is necessary. With the advent of universal checked baggage security screening, the FAA has developed an electronic system that prioritizes the discrepancy reports received based on risk. Although many discrepancy

reports include address information, most do not. When the passenger’s or shipper’s address information is included with a discrepancy report involving higher risk hazardous materials such as fireworks, gasoline, propane, etc, a manually prepared Letter of Investigation is generally sent to the alleged violator in an attempt to gain more information. When the relevant address information is included with a discrepancy report involving lesser risk hazardous materials, an outreach notice is generated and mailed to the responsible passenger. Since April 2005, the FAA has mailed over 10,000 of these automated outreach notices to airline passengers. The address of the passenger or shipper thought to be responsible for a reported discrepancy is a crucial element in the successful resolution of these events.

As an interim measure, the FAA has experienced some success obtaining addresses as part of discrepancy reports by using subpoena authority contained in 49 U.S.C. Section 5121 and Part 13 of the Federal Aviation Regulations, 14 CFR part 13. This experience suggests many cases involve air carriers who know the relevant passenger’s address information.

CORAR also requests further clarification of the phrase “as soon as practicable” for reporting and asks us to establish a timeframe for reporting such as immediate, 24 hour, 30 days, etc. For purposes of § 175.31, the phrase “as soon as practicable” means without undue delay. The person is not required to stop what they are doing and contact FAA immediately.

#### *H. Sections 175.33 and 175.35 Shipping Papers and Notification of Pilot-in-Command*

In the NPRM, we proposed to consolidate all the requirements related to shipping papers (§ 175.35), their retention for two years after the material is accepted by the initial carrier (§ 175.30(a)(2)), and the notification to pilot-in-command (NOPIC) into one section—§ 175.33, entitled “Shipping papers and notification of pilot-in-command.”

ATA states § 175.33(b)(1)(i)(ii) requires extraneous and unnecessary information on a NOPIC. ATA asserts there is no safety-related reason for a NOPIC to include information about outer packaging. According to ATA, the requirement was added to shipping certification in the HM-215G final rule, but is not required in a NOPIC under ICAO Technical Instructions 7.4.1.1(e) and (f). ATA states, “[T]hese elements have grown unintentionally as supplemental shipping paper

requirements have been added to both U.S. and international regulations.” ATA further states, “Inclusion of details such as the EX number for airbags (but not for other explosives when the detail is marked on a package or shipping papers), State exemptions, or similar information cross-referenced to the shipping papers is irrelevant, and possibly confusing to the flight crew and/or emergency responders.” ATA suggests these requirements should be discussed with DOT, FAA, National Transportation Safety Board and international authorities as appropriate. FedEx Express states it does not believe it is the intent of PHMSA to require a description of the outer package on the NOPIC which provides no safety benefit and could delay or keep emergency response personnel from reviewing pertinent information.

We did not propose any revision to the requirements related to shipping papers or the preparation and delivery of a NOPIC. Therefore, the comments summarized above are beyond the scope of this rulemaking.

ALPA proposes adding a revision to § 175.33(b) to state, “allowing adequate time for review”, where the NOPIC is referenced. ALPA states operators or their agents wait until the very last minute before departure to provide flight crews with hazardous materials information contained in the NOPIC. According to ALPA, “Just prior to departure is not the best time to provide this information to the flight crew. This does not allow the time required to properly examine the NOPIC, determine legality, and, where possible check the proper loading of these commodities.”

We agree with ALPA, operators should provide the NOPIC to the pilot-in-command early enough to allow adequate time for review. However, we believe the current wording, which requires the NOPIC to be provided to the pilot-in-command as early as practicable, is adequate. Therefore, we are not adding the statement “allowing adequate time for review” to § 175.33(b).

#### *I. Section 175.40 Keeping and Replacement of Labels*

This section requires aircraft operators to maintain an adequate supply of labels in case a label becomes lost or destroyed. Consistent with the removal of this section from the other modal parts of the HMR, we proposed the removal of this section. Commenters who addressed this section support its removal. Therefore, in this final rule, we are removing the requirement as we proposed.

*J. Sections 175.75 and 175.85 Quantity Limitations and Cargo Location*

Sections 175.75 and 175.85 prescribe limitations on the quantity of hazardous materials authorized to be carried aboard passenger-carrying or cargo-only aircraft, and the location of those materials, respectively. The quantity limitations for hazardous materials permitted aboard passenger-carrying aircraft are specified in § 175.75(a)(2). This section states no more than 25 kg of hazardous materials and, in addition, 75 kg net weight of Division 2.2 (non-flammable compressed gas) may be carried aboard a passenger-carrying or cargo-only aircraft:

- (1) In an accessible cargo compartment;
- (2) In any freight container within an accessible cargo compartment; or
- (3) In any accessible cargo compartment of a cargo-only aircraft if the hazardous materials are loaded as to be inaccessible unless in a freight container.

Class 9 materials and consumer commodities are excepted from the quantity limitations of § 175.75(a)(2). Section 175.85(b) requires hazardous materials packages acceptable for cargo-aircraft only to be loaded in a manner allowing access to the package by crew members.

Section 175.85(a) prohibits the carriage of a hazardous material in the passenger cabin or on the flight deck of any aircraft, and specifies conditions under which hazardous materials may be carried on main-deck cargo compartments. Section 175.85(c)(1)(i) through (v) provides exceptions for cargo-only operations from the quantity limitations of § 175.75(a)(2), and accessibility requirements of § 175.85(b) for those hazardous materials listed. Section 175.85(c)(2) provides exceptions, when other means of transportation are impracticable, to the accessibility requirement of § 175.85(b) and the quantity limitation requirements of § 175.75(a)(2) for hazardous materials acceptable by both cargo-only and passenger-carrying aircraft. These exceptions require packages to be carried in accordance with procedures approved in writing by the nearest FAA Civil Aviation Security Field Office (CASFO). Columns 9A and 9B of the § 172.101 Hazardous Materials Table (HMT) specify limitations on individual package quantities, or list packages forbidden from transportation by aircraft. Section 173.27 specifies inner receptacle limits for combination packages.

Sections 175.85(c)(3)(i) through (iii) provide exceptions for small, single-

pilot cargo-only aircraft from the accessibility requirements of § 175.85(b) and the quantity limits of § 175.75. These exceptions apply when small aircraft are the only means of transporting hazardous materials to a particular destination. This applies to airports and locations incapable of supporting larger aircraft operations, where the only means of access is by smaller aircraft. The provisions of § 175.85(c)(3) do not require approval by the FAA.

To make these requirements easier to understand, in the NPRM we proposed to merge the requirements of §§ 175.75 and 175.85 into one section and remove any unnecessary paragraphs. We also proposed to eliminate the 25 kg cargo compartment restriction from cargo aircraft. We did not propose to increase or eliminate the limitation on the amount of hazardous materials authorized to be transported in an inaccessible cargo compartment of a passenger aircraft. We also proposed to eliminate from the exception in § 175.85(c)(3) the requirement indicating shipment by other means of transportation is impractical. We did not propose to eliminate or modify the exception from the 25 kilogram limitation currently afforded Class 9 and ORM-D materials. In an effort to enhance compliance and further clarify the cargo loading requirements, we proposed to add a chart at the end of § 175.75 to summarize these requirements.

ALPA does not support the proposal to eliminate the 25 kg cargo compartment restriction provision from all cargo operations or cargo-only aircraft. ALPA asserts the greatest danger to an aircraft in-flight from hazardous materials is fire, and, according to ALPA, the quantity limitations and accessibility provisions reduce the potential danger. ALPA states, "Increasing the quantities of hazardous materials that are inaccessible in cargo compartments without an active fire suppression system is not sound management of the safety risk." In addition, ALPA did not support the proposal to eliminate DOT E-11110 and incorporating it into the HMR. This exemption authorizes the transportation of certain hazardous materials in an inaccessible location aboard a cargo aircraft in quantities exceeding those authorized by § 175.75(a)(2). According to ALPA, the proposal is not warranted, and believed this change could significantly increase the potential for fire aboard an aircraft by avoiding these accessibility requirements.

UPS supports the proposal to eliminate the 25 kg quantity limits, stating it recognizes safety margins represented by quantity limits and packaging requirements are applicable to shipments eligible for transportation on passenger aircraft. According to UPS, "We note that outside the U.S., the lack of any requirements similar to the current § 175.75 gives PHMSA a sound safety justification for its proposed amendment to this section." UPS also states, "We foresee a simplification of training for employees, as a result of this proposal. This benefit is important, because we believe- and have believed for many years-that the effort expended on training loaders to comply with the current requirements of § 175.75 can result in confusion among some employees." UPS also supports incorporation of the provisions of DOT-E 11110 into the HMR which authorizes the transportation of certain hazardous materials in an inaccessible location aboard a cargo aircraft in quantities exceeding those authorized by § 175.75(a)(2) as a reduction in an administrative burden for both PHMSA and UPS."

ATA supports the proposal to merge §§ 175.75 and 175.85, and eliminate the 25/75 kg cargo compartment restriction for cargo aircraft and the requirement for shipping by other means be impractical. However, ATA states PHMSA should also remove the current quantity restriction applicable to passenger aircraft and align the HMR with the ICAO Technical Instructions. In addition, the Association of HazMat Shippers (AHS) indicates it strongly supports removal of the cargo compartment restrictions for materials authorized aboard passenger aircraft when carried on cargo aircraft.

RAA suggests the proposal in § 175.75(a) is not appropriate for small cabin airplanes. For that reason, RAA asks PHMSA to remove the proposal from this section.

To make these requirements easier to understand, we are adopting our proposal to merge the requirements of (§ 175.75 and 175.85 into one section and remove any unnecessary paragraphs. However, based on comments received and further consultation, we are not adopting our proposal to eliminate the 25 kg cargo compartment restriction from cargo aircraft. We agree, such a restriction is necessary for the safety of cargo aircraft transporting hazardous materials and inaccessible passenger aircraft quantities of hazardous materials on cargo-only aircraft operations would unnecessarily compound the situation faced by the crew in an unrelated fire.

Therefore, we are not adopting any proposal to modify the limitation on the amount of hazardous materials authorized to be transported in an inaccessible cargo compartment of a cargo aircraft.

In this final rule, we are revising the provisions to clarify the quantity limitations to promote compliance and understanding. Thus, we are adopting our proposal to add a chart at the end of § 175.75 to summarize these requirements and clarify the language. We are also adopting our proposal to eliminate from the exception in § 175.85(c)(3) the requirement for shipment by other means of transportation be impractical.

The following table lists the existing paragraphs in (§ 175.75 and 175.85 and indicates where we are moving them:

Old section and paragraph	New section and paragraph
175.75(a)(1) .....	Removed as unnecessary.
175.75(a)(2) .....	175.75(b).
175.75(a)(3) .....	175.700.
175.75(b) .....	175.75(b) and (c).
175.85(a) .....	175.75(a).
175.85(b) .....	175.75(d).
175.85(c)(1) .....	175.75(d)(1).
175.85(c)(2) .....	175.75(d)(2).
175.85(c)(3) .....	175.75(d)(3).
175.85(d) .....	Removed as unnecessary.
175.85(e) .....	175.75(a).
175.85(f) .....	175.310.
175.85(g) .....	Removed as unnecessary.
175.85(h) .....	175.501.
175.85(i) .....	175.501.
175.85(j) .....	175.75(a).

**K. Section 175.78 Stowage Compatibility of Cargo**

For stowage of hazardous materials on an aircraft, in a cargo facility, or in any other area at an airport designated for the stowage of hazardous materials, packages containing hazardous materials with the potential to react dangerously with one another may not be placed next to each other in a position allowing a dangerous interaction in the event of leakage. At a minimum, segregation instructions prescribed in the segregation table in § 175.78 must be followed to maintain acceptable segregation between packages containing hazardous materials with different hazards.

ALPA states PHMSA should address the loading compatibility and associated potential hazards of Class 8 corrosives in this rulemaking. ALPA states these materials present a unique risk to be addressed. According to ALPA, "Strong acids and strong bases should be segregated onboard aircraft. While we

recognize this issue would require substantial regulatory changes regarding hazard classification and hazard communication, we feel the relative danger of an interaction not the difficulty of regulatory change, should be the determining factor in whether these substances are segregated."

We did not propose to make this change in the NPRM. Therefore, the request is beyond the scope of this regulatory action. We may consider segregation of strong acids and strong bases onboard aircraft in a future rulemaking.

**L. Sections 175.79, 175.81, and 175.88 Inspection, Orientation and Securing of Packages of Hazardous Materials**

In the NPRM, we proposed to merge the requirements of §§ 175.79 (Orientation of cargo); 175.81 (Securing of packages containing hazardous materials); and 175.88 (Inspection of unit load devices) into a single section—§ 175.88, entitled "Inspection, orientation, and securing of packages of hazardous materials."

We received no comments on this proposal. Therefore, we are adopting our proposal to merge the requirements of (§ 175.79 (Orientation of cargo); 175.81 (Securing of packages containing hazardous materials); and 175.88 (Inspection of unit load devices) into § 175.88.

**M. Section 175.90 Damaged Shipments**

We proposed no amendments for this section.

**N. Section 175.305 Self Propelled Vehicles**

We proposed to move the requirements of this section to § 173.220. We received no comments on this proposal. Therefore, we are adopting our proposal to move the requirements of this section to § 173.220.

**O. Sections 175.310 and 175.320 Transportation of Flammable Liquid Fuel Within Alaska or Into Other Remote Locations and Cargo Aircraft, Only Means of Transportation**

Section 175.310, "Transportation of flammable liquid fuel within Alaska or into other remote locations," provides exceptions for the shipment of flammable liquid fuels in the State of Alaska and other remote locations. Section 175.320 provides an exception from the quantity limitations in §§ 175.75 and 172.101, when certain conditions are met. Section 175.320 authorizes the transportation of certain hazardous materials by cargo-only

aircraft in inaccessible cargo locations when other means of transportation are impracticable. The term impracticable means transportation is not physically possible or cannot be performed by routine and frequent means of other transportation, due to extenuating circumstances.

In the NPRM, we proposed to merge the passenger-carrying aircraft operations of current § 175.310 and the cargo aircraft operations of the current § 175.320 into one section. However, similar loading and operating requirements were broken out of each and combined into paragraphs that will apply to both types of operations. This resulted in some additional operator requirements for the passenger aircraft operations (the 14 CFR references to operating manuals and FAA approval) which do not exist in current § 175.310. However, these requirements have applied to the operator via 14 CFR even though they were not specifically mentioned in the HMR.

