Billing Code: 4910-60-P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

49 CFR Parts 172 and 175

[Docket No. PHMSA-2015-0100 (HM-259)]

RIN 2137-AF10

Hazardous Materials: Notification of the Pilot-in-Command and Response to Air Related Petitions for Rulemaking (RRR)

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

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: In consultation with the Federal Aviation Administration (FAA), PHMSA proposes to amend the Hazardous Materials Regulations (HMR) to align with current international standards for the air transportation of hazardous materials. The proposals in this rule would amend certain special provisions, packaging requirements, notification of pilot-in-command (NOTOC) requirements, and exceptions for passengers and crew members. In addition to harmonization with international standards, several of the proposals in this rule are responsive to petitions for rulemaking submitted by the regulated community. PHMSA invites all interested persons to provide comments regarding these proposed revisions.

DATES: Comments must be received by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments by any of the following methods:

- Federal Rulemaking Portal: http://www.regulations.gov. Follow the online instructions for submitting comments.
- Fax: 1-202-493-2251.
- Mail: Docket Management System; U.S. Department of Transportation, Dockets Operations, M-30, Ground Floor, Room W12-140, 1200 New Jersey Avenue, S.E., Washington, DC 20590-0001.
- Hand Delivery: To U.S. Department of Transportation, Dockets Operations, M-30, Ground Floor, Room W12-140, 1200 New Jersey Avenue, S.E., Washington, DC 20590-0001 between 9 a.m. and 5 p.m. Monday through Friday, except Federal holidays.

Instructions: Include the agency name and Docket Number PHMSA-2015-0100 (HM-259) or RIN 2137-AF10 for this rulemaking at the beginning of your comment. Note that all comments received will be posted without change to http://www.regulations.gov including any personal information provided. If sent by mail, comments must be submitted in duplicate. Persons wishing to receive confirmation of receipt of their comments must include a self-addressed, stamped postcard.

Privacy Act: Anyone is able to search the electronic form of any written communications and comments received into any of our dockets by the name of the individual submitting the document (or signing the document, 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 [65 FR 19477], or you may

visit http://www.regulations.gov.

Docket: You may view the public docket online at http://www.regulations.gov or in person at the Docket Operations Office at the above address (see ADDRESSES).

FOR FURTHER INFORMATION CONTACT: Aaron Wiener, Office of Hazardous Materials Standards, International Standards, (202) 366-4579, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue, S.E., 2nd Floor, Washington, DC 20590-0001.

SUPPLEMENTARY INFORMATION:

Table of Contents:

I. Background

In consultation with the Federal Aviation Administration (FAA), PHMSA (also "we" or "us") proposes to amend the Hazardous Materials Regulations (HMR; 49 CFR parts 171-180) to more closely align with certain provisions of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods (ICAO TI). This NPRM also responds to four petitions for rulemaking submitted by the regulated community. The intended effect of these amendments is to update miscellaneous regulatory requirements for hazardous materials offered for transportation, or transported, in commerce by aircraft. The petitions are included in the docket for this proceeding and are discussed at length in Section II ("Overview of Proposals in this NPRM") of this rulemaking.

II. Overview of Proposals in this NPRM

A. Transportation by Air Intermediate Packaging Requirements for Certain Low and Medium Danger Hazardous Materials (P-1637)

The Dangerous Goods Advisory Council petitioned PHMSA to remove the additional intermediate packaging requirements found in special provisions A3 and A6, see 49 CFR 172.102(b)(2), by deleting these special provisions and all references to them in

the Hazardous Materials Table (HMT) in § 172.101. See P-1637.[1] Special provisions A3 and A6 apply to certain commodities as assigned in column (7) of the HMT when transported by aircraft:

- Special provision A3 states that if glass inner packagings are used for transportation of referenced commodities, they must be packed with absorbent material in tightly closed metal receptacles before being packed in outer packagings.
- Special provision A6 states that if plastic inner packagings are used for transportation of referenced commodities, they must be packed in tightly closed metal receptacles before being packed in outer packagings.

