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Prohibition of Oxidizers Aboard Aircraft; Proposed Rule

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Parts 171, 172, and 175

[Docket No. HM–224A; Notice No. 97–8]

RIN 2137–AC92

Prohibition of Oxidizers Aboard Aircraft

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Supplemental notice of proposed rulemaking.

SUMMARY: On December 30, 1996, RSPA proposed to amend the Hazardous Material Regulations to prohibit the carriage of oxidizers, including compressed oxygen, aboard all passenger-carrying aircraft. The effect of this prohibition would be to limit oxidizers to accessible locations on cargo aircraft. The December 30, 1996 notice of proposed rulemaking analyzed Class D cargo compartments and indicated that a supplemental notice would be published to analyze Class B and C compartments. This supplemental notice specifically analyzes the prohibition of oxidizers in other than Class D cargo compartments. The proposed requirements would apply to foreign and domestic aircraft entering, leaving, or operating within the United States. The purpose of these proposals is to enhance air transportation safety.

DATES: Comments must be received by October 20, 1997.

ADDRESSES: Address comments to the Dockets Unit, Research and Special Programs Administration, U.S. Department of Transportation, room 8421, 400 Seventh Street, SW., Washington, DC 20590–0001. Comments should identify the docket number and be submitted in five copies. Persons wishing to receive confirmation of receipt of their comments should include a self-addressed, stamped postcard. The Dockets Unit is located in the Department of Transportation headquarters building (Nassif Building) at the above address on the eighth floor. Public dockets may be reviewed there between the hours of 8:30 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Diane LaValle, Office of Hazardous Materials Standards, (202) 366–8553, Research and Special Programs Administration, U.S. Department of Transportation, 400 Seventh Street SW., Washington DC 20590–0001; or Gary Davis, Office of Flight Standards, (202) 267–8166, Federal Aviation Administration, U.S. Department of Transportation, 800 Independence Avenue, SW., Washington DC 20591.

SUPPLEMENTARY INFORMATION:

I. Background

On December 30, 1996, RSPA published a notice of proposed rulemaking (NPRM) in the **Federal Register** (61 FR 68955) proposing to amend the Hazardous Materials Regulations (HMR; 49 CFR parts 171–180) to prohibit the carriage of oxidizers, including compressed oxygen, in passenger-carrying aircraft. This proposal also would have the effect of limiting packages of oxidizers that are allowed on cargo aircraft to locations accessible to crew members (see § 175.85(b)). In the December 30, 1996 NPRM, RSPA analyzed the prohibition of oxidizers in Class D cargo compartments only, and it proposed a new § 175.85(d) to prohibit loading or transporting in a Class D compartment any package containing a hazardous material for which an Oxidizer or Oxygen label is required. RSPA also stated that it planned to issue a supplemental NPRM further analyzing the prohibition of oxidizers aboard passenger-carrying aircraft in Class B and C cargo compartments. This is the supplemental NPRM to which RSPA referred. If the proposal to completely prohibit the transportation of oxidizers on passenger-carrying aircraft and limit their transportation on cargo aircraft to accessible locations is adopted, by adding the word ''Forbidden'' in Column 9A of the Hazardous Materials Table in § 172.101 for those materials for which an Oxidizer or Oxygen label is required, RSPA would not adopt the proposed § 175.85(d), which would prohibit the carriage of these materials in Class D compartments only.

The December 30, 1996 NPRM also proposed several amendments to provisions in the HMR concerning chemical oxygen generators. These proposed amendments were discussed in Part VII of the preamble to the December 30, 1996 NPRM and, in summary, would: (1) Add a shipping description for ''Oxygen generator, chemical,'' consistent with the recent adoption of this shipping description by the International Civil Aviation Organization (ICAO); (2) indicate in §§ 172.101 (the Hazardous Materials Table) and 171.11 that chemical oxygen generators may not be transported aboard passenger-carrying aircraft or in inaccessible cargo compartments in cargo aircraft; (3) indicate in §§ 171.11, 171.12, and 171.12a that there are no exceptions from HMR requirements for classification, approval and description of oxygen generators when shipping to, from or within the U.S. under the provisions of international or Canadian regulations; (4) specify packaging requirements for shipment of chemical oxygen generators; and, (5) eliminate an exception in § 175.10(a)(24) pertaining to personal chemical oxygen generators carried by passengers in checked baggage.

RSPA received requests from two airline industry associations to withdraw the proposed rule and not issue the supplemental NPRM. These requests are denied. RSPA also received several requests to extend the comment period on the December 30, 1996 NPRM for either 60 or 90 days. These requests were not granted. However, RSPA has accepted all late-filed comments to the NPRM and, by issuing this supplemental NPRM, RSPA is effectively extending until October 20, 1997 the period for comments on the proposal in the December 30, 1996 NPRM to prohibit the transportation of oxidizers, including compressed oxygen, on board passenger-carrying aircraft. RSPA is denying the requests for an extension of time to comment on the proposals in the December 30, 1996 NPRM pertaining to chemical oxygen generators, other than for the proposed removal of § 175.10(a)(24). Sufficient time has been provided to comment on the generator-related proposals, and RSPA issued a final rule on these proposals which was published in the **Federal Register** (62 FR 30767) on June 5, 1997. Also, RSPA issued an extension of effective date and corrections to the June 5, 1997 final rule on June 27, 1997 (62 FR 34667).

On May 31, 1996, the National Transportation Safety Board (NTSB) issued two recommendations to RSPA, the following of which is pertinent to this discussion:

> In cooperation with the Federal Aviation Administration, prohibit the transportation of oxidizers and oxidizing materials (e.g., nitric acid) in cargo compartments that do not have fire or smoke detection systems. (Class I, Urgent Action) (A–96–30)

This NPRM was developed by RSPA in cooperation with the FAA. The actions proposed herein go beyond the NTSB recommendation and are based on a preliminary assessment by RSPA and the FAA of the hazards posed by oxidizers aboard aircraft. In its recommendation, NTSB cited three previous incidents in which oxidizers caused fires aboard aircraft. In each of these incidents, there were apparent or known serious violations of the HMR.

Although RSPA and FAA are not aware of any fire aboard an aircraft having been caused directly by transport of oxidizers in conformance with the HMR, RSPA and FAA agree that oxidizers may pose an unacceptable risk when transported aboard passenger-carrying aircraft and when transported aboard cargo aircraft in locations inaccessible to crew members.

Both the NTSB's recommendation and this proposed rule address risks that do not depend on or involve any violation of requirements currently in the HMR regarding the transportation of oxidizers. For that reason, RSPA and FAA disagree with opinions that better enforcement of the HMR would be sufficient to eliminate the risks present in transporting oxidizers on board passenger-carrying aircraft.