We proposed to remove the authorization to transport Class 1 (explosive) materials in accordance with § 175.320. In our view, because of security concerns and requirements, the carriage of explosives outside the normal requirements of the HMR should be handled by special permit. Alaska Air Carriers Association states the provision for Class 1 materials supports a variety of interests in Alaska including construction and mining, communities staging fireworks displays, and individuals in remote cabin parcels. AACA opposes the proposal eliminating the provision for Class 1 explosives because it did not consider the transportation of Class 1 materials within the United States where air is the only means of transportation; AACA suggests the provisions of § 175.320 be re-instated. In addition, Northern Air Cargo also expressed concern regarding the proposal to eliminate the provisions for Class 1 materials, stating, "Limiting shipments of explosives and requiring that an exemption for transport be requested with a minimum of 120 days lead time is unreasonable." It further states mining, construction and military operations and projects in inaccessible Alaskan locations by road or water make it difficult to give the kind of advance notice required to obtain an exemption. Northern Air Cargo asks PHMSA to continue the current Class 1 provisions.

In this final rule, we are adopting our proposal to remove the authorization to transport Class 1 (explosive) materials in accordance with § 175.320 due to security reasons and in accordance with a February 10, 2004 final rule published under Docket HM-232C (69 FR 6195). In

our view, because of security concerns and requirements, the carriage of explosives outside of the normal requirements of the HMR should be handled by special permit. The removal of the authorization to transport Class 1 materials also allows the deletion of some of the operator restrictions dealing with advance notices, airports, loading areas, etc. under the provisions.

We are also adopting our proposal to remove the reference to flammable liquids mentioned by name and proposing a new combined section limited to fuels, similar to existing § 175.310. Oil, toluene, and methyl alcohol would no longer be covered under this section unless they are being used as a fuel. We are adopting our proposal to remove the chart since there is only one commodity being covered (combustible liquids are mentioned in the paragraph covering bulk tanks). Fuels will be limited to those in Packing Group II or III (Packing Group I fuels, which have a boiling point of 35C/95F or higher, would be allowed only in aircraft tanks designed to hold such liquids).

*P. Section 175.501 Special Requirements for Oxidizers and Compressed Oxygen*

In the NPRM, we proposed to move the stowage requirements applicable to the transportation of compressed oxygen currently found in §§ 175.10(a)(7), and 175.85(h) and (i), to a new section—§ 175.501, entitled “Special requirements for oxidizers and compressed oxygen.”

We received no comments on this proposal. Therefore, we are adopting our proposal to move the stowage requirements applicable to the transportation of compressed oxygen currently found in §§ 175.10(a)(7), and 175.85(h) and (i), to § 175.501.

*Q. Section 175.630 Special requirements for Division 6.1 and Division 6.2 Material*

No amendments were proposed or adopted in this section. However, two comments were received regarding this section from RAA and ATA. Both are beyond the scope of this rulemaking.

*R. Sections 175.700, 175.701, 175.702, 175.703, 175.704, 175.705 and 175.706 Transportation of Radioactive Materials Aboard Aircraft*

Sections 175.700, 175.701, 175.702, 175.703, 175.704, 175.705, and 175.706 of part 175 contain numerous provisions related to the transportation of radioactive materials aboard aircraft. In the NPRM, we attempted to rewrite many of these provisions to facilitate

understanding of these requirements. We proposed to move requirements related to the carriage of radioactive materials with undeveloped film from these sections. However, except in the case of shipments with undeveloped film and separation distances for cargo aircraft, it was not our intent to make any substantive revisions to §§ 175.700, 175.701, 175.702, 175.703, 175.704, or 175.705. With regard to the separation distances from undeveloped film, we proposed to remove them from the HMR. It is our belief such requirements should not be part of Federal regulations, but instead should be addressed by an agreement between the shipper and the airline. We also proposed to adopt the separation distances in the ICAO Technical Instructions for shipments aboard cargo aircraft of greater than 50 TI. The following table identifies the existing requirements and where we proposed to move them:

Existing requirement	Proposed new section
175.75(a)(3) .....	175.700(b).
175.700(a) .....	175.700(b) and (c).
175.700(b) .....	175.705(b) and (c).
175.700(c) .....	175.700(a).
175.700(d) .....	175.700(a).
175.701(a) .....	Removed, unnecessary.
175.701(b)(1) .....	175.701(c).
175.701(b)(2) .....	175.701(a).
175.701(b)(3) .....	175.701(b).
175.701(c) .....	175.701(d).
175.702(a) .....	175.702(b).
175.702(b) and (b)(1) .....	175.702(a).
175.702(b)(2)(i) .....	175.702(a).
175.702(b)(2)(ii) .....	175.702(b).
175.702(b)(2)(iii) .....	175.702(c).
175.702(b)(2)(iv) .....	175.700(b)(2).
175.703(a) .....	175.706.
175.703(b) .....	175.703(a).
175.703(c) .....	175.703(b).
175.703(d) .....	175.700(a).
175.703(e) .....	Removed, already covered by § 173.441.
175.704 .....	Only editorial changes made to this section.
175.705(a) .....	175.705(a).
175.705(b) .....	175.705(a).
175.706 .....	175.703(a).

The Federal hazardous materials transportation law addresses ionizing radiation material transportation. (49 U.S.C. 5114.) It states the material may be transported on a passenger-carrying aircraft in air commerce only if the material is intended for use in, or incident to, research or medical diagnosis or treatment; and does not present an unreasonable hazard to health and safety when being prepared for, and during transportation. Section

175.700 prohibits, in addition to other requirements, a person from carrying in a passenger-carrying aircraft any package required to be labeled in accordance with § 172.403 with a RADIOACTIVE YELLOW II or III label, unless certain provisions are met. In addition, § 175.700(c) states (except for limited quantities) no person shall carry any class 7 material aboard a passenger-carrying aircraft unless the material is intended for use in research, medical diagnosis, or treatment.

It appears some persons have misused the definition of “research” to avoid the restrictions in § 175.700. We do not consider research to include the application of existing technology to industrial endeavors. For example, the use of radioactive material (e.g., iridium-192) to detect cracks in oil field pipelines is not research, but the application of existing scientific knowledge. Therefore, we are adopting our proposal to revise the definition of research in § 171.8 to clearly indicate it does not include the application of existing technology to industrial endeavors.

FedEx Express strongly supports the harmonization of the radioactive material separation distance requirements in §§ 175.701 and 702 with the IAEA Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised) no. TS-R-1 and the ICAO Technical Instruction for the Safe Transport of Dangerous Goods by Air. These are practical changes, which will facilitate the air transport of radioactive material and enhance radiation safety.

FedEx Express and CORAR support the adoption of the ICAO separation distances for radioactive material in quantities exceeding a total transport index of 50. They also support the allowance in § 175.700(b)(2) for a combined transport index of up to 200. According to CORAR, “This adoption by regulations of conditional relief currently provided by carrier exemption is a good example of practical rulemaking that facilitates compliance and streamlines the efforts to transport time-sensitive materials without compromising public or occupational health and safety.”

CORAR suggests changes to current limits on fissile material packages, as follows:

(1) In § 175.700(c)(1), there is no reason to limit a single fissile material package to a CSI no greater than 3.0. The fissile material package will have both a TSI and a CSI. The TSI will still be limited to not greater than 3.0, thereby limiting the external radiation exposure and will satisfy the congressional mandate on which that regulation is based.

(2) In § 175.700(c)(2), there is no reason to limit a single fissile material package to 10 CSI. Note that existing regulations limit a single fissile material package to no more than 50 CSI.

(3) In § 175.702(b), the reference to transport index should be eliminated. The separation distance for external radiation levels are governed by the table in § 175.700(c)(2).

We agree with CORAR's suggestions and have corrected the language in this final rule accordingly.

CORAR supports the proposed removal of separation distance requirements for undeveloped film in § 175.703 and agrees arrangements to prevent exposure should be made between shippers and carries and not mandated by regulation. However, Eastman Kodak does not support the proposal to remove the paragraph affecting the segregation of undeveloped film and radioactive sources aboard aircraft. Eastman Kodak suggests this provision provides a redundant and necessary assurance that undeveloped film products will not be compromised due to the proximity of certain radioactive sources during transportation. Kodak states, "Film customers, ranging from members of the general public to the diagnostic, radiography and defense industries, rely on being able to capture unique and/or transient images. In many cases, these images cannot be recaptured, thus the consequences for the medical and defense sectors can be very significant." Kodak further states, "Failure to have such requirements in place could result in damaged product and lead to increased cost and loss of critical information such as medical x-ray and aerial reconnaissance images." For this reason, Kodak recommends the elimination of the proposal to remove this provision and retention of the segregation provision.

We agree with Eastman Kodak's viewpoints regarding the need to protect the film, especially in medical and defense related reconnaissance images. Also, we understand our regulations establish the only requirements for the protective separation distances between film and radioactive materials. As stated above, it is our belief separation distances for film should be established and maintained through an agreement between the airline and the shipper and should not be part of HMR. However, we have decided to continue regulating the separation distances between radioactive materials and film by not adopting the proposal to remove the separation provision in § 175.703(a), and we are moving these requirements to new § 175.706.

Express.Net Airlines, LCC asks PHMSA to add a definition of "routinely" or delete the section altogether (175.705(d)). According to Express.Net, "If the intent of this section is to address the dangers of cumulative exposure to radioactive material, carriers, using multiple aircraft and rotating crewmember assignments will minimize exposure compared to an air carrier with limited equipment or personnel." Because we did not propose to remove this term or section from the HMR, this comment is beyond the scope of this rulemaking.

### III. Miscellaneous Proposals to the HMR

#### A. Quantity Limits in Column (9) of the Hazardous Materials Table (HMT)

Columns 9A and 9B of the § 172.101 Hazardous Materials Table (HMT) specify limitations on individual package quantities, or list packages forbidden from transportation by aircraft. Section 173.27 specifies inner receptacle limits for combination packages. In an effort to enhance compliance, we proposed to amend the heading for column 9 of the HMT to reference §§ 173.27 and 175.75 as a reminder to comply with both section requirements for quantity limitations for transportation by aircraft.

No comments were received on this proposal. We are adopting our proposal to amend the heading for column 9 of the HMT to reference §§ 173.27 and 175.75 as a reminder to comply with both section requirements for quantity limitations for transportation by aircraft.

#### B. Tire Assemblies

In the NPRM, we proposed to move the exception for tire assemblies from § 175.8 to Special Provisions A59 in § 172.102(c)(2).

RAA does not agree moving this exception to Part 172 will facilitate awareness and consistency within air transportation and suggests it should remain in § 175.8. RAA asserts operators will have interpretation problems with inspectors over what constitutes "protection from damage during transport" for a tire and suggests a number of other problems concerning securement of tires in a cargo hold and the transportation of damaged tires. RAA recommends a requirement for a damaged tire to be deflated so its pressure is below 25 psig, which is the HMR definition for a Division 2.2 compressed gas.

In accordance with RAA's comments, we are not adopting the proposed addition of tire assembly requirements to Special Provision A59. We agree

placing the requirement in § 175.8 will facilitate awareness and consistency in air transportation. Therefore, we are adding the requirements for tire assemblies proposed in Special Provision A59 to § 175.8(b)(4) and adding a reference to § 173.307(a)(2). We also agree the exception for tire assemblies should be tied to the definition of Division 2.2 gas. We have revised § 175.8(b)(4) accordingly.

#### C. Small Quantities, Limited Quantities and Consumer Commodities

The HMR contain exceptions for small quantities, limited quantities, and consumer commodities. These exceptions allow materials to be transported at reduced levels of regulation. Small quantities of hazardous materials are excepted from all other requirements of the HMR, provided certain criteria in § 173.4 are met. Limited quantity exceptions in the HMR are based on the class of the hazardous material, and include more stringent requirements for air transportation. Materials meeting the limited quantity exception and also meet the definition of a consumer commodity as provided by § 171.8, may be renamed "Consumer Commodity" and reclassified as ORM-D. Consumer commodities are excepted from specification packaging, labeling, placarding and quantity limitations applicable to air transportation. As currently written, these exceptions allow small quantities and consumer commodities to be transported by aircraft even though they may contain hazardous materials otherwise forbidden aboard aircraft. These exceptions are inconsistent with the ICAO Technical Instructions, which require before a hazardous material may be transported as an excepted quantity (i.e., small quantity or a limited quantity), it must be suitable for transportation aboard passenger aircraft. The ICAO Technical Instructions also prohibit the transportation of small quantities in checked and carry-on luggage.

In the NPRM, we proposed to eliminate a provision of the HMR allowing the transportation of hazardous materials forbidden aboard aircraft to be transported aboard aircraft as either ORM-D material or small quantity material. In addition, we proposed for transportation by aircraft only, to adopt the ICAO Technical Instructions provision that requires shipments of limited quantities to comply with the passenger aircraft net quantity limitation in the HMT. We proposed to amend all the limited quantity sections of the HMR (e.g., § 173.150) by stating,

for transportation by aircraft, only hazardous materials authorized aboard passenger-carrying aircraft may be transported as a limited quantity. In addition, we proposed to amend § 173.4 (small quantities) to limit those small quantity materials authorized for transportation aboard aircraft to those materials allowed aboard passenger-carrying aircraft. We also proposed, consistent with the ICAO Technical Instructions, to forbid the transportation of small quantities of hazardous materials in carry-on or checked baggage.

Anderson Products, Inc. opposes the proposed amendment to § 173.4 limiting the hazardous materials eligible for transport by aircraft under the small quantity exception to those authorized aboard passenger aircraft. Anderson Products manufacturers and ships medical sterilization devices worldwide and suggests this revision as proposed would impose an undue economic burden on its shipments. Anderson Products also notes the ICAO Technical Instructions currently provide an exception under special provision A131 to permit ethylene oxide sterilization devices to be transported under the excepted quantities provision in 1;2.4 of the ICAO Technical Instructions in quantities containing less than 30 mL per inner packaging.

Anderson Products suggests “in the interest of full consistency with the ICAO Technical Instructions—which was apparently PHMSA’s objective in proposing the new § 173.4(a)(9)(i)—if the proposed new paragraph is to be adopted a similar exception should be provided in the HMR for ethylene oxide sterilization devices.” In addition, Anderson Products “questions the need to include the proposed new 173.4(a)(9)(i) at all.” According to Anderson Products, “[T]here is no evidence to support that the more restrictive provisions adopted by ICAO which are now being proposed for incorporation into the HMR in the interests of “consistency” with ICAO, were necessary to ensure safety in air transport.”