The petitioner notes that the packaging requirements imposed by special provisions A3 and A6 are domestic provisions not found in the ICAO TI and that maintaining these differences creates both a trade barrier to U.S. exports and a burden to the domestic market. The petitioner contends that the requirement for "metal receptacles" is overly restrictive and provides a competitive advantage to shippers in countries that allow these products to be shipped without additional intermediate packagings.

The petitioner further notes that the following requirements in § 173.27(d) and (e) of the HMR make special provisions A3 and A6 unnecessary: (1) when transported by air, inner packagings of Packing Group (PG) I materials currently assigned A3, A6, or both are already required to be packed in either a rigid and leakproof receptacle or an intermediate packaging containing sufficient absorbent material to absorb the entire contents of the inner packaging before packing the inner packaging in its outer package; and (2) PG II and

[1] https://www.regulations.gov/docket?D=PHMSA-2014-0094

III commodities are already subject to secondary closure requirements. Therefore, the petitioner asks that the intermediate packaging requirements in special provisions A3 and A6 be removed.

Section 173.27(d) establishes the type of closure required for transportation of liquid hazardous materials by air. It states that the inner packaging for PG I liquid hazardous materials must have a secondary means of closure applied. The inner packaging for PG II or PG III liquid hazardous materials must have a secondary closure applied unless the secondary closure is impracticable. If the secondary closure is impracticable, the closure requirements for PG II and PG III liquids may be satisfied by securely closing the inner packaging and placing it in a leakproof liner or bag before placing the inner packaging in the outer packaging.

Section 173.27(e) sets the absorbency requirements for PG I liquid hazardous materials of Classes 3, 4, or 8, or Divisions 5.1 or 6.1, when the materials are packaged in glass, earthenware, plastic, or metal inner packagings and offered or transport by air. It requires that inner packagings be packed in a rigid and leakproof receptacle or intermediate packaging that that is sufficiently absorbent to absorb the entire contents of the inner packaging before the inner package is packed in the outer package.

After reviewing the petition, PHMSA agrees that current requirements in § 173.27(d) and (e) make special provisions A3 and A6 redundant for liquid PG I materials. We also agree that the requirements in § 173.27(d) for inner packagings to have a secondary means of closure or a leakproof liner or bag adequately address the hazards that special provision A6 was designed to mitigate for PG II and III materials. However,

we maintain that the material of construction of the inner packaging referenced in special provision A3 (glass) necessitates an intermediate package to perform a containment function in the event an inner packaging breaks.

Therefore, we propose to: (1) amend special provision A3 in § 172.102 to authorize rigid and leakproof receptacles for intermediate packaging; (2) remove references to special provision A3 from assigned PG I entries in the HMT; and (3) remove references to special provision A6 from assigned liquids in the HMT.

Four solid materials (UN Nos. 1326, 1390, 1889 and 3417) are currently assigned special provisions A6 in the HMT. Unlike the liquids currently assigned special provision A6, these solid materials are not subject to the intermediate or secondary packaging provisions in § 173.27. PHMSA solicits public comment on maintaining special provision A6 for currently assigned solid materials or whether revisions to the packaging provisions for these materials should be considered in a future rulemaking

B. Quantity Limits for Portable Electronic Medical Devices Carried by Passengers, Crewmembers, and Air Operators (P-1649)

Phillips Healthcare petitioned PHMSA to revise § 175.10(a)(18)(i) to increase the quantity limits applicable to the transportation of portable medical electronic devices (e.g., automated external defibrillators (AED); nebulizers; continuous positive airway pressure (CPAP) devices containing lithium metal batteries; and spare batteries) carried on aircraft by passengers and crewmembers. See P-1649.[2] The current HMR requirements limit all lithium metal batteries carried on an aircraft by passengers or crew for personal use to a

[2] https://www.regulations.gov/docket?D=PHMSA-2015-0107

lithium content of not more than 2 grams per battery. The ICAO TI allow portable medical electronic devices containing lithium metal batteries and spare batteries for these devices to contain up to 8 grams of lithium content per battery to be carried by passengers with the approval of the operator. The petitioner states:

> A global increase in air travel, as well as a growing aged population in many countries, makes it reasonable to assume that there will be a significant increase in older passengers and passengers with illness. An automated external defibrillator can make the difference between life and death during cardiac arrest.