II. Oxidizers Under the HMR

Under the HMR, an oxidizer (Division 5.1) is a material that may, generally by yielding oxygen, cause or enhance the combustion of other materials (see 49 CFR 173.127). Hydrogen peroxide, swimming pool chlorine, bleach and oxygen are examples of commonly used oxidizers. Liquid and solid materials in Division 5.1 are subdivided into Packing Groups I, II, or III, a relative ranking corresponding to high, moderate or low risks posed by the material. Packing groups are assigned to specifically named materials in the § 172.101 Hazardous Materials Table (Table). For generic entries, such as ''Oxidizing solid, n.o.s.'' (''n.o.s.'' means ''not otherwise specified''), packing groups are assigned on the basis of test results. Certain gases (Class 2), most notably oxygen, are also oxidizers under the HMR and, even though they are not classed as such, they are required to be identified with the OXIDIZER or OXYGEN label.

III. Oxidizers Aboard Aircraft

Liquid oxidizers in Packing Group I are very reactive and have the ability to initiate and substantially intensify fires. These materials currently are forbidden for transportation by passenger-carrying aircraft. Some are also forbidden for transportation by cargo aircraft, and others are permitted only in restricted quantities aboard cargo-only aircraft when loaded in a manner which renders them accessible to a crew member during flight. Liquid or solid oxidizers that will initiate a fire are not permitted on passenger-carrying aircraft. However, gaseous oxygen is permitted on passenger-carrying aircraft; combustible materials can be readily ignited, by impact, high temperature, or flame, if exposed to gaseous oxygen.

In the absence of a fire caused by another source, oxidizers currently authorized for air transportation and offered in conformance with the HMR present minimal risks to aircraft, crew and passengers. Most oxidizers will not initiate fires when spilled or released, but they will intensify fires originating from other sources. The potential hazard posed by these oxidizers in an aircraft cargo compartment is that, if a fire were to occur elsewhere in the compartment, the fire may involve the oxidizer, and most oxidizers would then provide an oxygen-enriched environment which could intensify the fire and override the safety features of the compartment.

When transported by aircraft, an oxidizer is subject to per package quantity limits specified in the Hazardous Materials Table, and to aircraft quantity limits specified in § 175.75. For oxidizers forbidden aboard a passenger-carrying aircraft but permitted aboard a cargo aircraft, packages must be labeled (see § 172.101(j)(4)) with the Cargo Aircraft Only label specified in § 172.448 and, under the provisions of § 175.85(b), must be loaded in a manner so that they are accessible to a crew member during flight.

IV. Prohibition of Oxidizers on Passenger-carrying Aircraft and in Inaccessible Locations on Cargo Aircraft

In the December 30, 1996 NPRM, RSPA proposed to prohibit the loading or transportation aboard a passenger-carrying aircraft of any package for which an Oxidizer or Oxygen label (see §§ 172.405 and 172.426) is required under subpart E of part 172. Consistent with that proposal, in this supplemental NPRM, RSPA proposes to revise Column 9A of the Hazardous Materials Table, pertaining to quantity limitations on passenger aircraft, to read ''Forbidden'' for every shipping description that requires an Oxidizer or an Oxygen label. For oxidizers currently authorized for transportation aboard both passenger-carrying aircraft and cargo aircraft, the effect of this action would be that packages now would be labeled (see § 172.101(j)(4)) with the Cargo Aircraft Only label specified in § 172.448 and would be subject to the provisions of § 175.85(b). Paragraph (b) of § 175.85 restricts hazardous materials that are forbidden aboard passenger-carrying aircraft, but authorized aboard cargo aircraft, to locations where ''a crew member or other authorized person can see, handle, and where size and weight permit, separate such packages from other cargo during flight.'' This means that oxidizers also will be forbidden to be transported on a cargo aircraft in an inaccessible cargo compartment (e.g., a Class C or D cargo compartment) or in an accessible cargo compartment in a manner which renders the oxidizer inaccessible.

There are certain hazardous materials which may be listed in the Hazardous Materials Table as ''Forbidden'' on passenger-carrying aircraft but which may be permitted on passenger-carrying aircraft under the provisions of exceptions elsewhere in the HMR, such as for compressed oxygen as proposed in this notice. RSPA is proposing a minor change to § 175.85(b) to clarify that any package bearing a Cargo Aircraft Only label must be stowed accessibly on cargo aircraft, even though there may be specific exceptions elsewhere in the regulations which allow the material on passenger-carrying aircraft under certain conditions.

The December 30, 1996 NPRM discussed the classification of cargo compartments into five categories, Classes A, B, C, D, and E (see 14 CFR 25.857), as defined for transport category aircraft in FAA's Federal Aviation Regulations (FAR). Although these categories are also referenced in the following paragraphs and elsewhere in this preamble, it should be noted that the proposals in this supplemental NPRM address all aircraft without regard to whether they are transport category aircraft or not. Thus, this proposal would prohibit oxidizers in cargo compartments of all transport category and nontransport category aircraft used in passenger-carrying service.

Class B Compartments on Passenger-Carrying Aircraft

A Class B compartment is one: (1) To which any part of the compartment is accessible in flight to a crew member with a hand held fire extinguisher; (2) from which no hazardous quantities of smoke, flames, or extinguishing agent will enter any compartment occupied by the crew or passengers when the compartment is being accessed; and (3) in which an approved smoke detector or fire detector system is installed. Under the provisions of 49 CFR 175.85 (a) and (b), hazardous materials transported in a Class B compartment must be inaccessible to passengers but accessible to crew members.

In the event of a fire in a Class B cargo compartment, protective breathing equipment should protect crew members from smoke and fumes. However, supplemental oxygen breathing systems for passengers are designed to provide a combination of supplemental oxygen and ambient cabin

air for use in emergency decompression situations. These breathing systems are not designed to protect passengers from smoke and fumes, and passengers would continue to inhale some amount of ambient air in the cabin. According to FAA, a fire fed by a secondary source of oxygen would create additional smoke and fume risks to passengers that would not otherwise be present in fires that are not fed by a secondary source of oxygen. Dangerous or even fatal levels of smoke and fumes are more likely to develop and migrate to the passenger cabin when a fire is fed by a secondary source of oxygen.

According to the FAA, even if a halon fire-suppressant system is present, although effective against most fires, it may not be effective against an oxidizer-fed fire. If a water fire extinguisher is used, it may not have a sufficient quantity of water to extinguish a fire that continues to reignite because it is being fed by an oxygen source. Although all areas of a Class B compartment must be accessible to the contents of a hand-held fire extinguisher, oxidizers stowed in a compartment where other materials are burning may be difficult or impossible to remove or otherwise keep away from the fire.