We agree with Anderson Products comments regarding the need for consistency with ICAO in this case and the need for an exception for ethylene oxide sterilization devices. Therefore, we are adopting the exception in Special Provision A131 of the ICAO Technical Instructions for ethylene oxide sterilization devices under a new Special Provision (A59) in 172.102. In addition, we are adopting Special Provision A75 of the ICAO Technical Instructions to provide a similar exception for hydrogen peroxide

sterilization devices under a new Special Provision (A60) in 172.101.

In this final rule, we are adopting our proposal to eliminate a provision of the HMR which inadvertently allows the transportation of hazardous materials forbidden aboard aircraft to be transported aboard aircraft as either a consumer commodity or small quantity material. In addition, we are adopting our proposal to amend all of the limited quantity sections of the HMR (e.g., § 173.150) by stating, for transportation by aircraft, only hazardous materials authorized aboard passenger-carrying aircraft may be transported as a limited quantity. We are adopting our proposal to amend § 173.4 (small quantities) to limit those small quantity materials authorized to be transported aboard aircraft to those allowed aboard passenger-carrying aircraft. However, we have decided to add new paragraph (a)(11) to § 173.4 in place of redesignating paragraphs (a)(9) and (a)(10) as (a)(10) and (a)(11), respectively, and then adding new paragraph (a)(9). Adding one new paragraph to § 173.4 is far less disruptive and much easier to follow than redesignating two paragraphs and adding a new paragraph. Except as noted above, we are also adopting our proposal, consistent with the ICAO Technical Instructions, to forbid the transportation of small quantities of hazardous materials in carry-on or checked baggage.

The ICAO Technical Instructions provision to require shipments of limited quantities to comply with the passenger aircraft net quantity limitation in the HMT we proposed, was in error. The provision in ICAO is not consistent with the HMT net quantity limitation for passenger aircraft. Therefore, we are unable to adopt the provision as proposed and will not be making a change to the quantity limits for limited quantities.

#### D. Section 173.7

In the NPRM, we proposed to move the exception currently in § 175.5(a)(2), related to an aircraft under the exclusive direction and control of a government, to § 173.7. We also proposed to modify the exception by making it an exception from the “subchapter” and not solely an exception from part 175.

No comments were received on these proposals. Therefore, we are adopting these amendments as proposed.

#### E. Section 173.217

In the NPRM, in the proposed revision of § 175.10, we proposed to maintain the exception for dry ice in checked and carry-on baggage and move

the exception for dry ice in airline food service to § 175.8(b)(2). We proposed to relocate the exception for 2.3 kg (5 pounds) of dry ice as cargo/freight to § 173.217.

We received no comments on this issue. Therefore, we are adopting the changes as proposed in the NPRM. In the revision of § 175.10, we will maintain the exception for dry ice in checked and carry-on baggage and § 175.8 will contain the exception for dry ice used in airline food service. To retain the 2.3 kg (5.0 pounds) exception for the shipment of dry ice as cargo/freight, we are adopting our proposal to move this exception from § 175.10 to a new paragraph (f) in § 173.217.

#### F. Section 173.220

The proposed revision would move the requirements for self-propelled vehicles from § 175.305 to paragraph (b)(4)(iii) of this section. No comments were received on the proposed revision. Therefore, in this final rule we are moving the requirements for self-propelled vehicles from § 175.305 to paragraph (b)(4)(iii).

### IV. Rulemaking Analysis and Notices

#### A. Statutory/Legal Authority for This Rulemaking

This final rule is published under the authority of the Federal hazardous materials transportation law (Federal hazmat law; 49 U.S.C. 5101 et seq.) and 49 U.S.C. 44701. Section 5103(b) of the Federal hazmat law authorizes the Secretary of Transportation to prescribe regulations for the safe transportation, including security, of hazardous material in intrastate, interstate, and foreign commerce. Title 49 United States Code § 44701 authorizes the Administrator of the Federal Aviation Administration to promote safe flight of civil aircraft in air commerce by prescribing regulations and minimum standards for practices, methods, and procedures the Administrator finds necessary for safety in air commerce and national security. Under 49 U.S.C. 40113, the Secretary of Transportation has the same authority to regulate the transportation of hazardous material by air, in carrying out § 44701, that he has under 49 U.S.C. 5103.

#### B. Executive Order 12866 and DOT Regulatory Policies and Procedures

This final rule is not considered a significant regulatory action under section 3(f) of Executive Order 12866 and, therefore, was not reviewed by the Office of Management and Budget. This final rule is not considered a significant rule under the Regulatory Policies and

Procedures of the Department of Transportation [44 FR 11034].

The changes resulting from this final rule have minimal cost implications that will be more than offset by the benefits. For example, the costs of altering the small quantity and limited quantity requirements so they allow only those materials authorized for transportation on passenger-carrying aircraft and the costs of including a new requirement in § 175.3 for ORM-D materials to be inspected before they are placed aboard an aircraft are offset by eliminating the unacceptable risk to passengers and crew that existed prior to this final rule. A change with a minimal impact on the cost to carriers is the requirement to include the address of the shipper, if known, in the discrepancy report required by § 175.31. However, the cost resulting from this new discrepancy report requirement will be offset by the benefits provided elsewhere in this final rule.

In addition to the costs and benefits provided above, this final rule will provide several other benefits to help offset the costs. The majority of this rulemaking address clarification of requirements applicable to the transport of hazardous materials aboard aircraft. By focusing on clarity this final rule will enable shippers, carriers, and enforcement officers to gain a better understanding of the regulations. The changes we have adopted in this final rule will clarify the aircraft requirements, which, will promote compliance and enforcement in order to increase safety. Other increases in transportation safety are realized by harmonizing the domestic and international regulations where applicable. Harmonization will also provide for continued access to foreign markets by domestic shippers of hazardous materials. In addition, carriers will realize a cost savings from the elimination of the requirement for carriers to maintain replacement labels to be used in the event that a hazmat label becomes lost or damaged.

The majority of amendments in this final rule result in cost savings and several ease the regulatory compliance burden for shippers engaged in domestic and international commerce, including trans-border shipments within North America.

#### C. Executive Order 13132

This final rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 ("Federalism"). This final rule preempts State, local, and Indian tribe requirements but does not propose any regulation that has substantial direct

effects on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government. Therefore, the consultation and funding requirements of Executive Order 13132 do not apply.

The Federal hazardous materials transportation law, 49 U.S.C. 5101–5128, contains an express preemption provision (49 U.S.C. 5125(b)) that preempts State, local, and Indian tribe requirements on the following subjects:

- (1) The designation, description, and classification of hazardous materials;
- (2) The packing, repacking, handling, labeling, marking, and placarding of hazardous materials;
- (3) The preparation, execution, and use of shipping documents related to hazardous materials and requirements related to the number, contents, and placement of those documents;
- (4) The written notification, recording, and reporting of the unintentional release in transportation of hazardous material; or
- (5) The design, manufacture, fabrication, marking, maintenance, recondition, repair, or testing of a packaging or container represented, marked, certified, or sold as qualified for use in transporting hazardous material.

This final rule addresses subject areas 2, 3, and 4 above. This final rule preempts any state, local, or Indian tribe requirements concerning these subjects unless the non-Federal requirements are "substantively the same" as the Federal requirements. This final rule is necessary to update and clarify the hazardous materials transportation requirements by aircraft which will enhance future compliance.

Federal hazardous materials transportation law provides at § 5125(b)(2), if DOT issues a regulation concerning any of the covered subjects, DOT must determine and publish in the **Federal Register** the effective date of Federal preemption. The effective date may not be earlier than the 90th day following the date of issuance of the final rule and not later than two years after the date of issuance. PHMSA proposes the effective date of Federal preemption will be 90 days from publication of a final rule in this matter in the **Federal Register**.

#### D. Executive Order 13175

This final rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13175 ("Consultation and Coordination with Indian Tribal Governments"). Because this final rule does not have tribal implications and does not impose

direct compliance costs, the funding and consultation requirements of Executive Order 13175 do not apply.

#### E. Regulatory Flexibility Act, Executive Order 13272, and DOT Procedures and Policies

The Regulatory Flexibility Act (5 U.S.C. 601–611) requires each agency to analyze regulations and assess their impact on small businesses and other small entities to determine whether the rule is expected to have a significant impact on a substantial number of small entities. The provisions of this final rule apply to aircraft operators. The Small Business Administration criterion specifies an aircraft operator/carrier is "small" if it has 1,500 or fewer employees. For this rule, small entities are part 121 and part 135 aircraft operators/carriers approved to carry hazardous materials, with 1,500 or fewer employees. We identified 729 aircraft operators/carriers meeting this standard. Provided we are only reorganizing the current requirements for the transportation of hazardous materials aboard aircraft and adopting provisions promoting cost savings, we anticipate a cost savings for the airline industry as a result of this final rule. While maintaining safety, this final rule relaxes certain requirements applicable to aircraft operators and would clarify existing provisions. Therefore, PHMSA certifies this final rule does not have a significant economic impact on a substantial number of small entities.

This final rule has been developed in accordance with Executive Order 13272 ("Proper Consideration of Small Entities in Agency Rulemaking") and DOT's procedures and policies to promote compliance with the Regulatory Flexibility Act to ensure that potential impacts of draft rules on small entities are properly considered.

#### F. Unfunded Mandates Reform Act of 1995

This final rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of \$120.7 million or more, in the aggregate, to any of the following: State, local, or Native American tribal governments, or the private sector.

#### G. Paperwork Reduction Act

This final rule does not impose any new information collection burden. Section 1320.8(d), Title 5, Code of Federal Regulations requires PHMSA to provide interested members of the public and affected agencies an opportunity to comment on information collection and recordkeeping requests.

We currently have approved information collections under OMB No. 2137-0034, "Hazardous Materials Shipping Papers and Emergency Response Information" which expires May 31, 2008, and OMB No. 2137-0557, "Approvals for Hazardous Materials" which expires March 31, 2008. This rule identifies only editorial revisions proposed as section designation changes, to these approved information collections. PHMSA submitted the revised information collection requests for editorial revisions as proposed changes in section designations to OMB for approval based on the requirements as proposed in this rule. OMB has approved both information collection requests submitted in association with this rulemaking and has extended these information collections until 2008.

PHMSA specifically requested comments on the information collection and recordkeeping burdens associated with developing, implementing, and maintaining these requirements for approval under this rule. No comments were received regarding approved editorial changes to this information collection.

Requests for a copy of the information collection should be directed to Deborah Boothe or T. Glenn Foster, Office of Hazardous Materials Standards (PHH-10), Pipeline and Hazardous Materials Safety Administration, Room 8430, 400 Seventh Street, SW., Washington, DC 20590-0001, Telephone (202) 366-8553.

Under the Paperwork Reduction Act of 1995, no person is required to respond to or comply with an information collection requirement unless it displays a valid OMB control number.

#### H. Regulation Identifier Number (RIN)

A regulation identifier number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN number contained in the heading of this document may be used to cross-reference this action with the Unified Agenda. The RIN number for this final rule is—RIN 2137-AD18.

#### I. Environmental Assessment

The National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321-4347), requires Federal agencies to consider the consequences of major Federal actions and prepare a detailed statement on actions significantly affecting the quality of the human environment. There are no significant environmental impacts associated with this final rule. PHMSA

proposed and is adopting in this final rule changes to the requirements in the HMR on the transportation of hazardous materials by aircraft. The purpose of this rulemaking is to modify or clarify requirements to promote safer transportation practices; promote compliance and enforcement; eliminate unnecessary regulatory requirements; convert certain exemptions into regulations of general applicability; finalize outstanding petitions for rulemaking; facilitate international commerce; and make these requirements easier to understand.

#### J. Privacy Act

Anyone is able to search the electronic form all comments received into any of our dockets by the name of the individual submitting the comments (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477-78) or you may visit <http://dms.dot.gov>.

#### List of Subjects

##### 49 CFR Part 171

Exports, Hazardous materials transportation, Hazardous waste, Imports, Incorporation by reference, Reporting and recordkeeping requirements.

##### 49 CFR Part 172

Education, Hazardous materials transportation, Hazardous waste, Labeling, Markings, Packaging and containers, Reporting and recordkeeping requirements.

##### 49 CFR Part 173

Hazardous materials transportation, Packaging and containers, Radioactive materials, Reporting and recordkeeping requirements, Uranium.

##### 49 CFR Part 175

Air carriers, Hazardous materials transportation, Radioactive materials, Reporting and recordkeeping requirements.

■ In consideration of the foregoing, 49 CFR Chapter I is amended as follows:

#### PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

■ 1. The authority citation for part 171 continues to read as follows:

**Authority:** 49 U.S.C. 5101-5128, 44701; 49 CFR 1.45 and 1.53; Pub. L. 101-410 section 4 (28 U.S.C. 2641 note); Pub. L. 104-134, section 31001.

■ 2. In § 171.8, the definition of "research" is revised to read as follows:

#### § 171.8 Definitions and abbreviations.

\* \* \* \* \*

*Research* means investigation or experimentation aimed at the discovery of new theories or laws and the discovery and interpretation of facts or revision of accepted theories or laws in the light of new facts. Research does not include the application of existing technology to industrial endeavors.

\* \* \* \* \*

#### PART 172—HAZARDOUS MATERIALS TABLE, SPECIAL PROVISIONS, HAZARDOUS MATERIALS COMMUNICATIONS, EMERGENCY RESPONSE INFORMATION, AND TRAINING REQUIREMENTS

■ 3. The authority citation for part 172 continues to read as follows:

**Authority:** 49 U.S.C. 5101-5128, 44701; 49 CFR 1.45 and 1.53.

#### § 172.101 [Amended]

■ 4. In § 172.101, in the Hazardous Materials Table:

■ a. The heading for column (9) is revised to read "(9) Quantity limitations (see (§§ 173.27 and 175.75))";

■ b. The entry in column (8A) for Air, compressed is amended by adding "307";

■ c. The entry in column (8A) for Nitrogen, compressed is amended by adding "307";

■ d. The column (2) is amended by adding the entry "Tires and tire assemblies, *see* Air, compressed or Nitrogen, compressed.";

■ e. The entry in column (7) for "Ethylene oxide or Ethylene oxide with nitrogen up to a total pressure of 1MPa (10 bar) at 50 degrees C." is amended by adding "A59"; and

■ f. The entry in column (7) for "Hydrogen peroxide, aqueous solutions with more than 40 percent but not more than 60 percent hydrogen peroxide (stabilized as necessary)." is amended by adding "A60".