The petitioner further asserts that the current HMR requirements prohibit many people who need to travel with their portable medical electronic devices from doing so because the lithium content exceeds the amount allowed.

In addition, the petitioner notes that increasing the quantity limits for portable medical electronic devices containing lithium metal batteries and spare batteries would be consistent with section 828 of the "FAA Modernization and Reform Act of 2012" (Pub. L. 112-98, 126 Stat. 133; Feb. 14, 2012),[3] which prohibits the Secretary of Transportation from issuing or enforcing any regulation or other requirement regarding the air transportation of lithium cells or batteries if the requirement is more stringent than the requirements of the ICAO TI.

PHMSA agrees that harmonizing the HMR with the ICAO TI on the issue portable medical electronic devices with lithium batteries is consistent with the intent of section 828

[3] See http://www.gpo.gov/fdsys/pkg/CRPT-112hrpt381/pdf/CRPT-112hrpt381.pdf

of the FAA Modernization and Reform Act. Therefore, we propose to amend § 175.10 to align HMR provisions with those in the ICAO TI.

The petitioner further asks that portable medical electronic devices with increased lithium contents be authorized for transport by passengers or crew members without the approval of the operator. PHMSA points the petitioner to the ICAO TI part 8, table 8-1 provisions with which we are proposing to harmonize and notes that, under the ICAO TI, approval of the operator is required for lithium metal battery powered portable medical electronic devices and their spare batteries exceeding 2 grams of lithium content but not exceeding 8 grams of lithium content. PHMSA is not compelled by the reasoning in the petition to be less restrictive than what international standards currently prescribe. Moreover, we believe that operator approval can be an important safety provision, especially in the context of large lithium metal batteries otherwise forbidden for transportation in carry-on or checked baggage. Accordingly, PHMSA does not propose to eliminate the operator approval provision.

In this NPRM, we propose to amend § 175.10(a)(18)(i) to authorize passengers and crewmembers to carry on board an aircraft lithium metal battery-powered portable medical electronic devices and two spare batteries for those devices exceeding 2 grams of lithium content per battery, but not exceeding 8 grams of lithium content per battery, with the approval of the operator.

Consistent with the ICAO TI and the current HMR prohibitions, spare lithium batteries (i.e., batteries that are not packed with or contained in equipment) of any type and for any application continue to be prohibited from checked baggage. FAA's Safety Alert

to Operators (SAFO) 15010 *Carriage of Spare Lithium Batteries in Carry-on and Checked Baggage* provides additional guidance to operators on this issue.

C. NOTOC Harmonization with the ICAO TI (P-1487)

The United Parcel Service petitioned PHMSA to revise the notification of the captain/pilot-in-command (NOTOC) requirements to match the ICAO TI. The pilot-in-command must receive the NOTOC in order to appropriately consider the presence, amount and location of hazardous materials onboard the aircraft in an emergency. See P-1487.[4] This information, which also includes the hazard classification, proper shipping name, and packing group of the hazmat onboard the aircraft can help to inform the flight crew's decision-making. If an in-flight emergency did occur, the flight crew or the air carrier's ground personnel would need to convey information to air traffic control and/or emergency responders in order to support a safe and effective response.

In its petition, the United Parcel Services asks PHMSA to amend the domestic NOTOC requirements in §175.33 to reduce what it considers extraneous information and more closely align the HMR with existing international practices. The petitioner stated that harmonization with more elements of the ICAO TI's NOTOC requirements will reduce the regulatory burden for operators, as well as the costs associated with training employees and contract personnel to two sets of standards.

PHMSA proposes adding each of the following requirements to the HMR: (a) the operator must provide to the flight dispatcher the same information as provided on the

[4] https://www.regulations.gov/docket?D=PHMSA-2006-26159

NOTOC; (b) the information must be provided to pilots and dispatchers prior to an aircraft moving under its own power; (c) the air operator must retain the pilot-in-command's confirmation via signature or other appropriate indication that the required information was received; and (d) the person responsible for loading must provide a signed confirmation or other form of indication that no damaged or leaking packages or packages showing evidence of damage or leakage were loaded on the aircraft. These changes and other general changes discussed below will result in PHMSA harmonizing more closely with the ICAO TI in regards to the information required to be provided in the NOTOC.