Class C Compartments

A Class C compartment is not accessible during flight but has: (1) An approved smoke detector or fire detector system; (2) an approved built-in fire-extinguishing system; (3) means to control ventilation and drafts so that the extinguishing agent can control a fire that may start within the compartment; and (4) means to exclude hazardous quantities of smoke, flames or extinguishing agent from any compartment occupied by crew or passengers.

While Class C cargo compartments have safety features that can control most types of fires, RSPA and FAA believe that an oxygen-fed fire can overcome these safety features and pose an unacceptable risk in the aviation environment. Moreover, an oxygen-fed fire in a Class C compartment may present a greater risk than a fire in a Class B compartment. Unlike a Class B compartment that a crew member can physically enter, a Class C compartment is not physically accessible to crew members. Thus, for a Class C compartment, there is no possibility for a crew member to remove an oxidizer from the area of the fire or to attack the fire with a hand-held extinguisher.

A fire that is fed by a secondary source of oxygen increases the risk that flames, toxic smoke or fumes may cause injury or death. It also increases the risk that control of the aircraft will be lost. This may be caused by damage to the aircraft's flight control cables, hydraulic systems, electrical systems or structure, or entry of fire and smoke into the aircraft's cabin. For the reasons set forth above, RSPA is proposing to prohibit the transportation of oxidizers aboard passenger-carrying aircraft and in inaccessible locations aboard cargo aircraft.

V. Exceptions for Carriage of Oxygen on Passenger-carrying Aircraft

RSPA is proposing to add a special provision in § 172.102 and to the Hazardous Materials Table entry for ''Oxygen, compressed,'' to clarify that certain exceptions are provided in § 175.10 for carriage of oxygen on passenger-carrying aircraft. These exceptions, some of which are in the HMR at present and some of which are proposed in this notice, are discussed in the following paragraphs.

Oxygen for Use of Passengers During Flight

The proposed prohibition against transportation of oxidizers as cargo would not affect the existing exception in 49 CFR 175.10(a)(7) for operator-supplied oxygen for a passenger's use during flight or the exception in 49 CFR 175.10(a)(14) for a transport incubator unit necessary to protect life, or an organ preservation unit necessary to protect human organs.

As proposed in the December 30, 1996 NPRM, RSPA is proposing an editorial change to § 175.10(a)(7) to clarify that this exception applies only to oxygen furnished by an aircraft operator for medical use of an onboard passenger and does not allow the aircraft operator to transport medical oxygen cylinders as cargo in order to move them to the locations where they will be needed, at a later time, for use by passengers. This proposal is included in the regulatory text of this supplemental NPRM for convenience of the reader.

Personal Use Chemical Oxygen Generators in Checked Baggage

As proposed in the December 30, 1996 NPRM, RSPA is proposing in this supplemental NPRM to remove the exception provided in § 175.10(a)(24) for small personal chemical oxygen generators in checked baggage. See the December 30, 1996 NPRM for additional discussion of this proposal.

Aircraft Operators' and Passengers' Own Oxygen Cylinders

In this supplemental NPRM, RSPA is proposing provisions by which an aircraft operator may transport limited numbers of the operator's own cylinders (e.g., replacements for cylinders required aboard an aircraft or cylinders being returned for maintenance) containing compressed oxygen aboard passenger-carrying aircraft and by which an air carrier may transport a cylinder belonging to a passenger needing oxygen at destination for personal medical use.

As indicated in the December 30, 1996 NPRM, FAA supports a complete removal of oxidizers from passenger-carrying aircraft but also believes that, if it is necessary to allow a passenger to transport his or her own oxygen cylinder for use at destination, it is far safer to stow the cylinder in the passenger cabin, under the control of and accessible to the airline crew, than in an inaccessible cargo compartment. FAA does not believe that oxygen should be carried in inaccessible cargo compartments. FAA believes that, if an oxygen cylinder is involved in a fire, the release of oxygen will intensify the fire and a fire that might otherwise be survivable has an increased risk of becoming fatal. Thus, FAA believes that it would be safer to carry personal medical oxygen cylinders in the cabin because the crew could quickly remove the cylinders from any fire area in the cabin. This is in contrast to the complete inability of the crew to remove compressed oxygen from an inaccessible cargo compartment.

RSPA believes that oxygen can be safely transported aboard passenger-carrying aircraft and that there is a continuing need, for reasons of safety, service to passengers and potential cost impacts of a total prohibition, to permit an airline to transport its own oxygen cylinders and to transport a cylinder belonging to a passenger needing oxygen at destination for personal medical use. RSPA's proposal provides airlines a means of using their own passenger-carrying aircraft to position oxygen cylinders needed by passengers on subsequent flights or to place oxygen cylinders used on aircraft, such as those used for the flight crew's personal breathing equipment or emergency-use medical oxygen. Although oxygen cylinders required on aircraft by FAA regulations are not subject to the HMR, replacements carried aboard aircraft are. This proposed exception will provide an alternative to cargo aircraft or surface transportation for prepositioning essential supplies of oxygen.

At present, a passenger who needs supplemental oxygen may ship it in conformance with the HMR when it is offered and accepted as air cargo by an airline that is capable and willing to transport hazardous materials and has procedures for handling hazardous materials which have been approved by the FAA under existing rules (e.g., 14 CFR 121.25, 121.135, 135.21, and 135.23). It may be carried as cargo (i.e., as freight rather than as checked baggage) on the same aircraft carrying the passenger. The advantage is that the passenger would have that oxygen available for use at destination without having to arrange with an oxygen supplier, if one services the destination airport, to charge the passenger's cylinder or provide a supplier-owned charged cylinder upon arrival.

Under this proposed rule, carriage of oxygen in cargo compartments on passenger-carrying aircraft would no longer be permitted. However, the exception proposed in § 175.10(b) would permit an airline to carry a passenger's oxygen cylinder on the same aircraft as the passenger in the same manner as the airline carries its own cylinders. The oxygen cylinder would not be available to the passenger during flight; only oxygen furnished by the aircraft operator under the provisions of 49 CFR 175.10(a)(7) would be available for use during flight.

Based on FAA's assessment of the potential hazards of compressed oxygen in a cargo compartment, RSPA is proposing much more restrictive provisions for its carriage on passenger-carrying aircraft than currently apply, particularly that the oxygen be carried only in the cabin of the aircraft. The aircraft operator would be limited to no more than six of its own cylinders and no more than one cylinder belonging to each passenger needing the oxygen at destination, and would have to overpack each cylinder in a fire-resistant metal or plastic case. A passenger's cylinder would be limited in rated capacity to 850 liters (30 cubic feet) or less of oxygen.