■ 5-10. In § 172.102, in paragraph (c)(2), Special Provisions A59 and A60 are added to read as follows:

#### § 172.102 Special Provisions.

\* \* \* \* \*

(c) \* \* \*

(2) \* \* \*

Code/Special Provisions

\* \* \* \* \*

A59 Sterilization devices, when containing less than 30 mL per inner packaging with no more than 300 mL per outer packaging may be transported in accordance with provisions in

§ 173.4(a)(11)(i). In addition, after filling, each inner packaging must be determined to be leak-tight by placing the inner packaging in a hot water bath at a temperature and for a period of time sufficient to ensure an internal pressure equal to the vapor pressure of ethylene oxide at 55 °C is achieved. Any inner packaging showing evidence of leakage, distortion or other defect under this test may not be transported under the terms of this special provision. In addition to the packaging required in § 173.4, inner packagings must be placed in a sealed plastic bag compatible with ethylene oxide and capable of containing the contents in the event of breakage or leakage of the inner packaging. Glass inner packagings must be placed within a protective shield capable of preventing the glass from puncturing the plastic bag in the event of damage to the packaging (e.g., crushing).

A60 Articles such as sterilization devices, UN2014, Hydrogen peroxide, aqueous solutions with more than 40 percent but not more than 60 percent hydrogen peroxide (stabilized as necessary), when containing less than 30 mL per inner packaging with not more than 150 mL per outer packaging, may be transported in accordance with the provisions in § 173.4, irrespective of § 173.4(a)(11)(i), provided such packagings were first subjected to comparative fire testing. Comparative fire testing must show no difference in burning rate between a package as prepared for transport (including the substance to be transported) and an identical package filled with water.

\* \* \* \* \*

**PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS**

■ 11. The authority citation for part 173 continues to read as follows:

Authority: 49 U.S.C. 5101–5128, 44701; 49 CFR 1.45 and 1.53.

■ 12. In § 173.4, new paragraph (a)(11) is added to read as follows:

**§ 173.4 Small quantity exceptions.**

- (a) \* \* \*
(11) For transportation by aircraft:
(i) The hazardous material must be authorized to be carried aboard passenger-carrying aircraft;
(ii) The hazardous material is not authorized to be carried in checked or carry-on baggage.

\* \* \* \* \*

■ 13. In § 173.7, the section heading is revised and a new paragraph (f) is added to read as follows:

**§ 173.7 Government operations and materials.**

\* \* \* \* \*

(f) The requirements of this subchapter do not apply to shipments of hazardous materials carried aboard an aircraft that is not owned by a government or engaged in carrying

persons or property for commercial purposes, but is under the exclusive direction and control of the government for a period of not less than 90 days as specified in a written contract or lease. An aircraft is under the exclusive direction and control of a government when the government exercises responsibility for:

- (1) Approving crew members and determining they are qualified to operate the aircraft;
- (2) Determining the airworthiness and directing maintenance of the aircraft; and
- (3) Dispatching the aircraft, including the times of departure, airports to be used, and type and amount of cargo to be carried.

■ 14. In § 173.27, in paragraph (a), the second sentence is revised to read as follows:

**§ 173.27 General requirements for transportation by aircraft.**

(a) \* \* \* Except for materials not subject to performance packaging requirements in subpart E of this part, a packaging containing a Packing Group III material with a primary or subsidiary risk of Division 4.1, 4.2, 4.3, 5.1, or Class 8 must meet the Packing Group II performance level when offered or intended for transportation by aircraft.

\* \* \* \* \*

■ 15. In § 173.63, the introductory text in paragraph (b)(1), is revised to read as follows:

**§ 173.63 Packaging exceptions.**

\* \* \* \* \*

(b) \* \* \*
(1) Cartridges, small arms, and cartridges power devices (which are used to project fastening devices) which have been classed as a Division 1.4S explosive may be reclassified, offered for transportation, and transported as ORM–D material when packaged in accordance with paragraph (b)(2) of this section. For transportation by aircraft, the package must also comply with the applicable requirements of § 173.27 of this subchapter. Such transportation is excepted from the requirements of subparts E (Labeling) and F (Placarding) of part 172 of this subchapter. Cartridges, small arms, and cartridges power devices that may be shipped as ORM–D material are limited to:

\* \* \* \* \*

■ 16. In § 173.150, the introductory text in paragraph (b) is revised to read as follows:

**§ 173.150 Exceptions for Class 3 (flammable and combustible liquids).**

\* \* \* \* \*

(b) Limited quantities. Limited quantities of flammable liquids (Class 3) and combustible liquids are excepted from labeling requirements, unless offered for transportation or transported by aircraft, and the specification packaging requirements of this subchapter when packaged in combination packagings according to this paragraph. For transportation by aircraft, the package must also comply with the applicable requirements of § 173.27 of this subchapter and only hazardous materials authorized aboard passenger-carrying aircraft may be transported as a limited quantity. In addition, shipments of limited quantities are not subject to subpart F (Placarding) of part 172 of this subchapter. Each package must conform to the packaging requirements of subpart B of this part and may not exceed 30 kg (66 pounds) gross weight. The following combination packagings are authorized:

\* \* \* \* \*

■ 17. In § 173.151, the introductory text in paragraphs (b) and (d) is revised to read as follows:

**§ 173.151 Exceptions for Class 4.**

\* \* \* \* \*

(b) Limited quantities of Division 4.1 flammable solids. Limited quantities of flammable solids (Division 4.1) in Packing Groups II and III are excepted from labeling, unless offered for transportation or transported by aircraft, and the specification packaging requirements of this subchapter when packaged in combination packagings according to this paragraph. For transportation by aircraft, the package must also comply with the applicable requirements of § 173.27 of this subchapter and only hazardous materials authorized aboard passenger-carrying aircraft may be transported as a limited quantity. In addition, shipments of limited quantities are not subject to subpart F (Placarding) of part 172 of this subchapter. Each package must conform to the packaging requirements of subpart B of this part and may not exceed 30 kg (66 pounds) gross weight. The following combination packagings are authorized:

\* \* \* \* \*

(d) Limited quantities of Division 4.3 (dangerous when wet) material. Limited quantities of Division 4.3 (dangerous when wet) solids in Packing Groups II and III are excepted from labeling, unless offered for transportation or transported by aircraft, and the specification packaging requirements of this subchapter when packaged in combination packagings according to

this paragraph. For transportation by aircraft, the package must also comply with the applicable requirements of § 173.27 of this subchapter and only hazardous materials authorized aboard passenger-carrying aircraft may be transported as a limited quantity. In addition, shipments of limited quantities are not subject to subpart F (Placarding) of part 172 of this subchapter. Each package must conform to the packaging requirements of subpart B of this part and may not exceed 30 kg (66 pounds) gross weight. The following combination packagings are authorized:

\* \* \* \* \*

■ 18. In § 173.152, the introductory text in paragraph (b) is revised to read as follows:

**§ 173.152 Exceptions for Division 5.1 (oxidizers) and Division 5.2 (organic peroxides).**

\* \* \* \* \*

(b) *Limited quantities.* Limited quantities of oxidizers (Division 5.1) in Packing Groups II and III and organic peroxides (Division 5.2) are excepted from labeling, unless offered for transportation or transported by aircraft, and the specification packaging requirements of this subchapter when packaged in combination packagings according to this paragraph. For transportation by aircraft, the package must also comply with the applicable requirements of § 173.27 of this subchapter and only hazardous materials authorized aboard passenger-carrying aircraft may be transported as a limited quantity. In addition, shipments of these limited quantities are not subject to subpart F of part 172 (Placarding) of this subchapter. Each package must conform to the packaging requirements of subpart B of this part and may not exceed 30 kg (66 pounds) gross weight. The following combination packagings are authorized:

\* \* \* \* \*

■ 19. In § 173.153, the introductory text in paragraph (b) is revised to read as follows:

**§ 173.153 Exceptions for Division Class 6.1 (poisonous materials).**

\* \* \* \* \*

(b) *Limited quantities of Division 6.1 materials.* The exceptions in this paragraph do not apply to poison-by-inhalation materials limited quantities of poisonous materials (Division 6.1) in Packing Group III are excepted from the specification packaging requirements of this subchapter when packaged in combination packagings according to this paragraph. For transportation by aircraft, the package must also comply

with the applicable requirements of § 173.27 of this subchapter and only hazardous materials authorized aboard passenger-carrying aircraft may be transported as a limited quantity. In addition, shipments of these limited quantities are not subject to subpart F of part 172 (Placarding) of this subchapter. Each package must conform to the packaging requirements of subpart B of this part and may not exceed 30 kg (66 pounds) gross weight. The following combination packagings are authorized:

\* \* \* \* \*

■ 20. In § 173.154, the introductory text in paragraph (b) is revised to read as follows:

**§ 173.154 Exceptions for Class 8 (corrosive materials).**

\* \* \* \* \*

(b) *Limited quantities.* Limited quantities of corrosive materials (Class 8) in Packing Groups II and III are excepted from labeling, unless offered for transportation or transported by aircraft, and the specification packaging requirements of this subchapter when packaged in combination packagings according to this paragraph. For transportation by aircraft, the package must also comply with the applicable requirements of § 173.27 of this subchapter and only hazardous materials authorized aboard passenger-carrying aircraft may be transported as a limited quantity. In addition, shipments of these limited quantities are not subject to subpart F (Placarding) of part 172 of this subchapter. Each package must conform to the packaging requirements of subpart B of this part and may not exceed 30 kg (66 pounds) gross weight. The following combination packagings are authorized:

\* \* \* \* \*

■ 21. In § 173.155, the introductory text in paragraph (b) is revised to read as follows:

**§ 173.155 Exceptions for Class 9 (miscellaneous hazardous materials).**

\* \* \* \* \*

(b) *Limited quantities.* Limited quantities of miscellaneous hazardous materials (Class 9) are excepted from labeling, unless offered for transportation or transported by aircraft, and the specification packaging requirements of this subchapter when packaged in combination packagings according to this paragraph. For transportation by aircraft, the package must also comply with the applicable requirements of § 173.27 of this subchapter and only hazardous materials authorized aboard passenger-carrying aircraft may be transported as

a limited quantity. In addition, shipments of these limited quantities are not subject to subpart F (Placarding) of part 172 of this subchapter. Each package must conform to the packaging requirements of subpart B of this part and may not exceed 30 kg (66 pounds) gross weight. The following combination packagings are authorized:

\* \* \* \* \*

■ 22. In § 173.217, a new paragraph (f) is added to read as follows:

**§ 173.217 Carbon dioxide, solid (dry ice).**

\* \* \* \* \*

(f) Carbon dioxide, solid (dry ice), when offered or transported by aircraft, in quantities not exceeding 2.3 kg (5 pounds) per package and used as a refrigerant for the contents of the package is excepted from all other requirements of this subchapter if the requirements of paragraphs (a) and (d) of this section are complied with and the package is marked "Carbon dioxide, sold" or "Dry ice", marked with the name of the contents being cooled, and marked with the net weight of the dry ice or an indication the net weight is 2.3 kg (5 pounds) or less.

■ 23. In § 173.220, paragraph (b)(4)(iii) is revised to read as follows:

**§ 173.220 Internal combustion engines, self-propelled vehicles, mechanical equipment containing internal combustion engines, and battery powered vehicles or equipment.**

\* \* \* \* \*

(b) \* \* \*

(4) \* \* \*

(iii) For transportation by aircraft, when carried in aircraft designed or modified for vehicle ferry operations and when all of the following conditions are met:

(A) Authorization for this type operation has been given by the appropriate authority in the government of the country in which the aircraft is registered;

(B) Each vehicle is secured in an upright position;

(C) Each fuel tank is filled in a manner and only to a degree that will preclude spillage of fuel during loading, unloading, and transportation; and

(D) Each area or compartment in which a self-propelled vehicle is being transported is suitably ventilated to prevent the accumulation of fuel vapors.

\* \* \* \* \*

■ 24. In § 173.306, the introductory text in paragraphs (a), (b), and (h) is revised to read as follows:

**§ 173.306 Limited quantities of compressed gases.**

\* \* \* \* \*

(a) Limited quantities of compressed gases for which exceptions are permitted as noted by reference to this section in § 172.101 of this subchapter are excepted from labeling, except when offered for transportation or transported by air, and, unless required as a condition of the exception, specification packaging requirements of this subchapter when packaged in accordance with the following paragraphs. For transportation by aircraft, the package must also comply with the applicable requirements of § 173.27 of this subchapter and only hazardous materials authorized aboard passenger-carrying aircraft may be transported as a limited quantity. In addition, shipments are not subject to subpart F (Placarding) of part 172 of this subchapter, to part 174 of this subchapter except § 174.24, and to part 177 of this subchapter except § 177.817. Each package may not exceed 30 kg (66 pounds) gross weight.

(b) *Exceptions for foodstuffs, soap, biologicals, electronic tubes, and audible fire alarm systems.* Limited quantities of compressed gases (except Division 2.3 gases) for which exceptions are provided as indicated by reference to this section in § 172.101 of this subchapter, when accordance with one of the following paragraphs, are excepted from labeling, except when offered for transportation or transported by aircraft, and the specification packaging requirements of this subchapter. For transportation by aircraft, the package must comply with the applicable requirements of § 173.27 of this subchapter; the net quantity per package may not exceed the quantity specified in column (9A) of the Hazardous Materials Table in § 172.101 of this subchapter; and only hazardous materials authorized aboard passenger-carrying aircraft may be transported as a limited quantity. In addition, shipments are not subject to subpart F (Placarding) of part 172 of this subchapter, to part 174 of this subchapter, except § 174.24, and to part 177 of this subchapter, except § 177.817. Special exceptions for shipment of certain compressed gases in the ORM-D class are provided in paragraph (i) of this section.