In addition to being labeled for the oxygen hazard (i.e., with either Oxygen or Non-Flammable Gas and Oxidizer labels, as specified in subpart D of Part 172), each cylinder and overpack would be required to be labeled with a Cargo Aircraft Only label to ensure that the overpack does not get placed in any cargo compartment on a passenger-carrying aircraft or in an inaccessible compartment or location when transported on cargo aircraft. The overpack would be marked with the proper shipping name and identification number (i.e., Oxygen, Compressed, UN1072), and with the statement ''Passenger cabin acceptable per 49 CFR 175.10'' to explain the apparent discrepancy concerning appearance of a Cargo Aircraft Only label on an overpack in the cabin of a passenger-carrying aircraft.

Prior to placing a cylinder in an overpack, the aircraft operator would be required to check that the cylinder's valves are closed and the cylinder is free of flammable contaminants. The aircraft operator would then stow the overpack in the passenger cabin in accordance with procedures approved by the FAA and notify the pilot-in-command as to the presence and location of the cylinder. Air carriers currently are required to have FAA-approved procedures in operations manuals, plans or specifications if they carry hazardous materials.

RSPA currently permits the carriage of oxygen cylinders in passenger compartments by several aircraft operators under the provisions of an exemption, DOT–E 10114. The purpose of the exemption is to facilitate the predeployment, and return for maintenance, of cylinders owned and maintained by an aircraft operator for use by passengers needing oxygen during flight. The provisions of the exemption serve as a basis for this rulemaking proposal and, although not authorized under the exemption, have been expanded to cover carriage by an aircraft operator of a passenger's own cylinder. RSPA anticipates that the exemption would no longer be necessary if this proposal becomes a final rule.

VI. Effects on Individuals With Disabilities

RSPA and FAA believe that exceptions for shipment and use of oxygen proposed in 49 CFR 175.10(b) eliminate any negative effects this rulemaking may have on passengers who need supplemental breathing oxygen when they disembark from aircraft at their destination and on the ability of airlines to preposition or stage oxygen at various locations for use by passengers. RSPA is interested in receiving comments from oxygen users, air carriers, and suppliers of oxygen about these effects and whether the proposed provisions for carriage of oxygen in passenger cabins are a safe and feasible alternative to a total prohibition.

Under separate RSPA and FAA rules (49 CFR 175.10(a)(7), and 14 CFR 121.574 and 135.91, respectively), which this proposal would not amend, passengers may not carry their own oxygen aboard aircraft for use during flight. Air carriers are permitted to provide oxygen for passenger use in accordance with specified requirements in the aforementioned rules, although some air carriers may not provide this service for their passengers. RSPA seeks comment on whether the new proposed provisions placed on carriage of air carriers' own oxygen cylinders will significantly interfere with carriers' ability to provide this service to passengers. Also, compressed oxygen, while regulated as a hazardous material, is different in form from other oxidizers which are usually liquids and solids. RSPA requests comments as to whether there is any evidence (e.g., accident or incident information, studies, etc.) to suggest that gaseous oxygen in cylinders, as distinct from chemical oxidizers, poses or has created significant safety problems while being transported in cargo compartments.

FAA, RSPA, and the Office of the Secretary are initiating a project separate from this rulemaking action to explore whether safe alternatives exist for accommodating passenger needs in regard to use of oxygen. This project could result in proposals to amend the relevant portions of the HMR and FAA regulations as well as those of the Office of the Secretary implementing the Air Carrier Access Act of 1986 (49 U.S.C. 41705), which prohibits discrimination in regard to air traveler access on the basis of disability.

VII. Spent Oxygen Generators

RSPA is proposing to prohibit the transportation by aircraft of spent chemical oxygen generators (i.e., generators in which the means of initiation and the chemical core have been expended) and to regulate them as Class 9 materials when transported by other than aircraft. This proposal was not in the December 30, 1996 NPRM.

Spent chemical oxygen generators currently may be regulated as hazardous wastes because of the residual materials contained therein. They may also pose a hazard in transportation by containing unburned oxidizing materials.

Regardless of the degree of hazard posed by the chemical contents, it can be difficult to confirm that a generator truly is spent. Human error in assessing whether such devices are, in fact, empty can result in a catastrophe. RSPA and FAA believe that lessening the possibility that this type of human error may occur outweighs any interest or need for transporting spent chemical oxygen generators by aircraft.

Based on the foregoing, RSPA is proposing to add to the Hazardous Materials Table (HMT) an entry for spent chemical oxygen generators. A

new shipping description, ''Oxygen generator, chemical, spent, 9, NA3356, III'' would be added. The entry would be preceded by a plus (''+'') in Column 1 to fix the proper shipping name, hazard class and packing group for the entry without regard to whether the material meets the definition of Class 9 or Packing Group III. Special provision 61 would be added in Column 7 to specify the conditions under which an oxygen generator is considered ''spent.'' For transportation aboard passenger-carrying and cargo aircraft, Columns 9a and 9b would read ''Forbidden.'' RSPA also proposes to amend §§ 171.11, 171.12 and 171.12a, consistent with its proposal in the December 30, 1996 NPRM, to indicate that there are no exceptions from HMR requirements for classification, description, and packaging of spent chemical oxygen generators when shipping to, from or within the U.S. under the provisions of international or Canadian regulations.

VIII. Cost/Benefit Analysis

Analysis of Costs

The preliminary regulatory evaluation ''Prohibition of Oxidizers and Oxidizing Materials as Cargo in Aircraft'' (June 1997) developed in support of this supplemental NPRM revises the earlier estimate of 10-year costs associated with the December 30, 1996 proposal to prohibit oxidizers in Class D cargo compartments from $25 million ($17 million, discounted) to $18 million ($12 million, discounted). This supplemental NPRM would impose additional costs on air carriers by prohibiting oxidizers in Class B and C cargo compartments on passenger aircraft and all inaccessible compartments in cargo-only aircraft. The additional cost of compliance (in the form of lost revenue) to air carriers imposed by this proposal is estimated to be $17 million ($12 million, discounted), in 1996 dollars, over the next 10 years.

RSPA and FAA are aware that the estimated cost associated with the proposed prohibition on oxidizers does not include any reduction in variable operating costs, such as fuel savings, that may result due to less weight being carried aboard the aircraft. In addition, this cost estimate may not represent a net loss to the aviation industry, as RSPA and FAA expect much of the affected traffic would shift to cargo-only operators. Overall cost to the aviation industry may, therefore, be less than the 10-year costs estimated for this proposed rule.

RSPA and FAA have not identified any cost impacts to cargo aircraft carriers, but recognize there could, nonetheless, be potential logistical impacts. Occasionally, hazardous materials are tendered for shipment that are not compatible and must be separated during transport. Currently, these materials may be transported in separate compartments. Therefore, the proposed rule may have an impact upon cargo airlines because of the airline's inability to transport incompatible hazardous materials on the same flight. As a result, one of the hazardous materials tendered to the airline for transport may experience a delay. RSPA solicits information from cargo-only aircraft operators that may incur this, or other, costs due to implementation of the proposed rule.

RSPA and FAA expect that the total compliance cost to the aviation industry attributed to this proposed rule would be borne by operators of passenger-carrying aircraft.

This supplemental NPRM expands, also, the prohibition of carriage of chemical oxygen generators aboard passenger-carrying aircraft by proposing to prohibit the shipment of spent chemical oxygen generators on aircraft. Because a spent chemical oxygen generator has no residual or economic value, and there is no urgent need to ship it by aircraft, RSPA and FAA determined there is essentially no adverse cost impact associated with the proposed prohibition.

RSPA has received comments on the potential costs of the NPRM. These comments and cost-related comments to this supplemental NPRM will be taken into account in developing a final regulatory evaluation prior to issuance of a final rule.

Analysis of Benefits

Notwithstanding current regulatory restrictions, hazardous materials, including oxidizers, are occasionally improperly carried in airplane cargo compartments through inadvertent or deliberate package mislabeling. Over the past 10 years, there are only two documented incidents where oxidizers (of types other than chemical oxygen generators) were known to be present in the cargo compartment of a U.S. air carrier when a fire occurred. Those incidents resulted only in minor injuries and damage, though damage from one of the fires extended outside the cargo compartment. RSPA and FAA believe, however, that the risk of fire as evidenced by the number of actual fires that have occurred justifies this proposed prohibition on the carriage of oxidizers in inaccessible cargo compartments.

One analytical tool commonly used in the statistical analysis of rare events is the Poisson probability distribution. This tool provides a means to statistically estimate the probability of the occurrence of rare and random events based on an observed rate of occurrence. In the case of cargo compartment fires in the presence of oxidizers, the observed mean is two over 10 years. The Poisson probability distribution with a mean of two suggests there is a small chance (14 percent) that there would be no oxidizer fires in the next decade based on the past accident history. However, there is an 86 percent probability of one or more such fires. In addition, there is a 14 percent probability that there would be four or more fires with oxidizers present.

Any one of these probable events could be more serious than the two reported incidents. According to the FAA, fire aboard an aircraft is one of the greatest threats to safety that can happen in air transportation. For example, an Air Canada flight from Dallas in 1983 made an emergency landing at the Greater Cincinnati International Airport because of a fire of undetermined origin. As soon as the airplane stopped, it was evacuated. However, 23 passengers were unable to exit the aircraft before the interior was engulfed in a flash fire. In 1983 a British Airtours flight was aborted during takeoff and 55 of the 137 persons onboard were unable to evacuate before a fire engulfed and destroyed the aircraft.

With respect to spent chemical oxygen generators, the Poisson probability distribution with a mean of four suggests, in the absence of any regulatory action, that there is only a 2 percent probability of no chemical oxygen generator fire in the next decade, based on actual incident and accident history. But, there is a 98 percent probability there will be one or more such fires in the same time period. In the absence of a regulatory prohibition on their carriage, there is a 57 percent probability of four or more incidents and accidents in the next 10 years, as there were in the last 10 years, involving chemical oxygen generators.

To determine the potential benefits that would result from this proposed rule, RSPA and FAA estimated the average costs associated with potential future fire accidents involving ''spent'' chemical oxygen generators. In the May 11, 1996 incident, there were 110 casualties and a McDonnell Douglas DC–9–32 was destroyed. The monetary value of this loss was ascertained in several steps. First, a critical economic value of $2.7 million was applied to each human casualty. This computation resulted in an estimate of $297 million ($2.7 million x 110). Next the value of

the destroyed aircraft was estimated to be $6 million. If this rulemaking prevents one such catastrophic incident over the next 10 years, the expected value of potential safety benefits would be $303 million ($213 million, discounted).

This supplemental NPRM reduces the chance that a cargo compartment fire will be enhanced by an oxidizer, thereby increasing the likelihood that a cargo compartment fire would be successfully contained or extinguished. One measure of calculating whether the proposed prohibition on oxidizers is cost-beneficial is to determine if it would prevent incidents that otherwise would claim at least thirteen lives over the next 10 years. RSPA and FAA are confident this proposed prohibition has the potential to achieve that level of benefits.

Relation to FAA Rulemaking on Cargo Compartments

The FAA has proposed to upgrade fire safety standard for cargo or baggage compartments by eliminating Class D compartments and requiring their conversion to the equivalent of Class C or Class E compartments. The NPRM is entitled ''Revised Standards for Cargo or Baggage Compartments in Transport Category Airplanes,'' 62 FR 32412 (June 13, 1997). While the benefits of these two proposed rules would overlap somewhat, each of them will also provide benefits that the other would not. The FAA's proposed rule addresses the risks of any fire in an inaccessible cargo compartment that lacks fire or smoke detection and suppression (including a situation when no oxidizer is present). This proposed rule addresses the risks of transporting an oxidizer on board a passenger-carrying aircraft (even when carried in a compartment with fire or smoke detection and suppression equipment). FAA has determined that both initiatives would yield benefits that justify their costs, 62 FR 32420, but interested parties are invited to submit comments on the potential for overlap in the benefits of these two proposed rules.

Comparison of Costs and Benefits

The proposed restrictions contained in the NPRM and this supplemental NPRM would impose an estimated 10-year cost of $35 million ($24 million, discounted) by prohibiting the shipment of oxidizers on passenger-carrying aircraft, and no identified costs by prohibiting the shipment of spent oxygen generators on passenger-carrying aircraft. While RSPA and FAA have been unable to estimate quantitative potential safety benefits for prohibiting the shipment of oxidizers, the high level of risk created by the presence of those hazardous materials aboard aircraft warrants adoption of the prohibitions. Preventing one catastrophic incident like the May 11, 1996 ValuJet accident, would result in calculated safety benefits of $303 million ($213 million, discounted over ten years).

IX. Request for Additional Comments

RSPA requests that interested parties provide additional information concerning the costs and benefits of this proposed action. RSPA also requests information concerning the hazards posed by oxidizers in aircraft cargo compartments that have fire detection or suppression systems. RSPA requests that shippers and carriers, including foreign carriers, provide detailed cost information to RSPA as to the type and amounts of any costs that may result from the proposed prohibition of oxidizers on passenger-carrying aircraft.