(h) A limited quantity which conforms to the provisions of paragraphs (a)(1), (a)(3), or (b) of this section and is a "Consumer Commodity" as defined in § 171.8 of this subchapter, may be renamed "Consumer Commodity" and reclassified as "ORM-D" material. For

transportation by aircraft, only hazardous materials authorized aboard passenger-carrying aircraft may be renamed "Consumer Commodity" and reclassified "ORM-D." Each package may not exceed 30 kg (66 pounds) gross weight. In addition to the exceptions provided by paragraphs (a) and (b) of this section:

■ 25. In § 173.307, paragraph (a)(2) is revised to read as follows:

**§ 173.307 Exceptions for compressed gases.**

(a) \* \* \*  
 (2) Tires when inflated to pressures not greater than their rated inflation pressures. For transportation by air, tires and tire assemblies must meet the conditions in § 175.8(b)(4) of this subchapter.

■ 26. Part 175 is revised to read as follows:

**PART 175—CARRIAGE BY AIRCRAFT**

**Subpart A—General Information and Regulations**

- Sec.
- 175.1 Purpose, scope and applicability.
- 175.3 Unacceptable hazardous materials shipments.
- 175.8 Exceptions for operator equipment and items of replacement.
- 175.9 Exceptions for special aircraft operations.
- 175.10 Exceptions for passengers, crewmembers, and air operators.
- 175.20 Compliance and training.
- 175.25 Notification at air passenger facilities of hazardous materials restrictions.
- 175.26 Notification at cargo facilities of hazardous materials requirements.
- 175.30 Inspecting shipments.
- 175.31 Reports of discrepancies.
- 175.33 Shipping paper and notification of pilot-in-command.

**Subpart B—Loading, Unloading and Handling**

- 175.75 Quantity limitations and cargo location.
- 175.78 Stowage compatibility of cargo.
- 175.88 Inspection, orientation and securing of packages of hazardous materials.
- 175.90 Damaged shipments.

**Subpart C—Specific Regulations Applicable According to Classification of Material**

- 175.310 Transportation of flammable liquid fuel; aircraft only means of transportation
- 175.501 Special requirements for oxidizers and compressed oxygen.
- 175.630 Special requirements for Division 6.1 and Division 6.2 material.
- 175.700 Special limitations and requirements for Class 7 materials.
- 175.701 Separation distance requirements for packages containing Class 7

- (radioactive) materials in passenger-carrying aircraft.
- 175.702 Separation distance requirements for packages containing Class 7 (radioactive) materials in cargo aircraft.
- 175.703 Other special requirements for the acceptance and carriage of packages containing Class 7 materials.
- 175.704 Plutonium shipments.
- 175.705 Radioactive contamination.
- 175.706 Separation distances for undeveloped film from packages containing Class 7 (radioactive) materials.

**Authority:** 49 U.S.C. 5101–5128, 44701; 49 CFR 1.45 and 1.53.

**Subpart A—General Information and Regulations**

**§ 175.1 Purpose, scope and applicability.**

(a) This part prescribes requirements that apply to the transportation of hazardous materials in commerce aboard (including attached to or suspended from) aircraft. The requirements in this part are in addition to other requirements contained in parts 171, 172, 173, 178, and 180 of this subchapter.

(b) This part applies to the offering, acceptance, and transportation of hazardous materials in commerce by aircraft to, from, or within the United States, and to any aircraft of United States registry anywhere in air commerce. This subchapter applies to any person who performs, attempts to perform, or is required to perform any function subject to this subchapter, including—(1) Air carriers, indirect air carriers, and freight forwarders and their flight and non-flight employees, agents, subsidiary and contract personnel (including cargo, passenger and baggage acceptance, handling, loading and unloading personnel); and

(2) Air passengers that carry any hazardous material on their person or in their carry-on or checked baggage.

(c) This part does not apply to aircraft of United States registry under lease to and operated by foreign nationals outside the United States if:

(1) Hazardous materials forbidden aboard aircraft by § 172.101 of this subchapter are not carried on the aircraft; and

(2) Other hazardous materials are carried in accordance with the regulations of the State (nation) of the aircraft operator.

**§ 175.3 Unacceptable hazardous materials shipments.**

A hazardous material that is not prepared for shipment in accordance with this subchapter may not be offered or accepted for transportation or transported aboard an aircraft.

**§ 175.8 Exceptions for operator equipment and items of replacement.**

(a) *Operator equipment.* This subchapter does not apply to—

(1) Aviation fuel and oil in tanks that are in compliance with the installation provisions of 14 CFR, chapter 1.

(2) Hazardous materials required aboard an aircraft in accordance with the applicable airworthiness requirements and operating regulations. Items of replacement for such materials must be transported in accordance with paragraph (a)(3) of this section.

(3) Items of replacement (company material (COMAT)) for hazardous materials described in paragraph (a)(2) of this section must be transported in accordance with this subchapter. When an operator transports its own replacement items described in paragraph (a)(2), the following exceptions apply:

(i) In place of required packagings, packagings specifically designed for the items of replacement may be used, provided such packagings provide at least an equivalent level of protection to those that would be required by this subchapter.

(ii) Aircraft batteries are not subject to quantity limitations such as those provided in § 172.101 or § 175.75(a) of this subchapter.

(b) *Other operator exceptions.* This subchapter does not apply to—

(1) Oxygen, or any hazardous material used for the generation of oxygen, for medical use by a passenger, which is furnished by the aircraft operator in accordance with 14 CFR 121.574 or 135.91. For the purposes of this paragraph, an aircraft operator that does not hold a certificate under 14 CFR parts 121 or 135 may apply this exception in conformance with 14 CFR 121.574 or 135.91 in the same manner as required for a certificate holder. See § 175.501 for additional requirements applicable to the stowage of oxygen.

(2) Dry ice (carbon dioxide, solid) intended for use by the operator in food and beverage service aboard the aircraft.

(3) Alcoholic beverages, perfumes, colognes, and liquefied gas lighters carried aboard a passenger-carrying aircraft by the operator for use or sale on the aircraft. Liquefied gas lighters must be examined by the Bureau of Explosives and approved by the Associate Administrator.

(4) A tire assembly with a serviceable tire, provided the tire is not inflated to a gauge pressure exceeding the maximum rated pressure for that tire, and the tire (including valve assemblies) is protected from damage during transport. A tire or tire assembly which is unserviceable or damaged is

forbidden from air transport; however, a damaged tire is not subject to the requirements of this subchapter if it contains no material meeting the definition of a hazardous material (e.g., Division 2.2).

**§ 175.9 Exceptions for special aircraft operations.**

This subchapter does not apply to the following materials used for special aircraft operations when applicable FAA operator requirements have been met, including training operator personnel on the proper handling and stowage of the hazardous materials carried:

(a) Hazardous materials loaded and carried in hoppers or tanks of aircraft certificated for use in aerial seeding, dusting spraying, fertilizing, crop improvement, or pest control, to be dispensed during such an operation.

(b) Parachute activation devices, lighting equipment, oxygen cylinders, flotation devices, smoke grenades, flares, or similar devices carried during a parachute operation.

(c) Smoke grenades, flares, and pyrotechnic devices affixed to aircraft during any flight conducted as part of a scheduled air show or exhibition of aeronautical skill. The aircraft may not carry any persons other than required flight crewmembers. The affixed installation accommodating the smoke grenades, flares, or pyrotechnic devices on the aircraft must be approved for its intended use by the FAA Flight Standards District Office having responsibility for that aircraft.

(d) Hazardous materials are carried and used during dedicated air ambulance, fire fighting, or search and rescue operations.

(e) A transport incubator unit necessary to protect life or an organ preservation unit necessary to protect human organs, carried in the aircraft cabin, provided:

(1) The compressed gas used to operate the unit is in an authorized DOT specification cylinder and is marked, labeled, filled, and maintained as prescribed by this subchapter;

(2) Each battery used is of the nonspillable type;

(3) The unit is constructed so valves, fittings, and gauges are protected from damage;

(4) The pilot-in-command is advised when the unit is on board, and when it is intended for use;

(5) The unit is accompanied by a person qualified to operate it;

(6) The unit is secured in the aircraft in a manner that does not restrict access to or use of any required emergency or regular exit or of the aisle in the passenger compartment; and,

(7) Smoking within 3 m (10 feet) of the unit is prohibited.

(f) Hazardous materials which are loaded and carried on or in cargo only aircraft, and which are to be dispensed or expended during flight for weather control, environmental restoration or protection, forest preservation and protection, fire fighting and prevention, flood control, or avalanche control purposes, when the following requirements are met:

(1) Operations may not be conducted over densely populated areas, in a congested airway, or near any airport where carrier passenger operations are conducted.

(2) Each operator shall prepare and keep current a manual containing operational guidelines and handling procedures, for the use and guidance of flight, maintenance, and ground personnel concerned in the dispensing or expending of hazardous materials. The manual must be approved by the FAA Principal Operations Inspector assigned to the operator.

(3) No person other than a required flight crewmember, FAA inspector, or person necessary for handling or dispensing the hazardous material may be carried on the aircraft.

(4) The operator of the aircraft must have advance permission from the owner of any airport to be used for the dispensing or expending operation.

(5) When dynamite and blasting caps are carried for avalanche control flights, the explosives must be handled by, and at all times be under the control of, a qualified blaster. When required by a State or local authority, the blaster must be licensed and the State or local authority must be identified in writing to the FAA Principal Operations Inspector assigned to the operator.

**§ 175.10 Exceptions for passengers, crewmembers, and air operators.**

(a) This subchapter does not apply to the following hazardous materials when carried by aircraft passengers or crewmembers provided the requirements of this section are met:

(1) (i) Non-radioactive medicinal and toilet articles for personal use (including aerosols) carried in carry-on and checked baggage. Release devices on aerosols must be protected by a cap or other suitable means to prevent inadvertent release;

(ii) Other aerosols in Div. 2.2 (nonflammable gas) with no subsidiary risk carried in checked baggage only. Release devices on aerosols must be protected by a cap or other suitable means to prevent inadvertent release; and

(iii) The aggregate quantity of these hazardous materials carried by each person may not exceed 2 kg (70 ounces) by mass or 2 L (68 fluid ounces) by volume and the capacity of each container may not exceed 0.5 kg (18 ounces) by mass or 500 ml (17 fluid ounces) by volume.

(2) Safety matches or a lighter intended for use by an individual when carried on one's person or in carry-on baggage only. Lighter fuel, lighter refills, and lighters containing unabsorbed liquid fuel (other than liquefied gas) are not permitted on one's person or in carry-on or checked baggage.

(3) Implanted medical devices in humans or animals that contain hazardous materials, such as a heart pacemaker containing Class 7 (radioactive) material or lithium batteries; and radiopharmaceuticals that have been injected or ingested.

(4) Alcoholic beverages containing:

(i) Not more than 24% alcohol by volume; or

(ii) More than 24% and not more than 70% alcohol by volume when in unopened retail packaging not exceeding 5 liters (1.3 gallons) carried in carry-on or checked baggage, with a total net quantity per person of 5 liters (1.3) gallons for such beverages.

(5) Perfumes and colognes purchased through duty-free sales and carried on one's person or in carry-on baggage.

(6) Hair curlers (curling irons) containing a hydrocarbon gas such as butane, no more than one per person, in carry-on or checked baggage. The safety cover must be securely fitted over the heating element. Gas refills for such curlers are not permitted in carry-on or checked baggage.

(7) A small medical or clinical mercury thermometer for personal use, when carried in a protective case in carry-on or checked baggage.

(8) Small arms ammunition for personal use carried by a crewmember or passenger in checked baggage only, if securely packed in boxes or other packaging specifically designed to carry small amounts of ammunition. Ammunition clips and magazines must also be securely boxed. This paragraph does not apply to persons traveling under the provisions of 49 CFR 1544.219.

(9) One self-defense spray (see § 171.8 of this subchapter), not exceeding 118 mL (4 fluid ounces) by volume, that incorporates a positive means to prevent accidental discharge may be carried in checked baggage only.

(10) Dry ice (carbon dioxide, solid), in quantities not exceeding 2.0 kg (4.4 pounds) per person in carry-on baggage or 2.3 kg (5 pounds) per person in

checked baggage, when used to refrigerate perishables. The packaging must permit the release of carbon dioxide gas. For checked baggage, the package must be marked "DRY ICE" or "CARBON DIOXIDE, SOLID" and must be marked with the net weight of dry ice or an indication the net weight is 2.3 kg (5 pounds) or less.

(11) A self-inflating life jacket fitted with no more than two small gas cartridges (containing no hazardous material other than a Div. 2.2 gas) for inflation purposes plus no more than two spare cartridges. The lifejacket and spare cartridges may be carried in carry-on or checked baggage, with the approval of the aircraft operator.

(12) Small compressed gas cylinders of Division 2.2 (containing no hazardous material other than a Division 2.2 gas) worn by the passenger for the operation of mechanical limbs and, in carry-on and checked baggage, spare cylinders of a similar size for the same purpose in sufficient quantities to ensure an adequate supply for the duration of the journey.

(13) A mercury barometer or thermometer carried as carry-on baggage, by a representative of a government weather bureau or similar official agency, provided that individual advises the operator of the presence of the barometer or thermometer in his baggage. The barometer or thermometer must be packaged in a strong packaging having a sealed inner liner or bag of strong, leak proof and puncture-resistant material impervious to mercury, which will prevent the escape of mercury from the package in any position.

(14) Electrically powered heat-producing articles (e.g., battery-operated equipment such as diving lamps and soldering equipment) as carry-on baggage only and with the approval of the operator of the aircraft. The heat-producing component, or the energy source, must be removed to prevent unintentional functioning during transport.

(15) A wheelchair or other battery-powered mobility aid equipped with a nonspillable battery, when carried as checked baggage, provided—

(i) The battery meets the provisions of § 173.159(d) of this subchapter for nonspillable batteries;

(ii) Visual inspection including removal of the battery, where necessary, reveals no obvious defects (removal of the battery from the housing should be performed by qualified airline personnel only);

(iii) The battery is disconnected and terminals are insulated to prevent short circuits; and

(iv) The battery is—

(A) Securely attached to the wheelchair or mobility aid,

(B) Is removed and placed in a strong, rigid packaging marked "NONSPILLABLE BATTERY" (unless fully enclosed in a rigid housing that is properly marked), or

(C) Is handled in accordance with paragraph (a)(16)(iv) of this section.

(16) A wheelchair or other battery-powered mobility aid equipped with a spillable battery, when carried as checked baggage, provided—

(i) Visual inspection including removal of the battery, where necessary, reveals no obvious defects (however, removal of the battery from the housing should be performed by qualified airline personnel only);

(ii) The battery is disconnected and terminals are insulated to prevent short circuits;

(iii) The pilot-in-command is advised, either orally or in writing, prior to departure, as to the location of the battery aboard the aircraft; and

(iv) The wheelchair or mobility aid is loaded, stowed, secured and unloaded in an upright position, or the battery is removed, and carried in a strong, rigid packaging under the following conditions:

(A) The packaging must be leak-tight and impervious to battery fluid. An inner liner may be used to satisfy this requirement if there is absorbent material placed inside of the liner and the liner has a leakproof closure;

(B) The battery must be protected against short circuits, secured upright in the packaging, and be packaged with enough compatible absorbent material to completely absorb liquid contents in the event of rupture of the battery; and

(C) The packaging must be labeled with a CORROSIVE label, marked to indicate proper orientation, and marked with the words "Battery, wet, with wheelchair."

(17) Except as provided in § 173.21 of this subchapter, consumer electronic and medical devices (watches, calculators, cameras, cellular phones, lap-top computer, camcorders, and hearing aids, etc.) containing lithium cells or batteries, and spare lithium batteries and cells for these devices, when carried by passengers or crew members in carry-on or checked baggage for personal use. In addition, each installed or spare battery must conform to the following:

(i) The lithium content of the anode of each cell, when fully charged, is not more than 5 g; and

(ii) The aggregate lithium content of the anodes of each battery, when fully charged, is not more than 25g.

(b) The exceptions provided in paragraph (a) of this section also apply to aircraft operators when transporting passenger or crewmember baggage that has been separated from the passenger or crewmember, including transfer to another carrier for transport to its final destination.

#### **§ 175.20 Compliance and training.**

An air carrier may not transport a hazardous material by aircraft unless each of its hazmat employees involved in that transportation is trained as required by subpart H of part 172 of this subchapter. In addition, air carriers must comply with all applicable hazardous materials training requirements in 14 CFR Part 121 and 135.

#### **§ 175.25 Notification at air passenger facilities of hazardous materials restrictions.**

Each person who engages in for-hire air transportation of passengers shall display notices of the requirements applicable to the carriage of hazardous materials aboard aircraft, and the penalties for failure to comply with those requirements. Each notice must be legible, and be prominently displayed so it can be seen by passengers in locations where the aircraft operator issues tickets, checks baggage, and maintains aircraft boarding areas.

(a) At a minimum, each notice must communicate the following information:

(1) Federal law forbids the carriage of hazardous materials aboard aircraft in your luggage or on your person. A violation can result in five years' imprisonment and penalties of \$250,000 or more (49 U.S.C. 5124). Hazardous materials include explosives, compressed gases, flammable liquids and solids, oxidizers, poisons, corrosives and radioactive materials. Examples: Paints, lighter fluid, fireworks, tear gases, oxygen bottles, and radio-pharmaceuticals.

(2) There are special exceptions for small quantities (up to 70 ounces total) of medicinal and toilet articles carried in your luggage and certain smoking materials carried on your person. For further information contact your airline representative.

(b) The information contained in paragraph (a) of this section must be printed:

(1) In legible English and may, in addition to English, be displayed in other languages;

(2) In lettering of at least 1 cm (0.4 inch) in height for the first sentence and 4.0 mm (0.16 inch) in height for the other sentences; and

(3) On a background of contrasting color.

(c) Size and color of the notice is optional. Additional information, examples, or illustrations, if not inconsistent with the required information, may be included.

#### **§ 175.26 Notification at cargo facilities of hazardous materials requirements.**

(a) Each person who engages in the acceptance or transport of cargo for transportation by aircraft shall display notices to persons offering such cargo of the requirements applicable to the carriage of hazardous materials aboard aircraft, and the penalties for failure to comply with those requirements, at each facility where cargo is accepted. Each notice must be legible, and be prominently displayed so it can be seen. At a minimum, each notice must communicate the following information:

(1) Cargo containing hazardous materials (dangerous goods) for transportation by aircraft must be offered in accordance with the Federal Hazardous Materials Regulations (49 CFR parts 171 through 180).

(2) A violation can result in five years' imprisonment and penalties of \$250,000 or more (49 U.S.C. 5124).

(3) Hazardous materials (dangerous goods) include explosives, compressed gases, flammable liquids and solids, oxidizers, poisons, corrosives and radioactive materials.

(b) The information contained in paragraph (a) of this section must be printed:

(1) Legibly in English, and, where cargo is accepted outside of the United States, in the language of the host country; and

(2) On a background of contrasting color.

(c) Size and color of the notice are optional. Additional information, examples, or illustrations, if not inconsistent with required information, may be included.

(d) *Exceptions.* Display of a notice required by paragraph (a) of this section is not required at:

(1) An unattended location (e.g., a drop box) provided a general notice advising customers of a prohibition on shipments of hazardous materials through that location is prominently displayed; or

(2) A customer's facility where hazardous materials packages are accepted by a carrier.

#### **§ 175.30 Inspecting shipments.**

(a) No person may accept a hazardous material for transportation aboard an aircraft unless the aircraft operator ensures the hazardous material is:

(1) Authorized, and is within the quantity limitations specified for

carriage aboard aircraft according to § 172.101 of this subchapter or as otherwise specifically provided by this subchapter.

(2) Described and certified on a shipping paper prepared in duplicate in accordance with subpart C of part 172 or as authorized by § 171.11 of this subchapter. See § 175.33 for shipping paper retention requirements;

(3) Marked and labeled in accordance with subparts D and E of part 172 or as authorized in § 171.11 of this subchapter, and placarded (when required) in accordance with subpart F of part 172 of this subchapter; and

(4) Labeled with a "CARGO AIRCRAFT ONLY" label (see § 172.448 of this subchapter) if the material as presented is not permitted aboard passenger-carrying aircraft.

(b) Except as provided in paragraph (d) of this section, no person may carry a hazardous material in a package, outside container, or overpack aboard an aircraft unless the package, outside container, or overpack is inspected by the operator of the aircraft immediately before placing it:

(1) Aboard the aircraft; or

(2) In a unit load device or on a pallet prior to loading aboard the aircraft.

(c) A hazardous material may be carried aboard an aircraft only if, based on the inspection by the operator, the package, outside container, or overpack containing the hazardous material:

(1) Has no holes, leakage or other indication that its integrity has been compromised; and

(2) For Class 7 (radioactive) materials, does not have a broken seal, except packages contained in overpacks need not be inspected for seal integrity.

(d) The requirements of paragraphs (b) and (c) of this section do not apply to Dry ice (carbon dioxide, solid).

(e) An overpack containing packages of hazardous materials may be accepted only if the operator has taken all reasonable steps to establish that:

(1) The overpack does not contain a package bearing the "CARGO AIRCRAFT ONLY" label unless—

(i) The overpack affords clear visibility of and easy access to the package;

(ii) The package contains a material which may be carried inaccessibly under the provisions of § 175.75(e); or

(iii) Not more than one package is overpacked.

(2) The proper shipping names, identification numbers, labels and special handling instructions appearing on the inside packages are clearly visible or reproduced on the outside of the overpack, and

(3) Has determined that word "OVERPACK", or until October 1, 2007

a statement to the effect that the inside packages comply with the prescribed specifications, appears on the outside of the overpack, when specification packagings are prescribed.

**§ 175.31 Reports of discrepancies.**

(a) Each person who discovers a discrepancy, as defined in paragraph (b) of this section, relative to the shipment of a hazardous material following its acceptance for transportation aboard an aircraft shall, as soon as practicable, notify the nearest FAA Regional or Field Security Office by telephone or electronically, and shall provide the following information:

- (1) Name and telephone number of the person reporting the discrepancy.
- (2) Name of the aircraft operator.
- (3) Specific location of the shipment concerned.
- (4) Name of the shipper.
- (5) Nature of discrepancy.
- (6) Address of the shipper or person responsible for the discrepancy, if known, by the air carrier.

(b) Discrepancies which must be reported under paragraph (a) of this section are those involving hazardous materials which are improperly described, certified, labeled, marked, or packaged, in a manner not ascertainable when accepted under the provisions of § 175.30(a) of this subchapter including packages or baggage which are found to contain hazardous materials subsequent to their being offered and accepted as other than hazardous materials.

**§ 175.33 Shipping paper and notification of pilot-in-command.**

(a) When a hazardous material subject to the provisions of this subchapter is carried in an aircraft, a copy of the shipping paper required by § 175.30(a)(2) must accompany the shipment it covers during transportation aboard the aircraft, and the operator of the aircraft must provide the pilot-in-command with accurate and legible written information as early as practicable before departure of the aircraft, which specifies at least the following:

(1) The proper shipping name, hazard class and identification number of the material, including any remaining aboard from prior stops, as specified in § 172.101 of this subchapter or the ICAO Technical Instructions. In the case of Class 1 materials, the compatibility group letter also must be shown. If a hazardous material is described by the proper shipping name, hazard class, and identification number appearing in:

(i) Section 172.101 of this subchapter, any additional description requirements provided in §§ 172.202 and 172.203 of

this subchapter must also be shown in the notification.

(ii) The ICAO Technical Instructions, any additional information required to be shown on shipping papers by § 171.11 of this subchapter must also be shown in the notification.

(2) The total number of packages;  
 (3) The net quantity or gross weight, as applicable, for each package except those containing Class 7 (radioactive) materials. For a shipment consisting of multiple packages containing hazardous materials bearing the same proper shipping name and identification number, only the total quantity and an indication of the quantity of the largest and smallest package at each loading location need to be provided;

(4) The location of the packages aboard the aircraft;

(5) Confirmation that no damaged or leaking packages have been loaded on the aircraft;

(6) For Class 7 (radioactive) materials, the number of packages, overpacks or freight containers their category, transport index (if applicable), and their location aboard the aircraft;

(7) The date of the flight;

(8) The telephone number of a person not aboard the aircraft from whom the information contained in the notification of pilot-in-command can be obtained. The aircraft operator must ensure the telephone number is monitored at all times the aircraft is in flight. The telephone number is not required to be placed on the notification of pilot-in-command if the phone number is in a location in the cockpit available and known to the flight crew.

(9) Confirmation that the package must be carried only on cargo aircraft if its transportation aboard passenger-carrying aircraft is forbidden; and

(10) An indication, when applicable, that a hazardous material is being carried under terms of a special permit.

(b) A copy of the written notification to pilot-in-command shall be readily available to the pilot-in-command during flight. Emergency response information required by subpart G of part 172 of this subchapter must be maintained in the same manner as the written notification to pilot-in-command during transport of the hazardous material aboard the aircraft.

(c) The aircraft operator must—

(1) Retain a copy of the shipping paper required by § 175.30(a)(2) or an electronic image thereof, that is accessible at or through its principal place of business and must make the shipping paper available, upon request, to an authorized official of a federal, state, or local government agency at reasonable times and locations. For a

hazardous waste, each shipping paper copy must be retained for three years after the material is accepted by the initial carrier. For all other hazardous materials, each shipping paper copy must be retained by the operator for one year after the material is accepted by the initial carrier. Each shipping paper copy must include the date of acceptance by the carrier. The date on the shipping paper may be the date a shipper notifies the air carrier that a shipment is ready for transportation, as indicated on the air bill or bill of lading, as an alternative to the date the shipment is picked up or accepted by the carrier. Only an initial carrier must receive and retain a copy of the shipper's certification, as required by § 172.204 of this subchapter.

(2) Retain a copy of each notification of pilot-in-command, an electronic image thereof, or the information contained therein for 90 days at the airport of departure or the operator's principal place of business.

(3) Have the information required to be retained under this paragraph readily accessible at the airport of departure and the intended airport of arrival for the duration of the flight leg.

(4) Make available, upon request, to an authorized official of a Federal, State, or local government agency (including an emergency responders) at reasonable times and locations, the documents or information required to be retained by this paragraph.

(d) The documents required by paragraphs (a) and (b) this section may be combined into one document if it is given to the pilot-in-command before departure of the aircraft.

**Subpart B—Loading, Unloading and Handling**

**§ 175.75 Quantity limitations and cargo location.**

(a) No person may carry on an aircraft a hazardous material except as permitted by this subchapter.

(b) Except as otherwise provided in this subchapter, no person may carry a hazardous material in the cabin of a passenger-carrying aircraft or on the flight deck of any aircraft, and the hazardous material must be located in a place that is inaccessible to persons other than crew-members. 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 in 14 CFR 25.857(b) or for a Class C aircraft cargo compartment in 14 CFR 25.857(c). A package bearing a KEEP AWAY FROM HEAT handling marking must be

protected from direct sunshine and stored in a cool and ventilated place, away from sources of heat.

(c) For each package containing a hazardous material acceptable for carriage aboard passenger-carrying aircraft, no more than 25 kg (55 pounds) net weight of hazardous material may be loaded in an inaccessible manner. Loaded in an inaccessible manner means cargo that is loaded in such a manner that a crew member or other authorized person cannot handle, and when size and weight permit, separate such packages from other cargo during flight. This includes materials loaded in a freight container in an accessible cargo compartment. In addition to the 25 kg limitation above, an additional 75 kg (165 pounds) net weight of Division 2.2 (non-flammable compressed gas) may be loaded in an inaccessible manner.

(d) 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 access, handle and when size and weight permit, separate such packages from other cargo during flight.

(e) The requirements of paragraph (c) and (d) of this section do not apply to the following hazardous materials:

(1) Class 3—Packing Group III (that do not meet the definition of another hazard class), Division 6.1 (except those also labeled FLAMMABLE), Division 6.2, Class 7, Class 9 or ORM-D;

(2) Division 2.2 in that an additional 75 kg (165 pounds) net weight of Division 2.2 material is authorized in inaccessible locations.

(3) Packages of hazardous materials transported aboard a cargo aircraft, when other means of transportation are impracticable or not available, in accordance with procedures approved in writing by the FAA Regional or Field Security Office in the region where the operator is located; and

(4) Packages of hazardous materials carried on small, single pilot, cargo aircraft if:

(i) No person is carried on the aircraft other than the pilot, an FAA inspector, the shipper or consignee of the material, a representative of the shipper or consignee so designated in writing, or a person necessary for handling the material;

(ii) The pilot is provided with written instructions on the 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.

(5) At a minimum, quantity limits and loading instructions in the following Quantity and Loading Tables must be followed to maintain acceptable quantity and loading between packages containing hazardous materials. The Quantity and Loading Tables are as follows:

Section 175.75 Quantity and Loading Tables

**PASSENGER AIRCRAFT**

Packages Authorized for Transport Onboard a Passenger Aircraft

In an accessible cargo compartment		
If packages are accessible	If packages are inaccessible	If packages are in a freight container
No limit .....	25 kg per compartment plus an additional 75 kg of Division 2.2 material.	25 kg per container plus an additional 75 kg of Division 2.2 material.
In an inaccessible cargo compartment		
If packages are not in a freight container	If packages are in a freight container	
25 kg per compartment plus an additional 75 kg of Division 2.2 material	25 kg per compartment plus an additional 75 kg of Division 2.2 material.	