In evaluating the costs and benefits of the proposed rule, RSPA and FAA have assumed that cargo aircraft operators would not incur any costs because of their ability to transport oxidizers in accessible cargo compartments of an aircraft. In addition, RSPA and FAA have assumed that there would be little or no impact on shippers of oxidizers because of the availability of other means of transportation (e.g., cargo aircraft or highway transportation).

RSPA and FAA have not assessed the costs associated with prohibiting the shipment of oxygen cylinders on passenger-carrying aircraft. Although the proposed exceptions in § 175.10(b) serve to mitigate any adverse impacts, there may be some costs to air carriers if they routinely use passenger-carrying aircraft to transport, as cargo, oxygen cylinders which are normally installed or required on aircraft and must be periodically retested or refilled, or which are prepositioned for use by passengers on subsequent flights. Therefore, RSPA requests information concerning the costs and benefits of prohibiting cylinders containing oxygen, aboard passenger-carrying aircraft. Please provide detailed information as to the manner by which costs may be incurred. In particular, RSPA requests information on (1) the number of cylinders of oxygen which are transported each day on passenger-carrying aircraft; (2) the typical size of these cylinders; (3) other means of transportation that are available; and (4) the cost differences to the airlines for using other means of transportation.

RSPA requests comments concerning any hardships that may be caused in remote areas, such as Alaska, where frequent cargo-only air service may not be available, and suggestions for limiting this hardship.

By limiting the prohibition on oxidizers to packages required to be labeled Oxidizer and Oxygen, the prohibition would not apply to oxidizers renamed ''consumer commodity'' and reclassed as ORM–D under the provisions of § 173.152, or as consumer commodities, Class 9, as permitted under § 171.11. RSPA requests comments regarding whether it would be appropriate to extend this prohibition to consumer commodities which are oxidizers or whether more restrictive packaging, per package quantity limits, or aircraft quantity limits should be imposed on these materials.

X. Study To Assess the Risks Associated With Transportation of Hazardous Materials in Aircraft Cargo Compartments

RSPA, in coordination with FAA, has initiated a study to assess the risks associated with the transportation of hazardous materials in aircraft cargo compartments. As beginning steps, RSPA assembled a panel of experts and held meetings in Cambridge, Massachusetts on October 22 and 23, 1996, and in Washington, D.C. on June 10 through 12, 1997, for purposes of identifying accident scenarios, probabilities of occurrence, and expected consequences. In attendance at the meetings were representatives from the NTSB, FAA, Air Transport Association of America, Chemical Manufacturers Association, Air Line Pilots Association, International Air Line Passenger Association and several aircraft manufacturers. Based on the outcome of this study, RSPA may initiate rulemaking to prohibit or further limit the transportation of other types of hazardous materials on aircraft.

XI. Regulatory Analyses and Notices

Executive Order 12866 and DOT Regulatory Policies and Procedures

This proposed rule is considered a significant regulatory action under section 3(f) of Executive Order 12866 and was reviewed by the Office of Management and Budget. The rule is considered significant under the regulatory policies and procedures of the Department of Transportation (44 FR 11034). A preliminary regulatory evaluation is available for review in the public docket. A summary of the costs and benefits of this supplemental NPRM is set forth in Section VIII of this preamble.

Executive Order 12612

This proposed rule has been analyzed in accordance with the principles and criteria contained in Executive Order 12612 (''Federalism''). The Federal hazardous materials transportation law (49 U.S.C. 5101–5127) contains an express preemption provision that preempts State, local, and Indian tribe requirements on certain covered subjects. Covered subjects are:

(A) The designation, description, and classification of hazardous material;

(B) The packing, repacking, handling, labeling, marking, and placarding of hazardous material;

(C) The preparation, execution, and use of shipping documents pertaining to hazardous material and requirements respecting the number, content, and placement of such documents;

(D) The written notification, recording, and reporting of the unintentional release in transportation of hazardous material; or

(E) The design, manufacturing, fabrication, marking, maintenance, reconditioning, repairing, or testing of a package or container which is represented, marked, certified, or sold as qualified for use in the transportation of hazardous material.

Because RSPA lacks discretion in this area, preparation of a federalism assessment is not warranted.

Title 49 U.S.C. 5125(b)(2) provides that DOT must determine and publish in the **Federal Register** the effective date of Federal preemption. That 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. This proposed rule would require oxidizers to be transported in certain types of cargo compartments aboard aircraft. RSPA solicits comments on whether the proposed rule would have any effect on State, local or Indian tribe requirements and, if so, the most appropriate effective date of Federal preemption.

Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities (small business and small not-for-profit organizations which are independently owned and operated, and small government jurisdictions) are not unnecessarily and disproportionately burdened by Federal regulations. The RFA requires regulatory agencies to review rules which may have ''a significant economic impact on a substantial number of small entities.'' Since this proposed rule would primarily impact those entities operating under 14 CFR part 121, RSPA and FAA adopted the Federal Aviation Administration (FAA) Order 2100.14A (Regulatory Flexibility Criteria and Guidance) as the standard by which the potential impact on small entities would be determined. The potential impact on small entities is the cost (revenue losses) incurred by carriers that currently transport oxidizers and spent chemical oxygen generators. There is very little data to determine the proposed rule's economic impact on entities other than those operating under 14 CFR part 121 (e.g., part 135 operators). Therefore, RSPA requests comments on the economic impact, if any, of this proposed rule on other entities.

According to FAA Order 2100.14A, a substantial number of small entities is defined as a number which is not less than eleven and which is more than one-third of the small entities subject to a proposed or existing rule. A significant economic impact refers to the annualized threshold assigned to each entity group potentially impacted by rulemaking actions. For this proposed rule, the small entities are eight 14 CFR part operators (scheduled and non-scheduled) that carry hazardous materials. The annualized significant economic impact threshold for non-scheduled aircraft operators is estimated to be $4,900. Similarly, the annualized significant economic impact threshold for scheduled aircraft operators is estimated to be $70,100 (operators with less than 60 passenger seats) and $125,500 (operators with more than 60 passenger seats).

A small entity is defined in the FAA Order 2100.14A as an operator of aircraft for hire with nine or fewer aircraft owned but not necessarily operated. RSPA and FAA identified a total of eight operators that meet this definition. Those operators comprise two groups: (1) Non-scheduled small part 121 operators and (2) scheduled small part 121 operators.

To determine the impact of the proposed rule on these small entities, RSPA and FAA estimated the annualized cost impact on each of those small entities within the two groups. The annualized cost impact per small entity is based on the annual number of ton miles for oxidizer shipments times the respective revenue-per-ton-mile estimate.

Small Entities, Non-scheduled

RSPA and FAA determined there are six non-scheduled part 121 aircraft operators that meet the definition of a small entity. Of the six small entities within this group, only two would have annualized costs that exceed the significant economic impact threshold of $4,900. While one-third of the above aircraft operators would incur significant economic costs, a substantial number of them would not be impacted because their number is less than eleven.

Small Entities, Scheduled

RSPA and FAA also determined that there are two part 121 scheduled aircraft operators that meet the definition of a small entity. The ten-year estimated cost of compliance for the scheduled entity with less than 60 passenger seats would be $60,000 ($42,200, discounted). Similarly, for the entity with more than 60 passenger seats, the ten-year cost of compliance would be $9,800 ($6,900, discounted). Over a ten-year period, the annualized potential cost of compliance for the entity with less than 60 passenger seats and the entity with more than 60 passenger seats would be $6,000 and $1,000, respectively. These annualized cost of compliance estimates are far less than their respective significant economic thresholds of $70,100 and $125,500.

Based upon the above, I certify that this proposed rule would not have a significant economic impact on a substantial number of small entities. While the proposed rule would have a significant economic impact on two of the eight small entities examined in this analysis, it would not impact a substantial number of those small entities.

Paperwork Reduction Act

This supplemental notice of proposed rulemaking does not impose any new information collection requirements.

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 can be used to cross-reference this action with the Unified Agenda.

List of Subjects

49 CFR Part 171

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

49 CFR Part 172

Education, Hazardous materials transportation, Hazardous waste, Labeling, Marking, Packaging and

containers, Reporting and recordkeeping requirements.

49 CFR Part 175

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

In consideration of the foregoing, 49 CFR parts 171, 172, and 175 are proposed to be 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. 5101–5127; 49 CFR 1.53.

2. In § 171.11, paragraph (d)(15) is revised and paragraph (d)(16) is added to read as follows:

§ 171.11 Use of ICAO Technical Instructions.

* * * * *

(d) * * *

(15) An oxygen generator (chemical) must be classed, approved, and described in accordance with the requirements of this subchapter and an oxygen generator, chemical, spent, must be classed, described and packaged in accordance with the requirements of this subchapter.

(16) A package containing a hazardous material for which an Oxidizer or Oxygen label is required under part 172, subpart E, of this subchapter, may not be offered for transportation or transported in a passenger-carrying aircraft except as specified in this subchapter.

3. In § 171.12, paragraph (b)(18) is revised to read as follows:

§ 171.12 Import and export shipments.

* * * * *

(b) * * *

(18) An oxygen generator (chemical) must be classed, approved, and described in accordance with the requirements of this subchapter and an oxygen generator, chemical, spent, must be classed, described and packaged in accordance with the requirements of this subchapter.

* * * * *

4. In § 171.12a, paragraph (b)(17) is revised to read as follows:

§ 171.12a Canadian shipments and packagings.

* * * * *

(b) * * *

(17) An oxygen generator (chemical) must be classed, approved, and described in accordance with the requirements of this subchapter and an oxygen generator, chemical, spent, must be classed, described and packaged in accordance with the requirements of this subchapter.

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

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

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

6. In the § 172.101 Hazardous Materials Table, the following entry is added in appropriate alphabetical order:

§ 172.101 Purpose and use of hazardous materials table.

* * * * *

SECTION 172.101.—HAZARDOUS MATERIALS TABLE

Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or division	Identification numbers	PG	Label codes	Special provisions	(8) Packaging authorizations (§ 173.***)			(9) Quantity limitations		(10) Vessel stowage requirements	
							Exceptions	Non-bulk	Bulk	Passenger aircraft/rail	Cargo aircraft only	Location	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
*	*	*		*		*			*		*		
+	Oxygen generator, chemical, spent	9	NA3356	III	9	61	None	213	None	Forbidden	Forbidden	A	
*	*	*		*		*			*		*		

§ 172.101 [Amended]

7. In addition, in the § 172.101 Hazardous Materials Table, Column (9A) is amended by removing the existing language and adding the word ''Forbidden'' for the following entries:

Aluminum nitrate
Ammonium dichromate
Ammonium nitrate fertilizers
Ammonium nitrate fertilizers; *uniform non-segregating mixtures of ammonium nitrate with added matter which is inorganic and chemically inert towards ammonium nitrate, with not less than 90 percent ammonium nitrate and not more than 0.2 percent combustible material (including organic material calculated as carbon), or with more than 70 percent but less than 90 percent ammonium nitrate and not more than 0.4 percent total combustible material*
Ammonium nitrate mixed fertilizers
Ammonium nitrate, *with not more than 0.2 percent of combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance*
Ammonium perchlorate (PG II)
Ammonium persulfate
Barium bromate
Barium chlorate
Barium hypochlorite *with more than 22 percent available chlorine*
Barium nitrate
Barium perchlorate
Barium permanganate
Barium peroxide
Beryllium nitrate
Bromate, inorganic, aqueous solution, n.o.s.
Bromate, inorganic, n.o.s.
Calcium chlorate
Calcium chlorate aqueous solution
Calcium chlorite
Calcium hypochlorite, dry *or* Calcium hypochlorite mixtures dry *with more than 39 percent available chlorine (8.8 percent available oxygen)*
Calcium hypochlorite, hydrated *or* Calcium hypochlorite, hydrated mixtures, *with not less than 5.5 percent but not more than 10 percent water*
Calcium hypochlorite mixtures, dry, *with more than 10 percent but not more than 39 percent available chlorine*
Calcium nitrate
Calcium perchlorate
Calcium permanganate
Calcium peroxide
Cesium nitrate *or* Caesium nitrate
Chlorate and borate mixtures (PG II and III)
Chlorate and magnesium chloride mixtures (PG II and III)
Chlorates, inorganic, aqueous solution, n.o.s.
Chlorates, inorganic, n.o.s.
Chlorites, inorganic, n.o.s.
Chromic acid, solid
Chromium nitrate
Chromium trioxide, anhydrous
Compressed gas, oxidizing, n.o.s.
Copper chlorate
Corrosive liquids, oxidizing, n.o.s. (PG II)
Corrosive solids, oxidizing, n.o.s. (PG I and II)
Dichloroisocyanuric acid, dry *or* Dichloroisocyanuric acid salts
Didymium nitrate
Ferric nitrate
Guanidine nitrate
Hydrogen peroxide and peroxyacetic acid mixtures, stabilized *with acids, water and not more than 5 percent peroxyacetic acid*
Hydrogen peroxide, aqueous solutions *with not less than 8 percent but less than 20 percent hydrogen peroxide (stabilized as necessary)*
Hydrogen peroxide, aqueous solutions *with not less than 20 percent but not more than 40 percent hydrogen peroxide (stabilized as necessary)*
Hypochlorites, inorganic, n.o.s.
Lead dioxide
Lead nitrate
Lead perchlorate, solid
Lead perchlorate, solution
Liquefied gas, oxidizing, n.o.s.
Lithium hypochlorite, dry *or* Lithium hypochlorite mixtures, dry
Lithium nitrate
Lithium peroxide
Magnesium bromate
Magnesium chlorate
Magnesium nitrate
Magnesium perchlorate
Magnesium peroxide
Manganese nitrate
Medicines, *oxidizing substance, solid* n.o.s.
Nickel nitrate
Nickel nitrite
Nitrates, inorganic, aqueous solution, n.o.s. (PG II and III)
Nitrates, inorganic, n.o.s. (PG II and III)
Nitrites, inorganic, aqueous solution, n.o.s. (PG II and III)
Nitrites, inorganic, n.o.s.
Nitrous oxide, compressed
Oxidizing liquid, corrosive, n.o.s. (PG II and III)
Oxidizing liquid, n.o.s. (PG I, II and III)
Oxidizing liquid, toxic, n.o.s. (PG II and III)
Oxidizing solid, corrosive, n.o.s. (PG I, II and III)
Oxidizing solid, n.o.s. (PG I, II, and III)
Oxidizing solid, toxic, n.o.s. (PG I, II, and III)
Oxygen, compressed
Perchlorates, inorganic, aqueous solution, n.o.s. (PG II and III)
Perchlorates, inorganic, n.o.s. (PG II and III)
Permanganates, inorganic, aqueous solution, n.o.s.
Permanganates, inorganic, n.o.s. (PG II and III)
Peroxides, inorganic, n.o.s. (PG II and III)
Persulfates, inorganic, aqueous solution, n.o.s.
Persulfates, inorganic, n.o.s.
Potassium bromate
Potassium chlorate
Potassium chlorate, aqueous solution (PG II and III)
Potassium nitrate
Potassium nitrate and sodium nitrite mixtures
Potassium nitrite
Potassium perchlorate, solid
Potassium perchlorate, solution
Potassium permanganate
Potassium persulfate
Silver nitrate
Sodium bromate
Sodium chlorate
Sodium chlorate, aqueous solution (PG II and III)
Sodium chlorite
Sodium nitrate
Sodium nitrate and potassium nitrate mixtures
Sodium nitrite
Sodium perchlorate
Sodium permanganate
Sodium peroxoborate, anhydrous
Sodium persulfate
Strontium chlorate
Strontium nitrate
Strontium perchlorate
Strontium peroxide
Thallium chlorate
Thallium nitrate
Toxic liquids, oxidizing, n.o.s. (PG II)
Toxic solids, oxidizing, n.o.s. (PG I and II)
mono- (Trichloro) tetra-(monopotassium dichloro)-penta-s-triazinetrione, dry (*with more than 39 percent available chlorine)*
Trichloroisocyanuric acid, dry
Urea hydrogen peroxide
Zinc ammonium nitrite
Zinc bromate
Zinc chlorate
Zinc nitrate
Zinc permanganate
Zinc peroxide
Zirconium nitrate

§ 172.101 [Amended]

8. In addition, in the § 172.101 Hazardous Materials Table, for the entry ''Oxygen, compressed'', in Column (7), special provision ''A52'' is added.

9. In § 172.102, special provision ''61'' is added in appropriate numerical sequence to paragraph (c)(1) and special provision ''A52'' is added in appropriate alphanumerical sequence to paragraph (c)(2), to read as follows:

§ 172.102 Special provisions.

* * * * *

(c) * * *

(1) * * *

Code/Special Provisions

* * * * *

61 A chemical oxygen generator is spent if its means of ignition and its chemical core have been expended.

* * * * *

(2) * * *

Code/Special Provisions

* * * * *

A52 Oxygen, compressed, may be offered for transportation and transported on a passenger-carrying aircraft in accordance with the provisions of § 175.10(a)(7), (a)(14), or (b) of this subchapter.

* * * * *

PART 175—CARRIAGE BY AIRCRAFT

9a. The authority citation for part 175 continues to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

10. In § 175.10, paragraph (b) is added to read as follows:

§ 175.10 Exceptions.

* * * * *

(b) A cylinder containing compressed oxygen, belonging to an aircraft operator or a passenger needing the oxygen for personal medical use at destination, may be carried in the cabin of a passenger-carrying aircraft in accordance with procedures approved by the FAA and specified in the carrier's operations specifications, manual or plan, as appropriate, and the following provisions:

(1) No more than six cylinders belonging to the aircraft operator and, in addition, no more than one cylinder (with a rated oxygen capacity of 850 liters (30 cubic feet) or less) per passenger needing the oxygen, may be transported on an aircraft under the provisions of paragraph (b);

(2) Each cylinder must conform to the provisions of this subchapter with regard to packaging specifications, fill limits, maintenance requirements, marking and labeling;

(3) Each cylinder shall be examined by the aircraft operator to ensure that all valves are closed and the cylinder is free of flammable contaminants on all exterior surfaces;

(4) Each cylinder shall be placed in a metal or plastic overpack which—

(i) Is capable of meeting the self extinguishing requirements of 14 CFR 25.853;

(ii) Provides protection to the cylinder and valves;

(iii) Is marked ''Oxygen, Compressed'', ''UN1072'', and ''Passenger cabin acceptable per 49 CFR 175.10''; and

(iv) Is labeled Cargo Aircraft Only and either Oxygen or Non-Flammable Gas and Oxidizer, in accordance with subpart D of part 172 of this subchapter;

(5) The aircraft operator shall securely stow the overpack in the cabin of the aircraft in accordance with the operator's operations procedures and shall notify the pilot-in-command as specified in § 175.33; and

(6) Shipments under this paragraph (b) are not subject to—

(i) The prohibition in § 172.101 of this subchapter against carriage of compressed oxygen on passenger-carrying aircraft;

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

(iii) Section 173.25 of this subchapter; or

(iv) Section 175.85.

§ 175.10 [Amended]

11. In addition in § 175.10, in paragraph (a)(7) the wording ''a passenger'' in the first sentence is revised to read ''an onboard passenger'' and paragraph (a)(24) is removed and reserved.

12. In § 175.85, paragraph (b) is revised to read as follows:

§ 175.85 Cargo location.

* * * * *

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

* * * * *

Issued in Washington, DC on August 12, 1997, under the authority delegated in 49 CFR part 106.

A.I. Roberts,

Associate Administrator for Hazardous Materials Safety.

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