**CARGO ONLY AIRCRAFT**

Packages Authorized for Transport Onboard a Passenger Aircraft

In an accessible cargo compartment		
If packages are accessible	If packages are inaccessible	If packages are in a freight container
No limit .....	25 kg per compartment plus an additional 75 kg of Division 2.2 material.	25 kg per container plus an additional 75 kg of Division 2.2 material.
In an inaccessible cargo compartment		
If packages are not in a freight container	If packages are in a freight container	
25 kg per compartment plus an additional 75 kg of Division 2.2 material	25 kg per compartment plus an additional 75 kg of Division 2.2 material.	

Packages Only Authorized for Transport Aboard a Cargo Aircraft

In an accessible cargo compartment			
If packages are accessible	If packages are inaccessible	If packages are in a freight container and are accessible	If packages are in a freight container and are inaccessible
No limit .....	Forbidden .....	No Limit .....	Forbidden.
	Except the following materials are not subject to this restriction:		Except the following materials are not subject to this restriction:

In an accessible cargo compartment			
If packages are accessible	If packages are inaccessible	If packages are in a freight container and are accessible	If packages are in a freight container and are inaccessible
	a. Class 3, PG III (unless the hazardous material meets the definition of another hazard class) b. Class 6, (unless also labeled as a flammable liquid) c. Class 7, (unless the hazardous material meets the definition of another hazard class)	..... ..... .....	a. Class 3, PG III (unless the hazardous material meets the definition of another hazard class); b. Class 6, (unless also labeled as a flammable liquid); c. Class 7, (unless the hazardous material meets the definition of another hazard class).
In an inaccessible cargo compartment			
If packages are not in a freight container		If packages are in a freight container	
Forbidden ..... Except the following materials are not subject to this restriction: a. Class 3, PG III (unless the hazardous material meets the definition of another hazard class). b. Class 6, (unless also labeled as a flammable liquid) ..... c. Class 7, (unless the hazardous material meets the definition of another hazard class).		Forbidden. Except the following materials are not subject to this restriction: a. Class 3, PG III (unless the hazardous material meets the definition of another hazard class); b. Class 6, (unless also labeled as a flammable liquid); c. Class 7, (unless the hazardous material meets the definition of another hazard class).	

**§ 175.78 Stowage compatibility of cargo.**

(a) For stowage on an aircraft, in a cargo facility, or in 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.

(b) At a minimum, the segregation instructions prescribed in the following Segregation Table must be followed to

maintain acceptable segregation between packages containing hazardous materials with different hazards. The Segregation Table instructions apply whether or not the class or division is the primary or subsidiary risk. The Segregation Table follows:

**SEGREGATION TABLE**

Hazard label	Class or division							
	1	2	3	4.2	4.3	5.1	5.2	8
1 .....	Note 1	Note 2						
2 .....	Note 2	.....	.....	.....	.....	.....	.....	.....
3 .....	Note 2	.....	.....	.....	.....	X	.....	.....
4.2 .....	Note 2	.....	.....	.....	.....	X	.....	.....
4.3 .....	Note 2	.....	.....	.....	.....	.....	.....	X
5.1 .....	Note 2	.....	X	X	.....	.....	.....	.....
5.2 .....	Note 2	.....	.....	.....	.....	.....	.....	.....
8 .....	Note 2	.....	.....	.....	X	.....	.....	.....

(c) Instructions for using the Segregation Table are as follows:

(1) Hazard labels, classes or divisions not shown in the table are not subject to segregation requirements.

(2) Dots at the intersection of a row and column indicate that no restrictions apply.

(3) The letter "X" at the intersection of a row and column indicates that packages containing these 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.

(4) Note 1. ("Note 1" at the intersection of a row and column means the following:

(i) For explosives in compatibility groups A through K and N—

(A) Packages bearing the same compatibility group letter and the same division number may be stowed together.

(B) Explosives of the same compatibility group, but different divisions may be stowed together provided the whole shipment is treated as belonging to the division having the smaller number. However, when explosives of Division 1.5 Compatibility Group D are stowed together with explosives of Division 1.2 Compatibility Group D, the whole shipment must be treated as Division 1.1, Compatibility Group D.

(C) Packages bearing different compatibility group letters may not be

stowed together whether or not they belong to the same division, except as provided in paragraphs (c)(3)(ii) and (iii) of this section.

(ii) Explosives in Compatibility Group L may not be stowed with explosives in other compatibility groups. They may only be stowed with the same type of explosives in Compatibility Group L.

(iii) Explosives of Division 1.4, Compatibility Group S, may be stowed with explosives of all compatibility groups except for Compatibility Groups A and L.

(iv) Other than explosives of Division 1.4, Compatibility Group S (see paragraph (c)(3)(iii) of this section), and Compatibility Groups C, D and E that may be stowed together, explosives that

do not belong in the same compatibility group may not be stowed together.

(A) Any combination of substances in Compatibility Groups C and D must be assigned to the most appropriate compatibility group shown in the § 172.101 Table of this subchapter.

(B) Explosives in Compatibility Group N may be stowed together with explosives in Compatibility Groups C, D, or E when the combination is assigned Compatibility Group D.

(v) See §§ 175.704(b)(1) and (c)(1).

(5) Note 2. "Note 2" at the intersection of a row and column means that other than explosives of Division 1.4, Compatibility Group S, explosives may not be stowed together with that class.

(6) Packages containing hazardous materials with multiple hazards in the class or divisions, which require segregation in accordance with the Segregation Table, need not be segregated from other packages bearing the same UN number.

(7) A package labeled "BLASTING AGENT" may not be stowed next to or in a position that will allow contact with a package of special fireworks or railway torpedoes.

**§ 175.88 Inspection, orientation and securing packages of hazardous materials.**

(a) 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.

(b) 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. A package without orientation markings containing liquid hazardous materials must be stored and loaded with top closure facing upward.

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

**§ 175.90 Damaged shipments.**

(a) Packages or overpacks containing hazardous materials must be inspected for damage or leakage after being unloaded from an aircraft. When packages or overpacks containing

hazardous materials have been transported 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 must be 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 decontaminated, if applicable.

(b) Except as provided in § 175.700, the operator of an aircraft must remove from the aircraft any package, baggage or cargo that appears to be leaking or contaminated by a hazardous material. In the case of a package, baggage or cargo that appears to be leaking, the operator must ensure that other packages, baggage or cargo in the same shipment are in proper condition for transport aboard the aircraft and that no other package, baggage or cargo has been contaminated or is leaking. If an operator becomes aware that a package, baggage or cargo not identified as containing a hazardous material has been contaminated, or the operator has cause to believe that a hazardous material may be the cause of the contamination, the operator must take reasonable steps to identify the nature and source of contamination before proceeding with the loading of the contaminated baggage or cargo. If the contaminating substance is found or suspected to be hazardous material, the operator must isolate the package, baggage or cargo and take appropriate steps to eliminate any identified hazard before continuing the transportation of the item by aircraft.

(c) No person may place aboard an aircraft a package, baggage or cargo that is contaminated with a hazardous material or appears to be leaking.

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

- (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 and 175.31 of this subchapter; and
- (4) Notify the consignor or consignee.

**Subpart C—Specific Regulations Applicable According to Classification of Material**

**§ 175.310 Transportation of flammable liquid fuel; aircraft only means of transportation.**

(a) When other means of transportation are impracticable, flammable liquid fuels may be carried on certain passenger and cargo aircraft as provided in this section, without regard to the packaging references and quantity limits listed in Columns 7, 8 and 9 of the § 172.101 Hazardous Materials Table. All requirements of this subchapter that are not specifically covered in this section continue to apply to shipments made under the provisions of this section. For purposes of this section "impracticable" means transportation is not physically possible or cannot be performed by routine and frequent means of other transportation, due to extenuating circumstances. Extenuating circumstances include: conditions precluding highway or water transportation, such as a frozen vessel route; road closures due to catastrophic weather or volcanic activity; or a declared state of emergency. The desire for expedience of a shipper, carrier, or consignor, is not relevant in determining whether other means of transportation are impracticable. The stowage requirements of § 175.75(a) do not apply to a person operating an aircraft under the provisions of this section which, because of its size and configuration, makes it impossible to comply.

(b) A small passenger-carrying aircraft operated entirely within the State of Alaska or into a remote area, in other than scheduled passenger operations, may carry up to 76 L (20 gallons) of flammable liquid fuel (in Packing Group II or Packing Group III), when:

- (1) The flight is necessary to meet the needs of a passenger; and
- (2) The fuel is carried in one of the following types of containers:
  - (i) Strong tight metal containers of not more than 20 L (5.3 gallons) capacity, each packed inside a UN 4G fiberboard box, at the Packing Group II performance level, or each packed inside a UN 4C1 wooden box, at the Packing Group II performance level;
  - (ii) Airtight, leakproof, inside containers of not more than 40 L (11 gallons) capacity and of at least 28-gauge metal, each packed inside a UN 4C1 wooden box, at the Packing Group II performance level;
  - (iii) UN 1A1 steel drums, at the Packing Group I or II performance level, of not more than 20 L (5.3 gallons) capacity; or

(iv) In fuel tanks attached to flammable liquid fuel powered equipment under the following conditions:

(A) Each piece of equipment is secured in an upright position;

(B) Each fuel tank is filled in a manner that will preclude spillage of fuel during loading, unloading, and transportation; and

(C) Fueling and refueling of the equipment is prohibited in or on the aircraft.

(3) In the case of a passenger-carrying helicopter, the fuel or fueled equipment must be carried on external cargo racks or slings.

(c) Flammable liquid fuels may be carried on a cargo aircraft, subject to the following conditions:

(1)(i) The flammable liquid fuel is in Packing Group II or Packing Group III except as indicated in paragraph (c)(1)(iv) of this section;

(ii) The fuel is carried in packagings authorized in paragraph (b) of this section;

(iii) The fuel is carried in metal drums (UN 1A1, 1B1, 1N1) authorized for Packing Group I or Packing Group II liquid hazardous materials and having rated capacities of 220 L (58 gallons) or less. These single packagings may not be transported in the same aircraft with Class 1, Class 5, or Class 8 materials.

(iv) Combustible and flammable liquid fuels (including those in Packing Group I) may be carried in installed aircraft tanks each having a capacity of more than 450 L (118.9 gallons), subject to the following additional conditions:

(A) The tanks and their associated piping and equipment and the installation thereof must have been approved for the material to be transported by the appropriate FAA Flight Standards District Office.

(B) In the case of an aircraft being operated by a certificate holder, the operator shall list the aircraft and the approval information in its operating specifications. If the aircraft is being operated by other than a certificate holder, a copy of the FAA Flight Standards District Office approval required by this section must be carried on the aircraft.

(C) The crew of the aircraft must be thoroughly briefed on the operation of the particular bulk tank system being used.

(D) During loading and unloading and thereafter until any remaining fumes within the aircraft are dissipated:

(1) Only those electrically operated bulk tank shutoff valves that have been approved under a supplemental type certificate may be electrically operated.

(2) No engine or electrical equipment, avionic equipment, or auxiliary power units may be operated, except position lights in the steady position and equipment required by approved loading or unloading procedures, as set forth in the operator's operations manual, or for operators that are not certificate holders, as set forth in a written statement.

(3) Static ground wires must be connected between the storage tank or fueler and the aircraft, and between the aircraft and a positive ground device.

(2) [Reserved]

(d) The following restrictions apply to loading, handling, or carrying fuel under the provisions of this section:

(1) During loading and unloading, no person may smoke, carry a lighted cigarette, cigar, or pipe, or operate any device capable of causing an open flame or spark within 15 m (50 feet) of the aircraft.

(2) No person may fill a container, other than an approved bulk tank, with a Class 3 material or combustible liquid or discharge a Class 3 material or combustible liquid from a container, other than an approved bulk tank, while that container is inside or within 15 m (50 feet) of the aircraft.

(3) When filling an approved bulk tank by hose from inside the aircraft, the doors and hatches of the aircraft must be fully open to insure proper ventilation.

(4) Each area or compartment in which the fuel is loaded is suitably ventilated to prevent the accumulation of fuel vapors.

(5) Fuel is transferred to the aircraft fuel tanks only while the aircraft is on the ground.

(6) Before each flight, the pilot-in-command:

(i) Prohibits smoking, lighting matches, the carrying of any lighted cigar, pipe, cigarette or flame, and the use of anything that might cause an open flame or spark, while in flight; and

(ii) For passenger aircraft, informs each passenger of the location of the fuel and the hazards involved.

(e) Operators must comply with the following:

(1) If the aircraft is being operated by a holder of a certificate issued under 14 CFR part 121 or part 135, operations must be conducted in accordance with conditions and limitations specified in the certificate holder's operations specifications or operations manual accepted by the FAA. If the aircraft is being operated under 14 CFR part 91, operations must be conducted in accordance with an operations plan accepted and acknowledged in writing by the FAA Principal Operations Inspector assigned to the operator.

(2) The aircraft and the loading arrangement to be used must be approved for the safe carriage of the particular materials concerned by the FAA Principal Operations Inspector assigned to the operator.

#### **§ 175.501 Special requirements for oxidizers and compressed oxygen.**

(a) Compressed oxygen, when properly labeled Oxidizer or Oxygen, may be loaded and transported as provided in this section. No person may load or transport any other package containing a hazardous material for which an OXIDIZER label is required under this subchapter in an inaccessible cargo compartment that does not have a fire or smoke detection system and a fire suppression system.

(b) In addition to the quantity limitations prescribed in § 175.75, cylinders of compressed oxygen must be stowed in accordance with the following:

(1) No more than a combined total of six cylinders of compressed oxygen may be stowed on an aircraft in the inaccessible aircraft cargo compartment(s) that do not have fire or smoke detection systems and fire suppression systems.

(2) When loaded into a passenger-carrying aircraft or in an inaccessible cargo location on a cargo-only aircraft, cylinders of compressed oxygen must be stowed horizontally on the floor or as close as practicable to the floor of the cargo compartment or unit load device. This provision does not apply to cylinders stowed in the cabin of the aircraft in accordance with paragraph (c) of this section.

(3) When transported in a Class B aircraft cargo compartment (see 14 CFR 25.857(b)) or its equivalent (i.e., an accessible cargo compartment equipped with a fire or smoke detection system but not a fire suppression system), cylinders of compressed oxygen must be loaded in a manner that a crew member can see, handle and, when size and weight permit, separate the cylinders from other cargo during flight. No more than six cylinders of compressed oxygen and, in addition, one cylinder of medical-use compressed oxygen per passenger needing oxygen at destination—with a rated capacity of 850 L (30 cubic feet) or less of oxygen—may be carried in a Class B aircraft cargo compartment or its equivalent.

(c) A cylinder containing medical-use compressed oxygen, owned or leased by an aircraft operator or offered for transportation by a passenger needing it for personal medical use at destination, may be carried in the cabin of a passenger-carrying aircraft in

accordance with the following provisions:

(1) No more than six cylinders belonging to the aircraft operator and, in addition, no more than one cylinder per passenger needing the oxygen at destination, may be transported in the cabin of the aircraft under the provisions of this paragraph (c);

(2) The rated capacity of each cylinder may not exceed 850 L (30 cubic feet);

(3) Each cylinder and its overpack or outer packaging must conform to the provisions of this subchapter (see Special Provision A52 in § 172.102 of this subchapter);

(4) The aircraft operator shall securely stow the cylinder in its overpack or outer packaging in the cabin of the aircraft and shall notify the pilot-in-command as specified in § 175.33 of this part; and

(5) Shipments under this paragraph (c) are not subject to—

(i) Subpart C and, for passengers only, subpart H of part 172 of this subchapter;

(ii) Section 173.25(a)(4) of this subchapter; and

(iii) Paragraph (b) of this section.

**§ 175.630 Special requirements for Division 6.1 and Division 6.2 material.**

(a) A package required to bear a POISON, POISON INHALATION HAZARD, or INFECTIOUS SUBSTANCE label may not be carried in the same compartment of an aircraft with material which is marked as or known to be a foodstuff, feed, or any other edible material intended for consumption by humans or animals unless:

(1) The Division 6.1 or Division 6.2 material and the foodstuff, feed, or other edible material are loaded in separate unit load devices which, when stowed on the aircraft, are not adjacent to each other; or

(2) The Division 6.1 or Division 6.2 material are loaded in one closed unit load device and the foodstuff, feed or other material is loaded in another closed unit load device.

(b) No person may operate an aircraft that has been used to transport any package required to bear a POISON or POISON INHALATION HAZARD label unless, upon removal of such package, the area in the aircraft in which it was carried is visually inspected for evidence of leakage, spillage, or other contamination. All contamination discovered must be either isolated or removed from the aircraft. The operation of an aircraft contaminated with such Division 6.1 materials is considered to be the carriage of poisonous materials under paragraph (a) of this section.

**§ 175.700 Special limitations and requirements for Class 7 materials.**

(a) Except as provided in §§ 173.4, 173.422 and 173.423 of this subchapter, no person may carry any Class 7 materials aboard a passenger-carrying aircraft unless that material is intended for use in, or incident to research (See § 171.8 of this subchapter), medical diagnosis or treatment. Regardless of its intended use, no person may carry a Type B(M) package aboard a passenger-carrying aircraft, a vented Type B(M) package aboard any aircraft, or a liquid pyrophoric Class 7 material aboard any aircraft.

(b) *Limits for transport index and criticality safety index.* A person may carry the following Class 7 (radioactive) materials aboard an aircraft only when—

(1) On a passenger-carrying aircraft—  
(i) Each single package on the aircraft has a transport index no greater than 3.0;

(ii) The combined transport index and the combined criticality index of all the packages on the aircraft are each no greater than 50.

(2) On a cargo aircraft—  
(i) Each single package on the aircraft has a transport index no greater than 10.0.

(ii) The combined transport index of all the packages on the aircraft is no greater than 200, and the combined criticality index of all the packages on the aircraft is no greater than—

(A) 50 on a non-exclusive use cargo aircraft, or

(B) 100 on an aircraft assigned for the exclusive use of the shipper [offeror] for the specific shipment of fissile Class 7 material. Instructions for the exclusive use must be developed by the shipper [offeror] and carrier, and the instructions must accompany the shipping papers.

(3) The combined transport index and combined criticality index are determined by adding together the transport index and criticality index numbers, respectively, shown on the labels of the individual packages.

(c) No person may carry in a passenger-carrying aircraft any package required to be labeled RADIOACTIVE YELLOW-II or RADIOACTIVE YELLOW-III label unless the package is carried on the floor of the cargo compartment or freight container.

**§ 175.701 Separation distance requirements for packages containing Class 7 (radioactive) materials in passenger-carrying aircraft.**

(a) The following table prescribes the minimum separation distances that must be maintained in a passenger-

carrying aircraft between Class 7 (radioactive) materials labeled RADIOACTIVE YELLOW-II or RADIOACTIVE YELLOW-III and passengers and crew:

Transport index or sum of transport indexes of all packages in the aircraft or predesignated area	Minimum separation distances	
	Centimeters	Inches
0.1 to 1.0 .....	30	12
1.1 to 2.0 .....	50	20
2.1 to 3.0 .....	70	28
3.1 to 4.0 .....	85	34
4.1 to 5.0 .....	100	40
5.1 to 6.0 .....	115	46
6.1 to 7.0 .....	130	52
7.1 to 8.0 .....	145	57
8.1 to 9.0 .....	155	61
9.1 to 10.0 .....	165	65
10.1 to 11.0 ..	175	69
11.1 to 12.0 ..	185	73
12.1 to 13.0 ..	195	77
13.1 to 14.0 ..	205	81
14.1 to 15.0 ..	215	85
15.1 to 16.0 ..	225	89
16.1 to 17.0 ..	235	93
17.1 to 18.0 ..	245	97
18.1 to 20.0 ..	260	102
20.1 to 25.0 ..	290	114
25.1 to 30.0 ..	320	126
30.1 to 35.0 ..	350	138
35.1 to 40.0 ..	375	148
40.1 to 45.0 ..	400	157
45.1 to 50.0 ..	425	167

(b) When transported aboard passenger-carrying aircraft packages, overpacks or freight containers labeled Radioactive Yellow-II or Radioactive Yellow-III must be separated from live animals by a distance of at least 0.5 m (20 inches) for journeys not exceeding 24 hours, and by a distance of at least 1.0 m (39 inches) for journeys longer than 24 hours.

(c) Except as provided in paragraph (d) of this section, the minimum separation distances prescribed in paragraphs (a) and (b) of this section are determined by measuring the shortest distance between the surfaces of the Class 7 (radioactive) materials package and the surfaces bounding the space occupied by passengers or animals. If more than one package of Class 7 (radioactive) materials is placed in a passenger-carrying aircraft, the minimum separation distance for these packages shall be determined in accordance with paragraphs (a) and (b) of this section on the basis of the sum of the transport index numbers of the individual packages or overpacks.

(d) *Predesignated areas.* A package labeled RADIOACTIVE YELLOW-II or RADIOACTIVE YELLOW-III may be carried in a passenger-carrying aircraft

in accordance with a system of pre-designated areas established by the aircraft operator. Each aircraft operator that elects to use a system of pre-designated areas shall submit a detailed description of the proposed system to the Associate Administrator for approval prior to implementation of the system. A proposed system of pre-designated areas is approved if the Associate Administrator determines that it is designed to assure that:

(1) The packages can be placed in each pre-designated area in accordance with the minimum separation distances prescribed in paragraph (a) of this section; and

(2) The pre-designated areas are separated from each other by minimum distance equal to at least four times the distances required by paragraphs (a) and (b) of this section for the pre-designated area containing packages with the largest sum of transport indexes.

**§ 175.702 Separation distance requirements for packages containing Class 7 (radioactive) materials in cargo aircraft.**

(a) No person may carry in a cargo aircraft any package required by § 172.403 of this subchapter to be labeled Radioactive Yellow-II or Radioactive Yellow-III unless:

(1) The total transport index for all packages does not exceed 50.0 and the packages are carried in accordance with § 175.701(a); or

(2) The total transport index for all packages exceeds 50.0; and

(i) The separation distance between the surfaces of the radioactive materials packages, overpacks or freight containers and any space occupied by live animals is at least 0.5 m (20 inches) for journeys not exceeding 24 hours and at least 1.0 m (39 inches) for journeys longer than 24 hours; and

(ii) The minimum separation distances between the radioactive material and any areas occupied by persons that are specified in the following table are maintained:

Transport index or sum of transport indexes of all packages in the aircraft or pre-designated area	Minimum separation distances	
	Centimeters	Inches
50.1 to 60.0 ..	465	183
60.1 to 70.0 ..	505	199
70.1 to 80.0 ..	545	215
80.1 to 90.0 ..	580	228
90.1 to 100.0	610	240
100.1 to 110.0	645	254
110.1 to 120.0	670	264
120.1 to 130.0	700	276
131.1 to 140.0	730	287

Transport index or sum of transport indexes of all packages in the aircraft or pre-designated area	Minimum separation distances	
	Centimeters	Inches
140.1 to 150.0	755	297
151.1 to 160.0	780	307
160.1 to 170.0	805	317
170.1 to 180.0	830	327
180.1 to 190.0	855	337
190.1 to 200.0	875	344

(b) The criticality safety index of any single group of packages must not exceed 50.0 (as used in this section, the term "group of packages" means packages that are separated from each other in an aircraft by a distance of 6 m (20 feet) or less); and

(c) Each group of packages must be separated from every other group in the aircraft by not less than 6 m (20 feet), measured from the outer surface of each group.

**§ 175.703 Other special requirements for the acceptance and carriage of packages containing Class 7 materials.**

(a) No person may accept for carriage in an aircraft packages of Class 7 materials, other than limited quantities, contained in a rigid or non-rigid overpack, including a fiberboard box or plastic bag, unless they have been prepared for shipment in accordance with § 172.403(h) of this subchapter.

(b) Each shipment of fissile material packages must conform to the requirements of §§ 173.457 and 173.459 of this subchapter.

(c) No person shall offer or accept for transportation, or transport, by air—

(1) Vented Type B(M) packages, packages which require external cooling by an ancillary cooling system or packages subject to operational controls during transport; or

(2) Liquid pyrophoric Class 7 (radioactive) materials.

(d) Packages with radiation levels at the package surface or a transport index in excess of the limits specified in § 173.441(a) of this subchapter may not be transported by aircraft except under special arrangements approved by the Associate Administrator.

**§ 175.704 Plutonium shipments.**

Shipments of plutonium which are subject to 10 CFR 71.88(a)(4) must comply with the following:

(a) Each package containing plutonium must be secured and restrained to prevent shifting under normal conditions.

(b) A package of plutonium having a gross mass less than 40 kg (88 pounds)

and both its height and diameter less than 50 cm (19.7 inches)—

(1) May not be transported aboard an aircraft carrying other cargo required to bear a Division 1.1 label; and

(2) Must be stowed aboard the aircraft on the main deck or the lower cargo compartment in the aft-most location that is possible for cargo of its size and weight, and no other cargo may be stowed aft of packages containing plutonium.

(c) A package of plutonium exceeding the size and weight limitations in paragraph (b) of this section—

(1) May not be transported aboard an aircraft carrying other cargo required to bear any of the following labels: Class 1 (all Divisions), Class 2 (all Divisions), Class 3, Class 4 (all Divisions), Class 5 (all Divisions), or Class 8; and

(2) Must be securely cradled and tied down to the main deck of the aircraft in a manner that restrains the package against the following internal forces acting separately relative to the deck of the aircraft; Upward, 2g; Forward, 9g; Sideward, 1.5g; Downward, 4.5g.

**§ 175.705 Radioactive contamination.**

(a) A carrier shall take care to avoid possible inhalation, ingestion, or contact by any person with Class 7 (radioactive) materials that may have been released from their packagings.

(b) When contamination is present or suspected, the package containing a Class 7 material, any loose Class 7 material, associated packaging material, and any other materials that have been contaminated must be segregated as far as practicable from personnel contact until radiological advice or assistance is obtained from the U.S. Department of Energy or appropriate State or local radiological authorities.

(c) An aircraft in which Class 7 material has been released must be taken out of service and may not be returned to service or routinely occupied until the aircraft is checked for radioactive contamination and it is determined in accordance with § 173.443 of this subchapter that the dose rate at every accessible surface is less than 0.005 mSv per hour (0.5 mrem per hour) and there is no significant removable surface contamination.

(d) Each aircraft used routinely for transporting Class 7 materials shall be periodically checked for radioactive contamination, and an aircraft must be taken out of service if contamination exceeds the level specified in paragraph (c). The frequency of these checks shall be related to the likelihood of contamination and the extent to which Class 7 materials are transported.

(e) In addition to the reporting requirements of (§§ 171.15 and 171.16 of this subchapter and § 175.31 of this part, an aircraft operator shall notify the offeror at the earliest practicable moment following any incident in which there has been breakage, spillage, or suspected radioactive contamination

involving Class 7 (radioactive) materials shipments.

**§ 175.706 Separation distances for undeveloped film from packages containing Class 7 (radioactive) materials.**

No person may carry in an aircraft any package of Class 7 (radioactive)

materials required by §172.403 of this subchapter to be labeled Radioactive Yellow-II or Radioactive Yellow-III closer than the distances shown in the table below to any package marked as containing undeveloped film.

Transport index	Minimum separation distance to nearest undeveloped film for various times in transit									
	Up to 2 hours		2 to 4 hours		4 to 8 hours		8 to 12 hours		Over 12 hours	
	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
0.1 to 1.0 .....	0.3	1	0.6	2	0.9	3	1.2	4	1.5	5
1.1 to 5.0 .....	0.9	3	1.2	4	1.8	6	2.4	8	3.3	11
5.1 to 10.0 .....	1.2	4	1.8	6	2.7	9	3.3	11	4.5	15
10.1 to 20.0 .....	1.5	5	2.4	8	3.6	12	4.8	16	6.6	22
20.1 to 30.0 .....	2.1	7	3	10	4.5	15	6	20	8.7	29
30.1 to 40.0 .....	2.4	8	3.3	11	5.1	17	6.6	22	9.9	33
40.1 to 50.0 .....	2.7	9	3.6	12	5.7	19	7.2	24	10.8	36

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**Brigham A. McCown,**  
*Acting Administrator.*

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