- Requirement that the operator provide the same information to the flight dispatcher that is required to be provided to the pilot-in-command. In an emergency, a dispatcher may be more readily able to communicate with air traffic control and emergency responders about the nature and location of hazardous materials onboard an aircraft than the flight crew. Harmonizing with the ICAO TI and requiring dispatchers to have the same information as pilots regarding the nature, amounts, and locations of hazardous materials improves information sharing in an emergency situation. The current ICAO requirement to provide information to the dispatcher was proposed by the U.S. Panel Member on the ICAO Dangerous Goods Panel after consultation with stakeholders.[5] Incorporating this provision into the HMR is also relevant to NTSB Safety Recommendation A-11-042, which

[5] See ICAO Dangerous Goods Panel Working Paper DGP/23-WP/35 (October 2011). In addition to regularly occurring public meetings before ICAO meetings, the FAA and PHMSA held a public meeting specific to NOTOCs in March 2011. For background information, visit: https://www.federalregister.gov/articles/2011/03/01/2011-4237/notification-of-pilot-in-command-notice-of-public-meeting

recommends that the FAA "develop a method to quickly communicate information regarding the number of persons on board and the presence of hazardous materials to emergency responders when airport emergency response or search and rescue is activated."[6]

For operations subject to the HMR where no dispatcher is required, other personnel with responsibilities for operational control of the aircraft (e.g., the flight operations officer or designated ground personnel responsible for flight operations) would serve as the additional contact. Consistent with the ICAO TI, operators are responsible for addressing in their relevant manuals the job title and specific functions of the person who will receive this information.

Providing an additional and potentially quicker means for airport rescue and firefighting (ARFF) personnel to receive the NOTOC underscores that the ARFF community is as much an intended consumer of the NOTOC as flight crews. We note that ARFF training in hazardous materials incidents is required under 14 CFR 139, which specifies the FAA's requirements for certificated airports.

- Requirement that the NOTOC be provided to pilots and dispatchers prior to an aircraft moving under its own power. The current HMR require pilots-in-command to receive written information meeting the requirements in § 175.33 as early as practicable before departure of the aircraft. Consistent with the ICAO TI, PHMSA believes that this information should be provided to both the pilot-in-command and dispatchers prior to the aircraft moving under its own power. The flight crew

[6] See http://www.ntsb.gov/safety/safety-recs/recletters/A-11-039-047.pdf.

should not be burdened with additional information or processes during taxiing and final preparations for takeoff. This proposed change would also allow the flight crew additional time to address any safety concerns identified after a review of the NOTOC before taxiing. For example, flight crews will be more likely to have the opportunity to physically inspect (e.g., packages, paperwork, etc.), ask questions, or otherwise act on the information in the NOTOC if they so choose.

- Requirement that the air operator obtains and retains a confirmation (e.g., a signed confirmation from the pilot-in-command or notation via an operator's computer system) that the NOTOC was received by the pilot in command. The current HMR require the information to be provided to the pilot-in-command by the operator and for the operator to maintain a record of the NOTOC for 90 days, but there is no requirement for the pilot to indicate receipt of the NOTOC. To be consistent with the ICAO TI, PHMSA is proposing to require the operator to obtain and retain documentation of the pilot-in-command's receipt of the NOTOC.
- Requirement for a signed confirmation or some other indication from the person responsible for loading the aircraft that no evidence of damaged or leaking packages were loaded on the aircraft. The current HMR require a confirmation that no damaged or leaking packages were loaded on board an aircraft, but there is no requirement for a signature or other means of verification from the person responsible for loading the aircraft. Requiring a signed confirmation or other indication from the person responsible for loading results in a more accountable safety system that helps to ensure that there is no evidence of damage to or leakage

from the packages or evidence of leakage from the unit load device loaded on an aircraft. Operators are responsible for addressing in their relevant manuals the job title and specific functions of the "responsible loader," as well as how information should be communicated from other loaders to the responsible loader for each flight prior to this confirmation/indication being provided on the NOTOC.

- General harmonization with the ICAO TI in regards to information required to be provided in the NOTOC associated with (and linked to) requirements for shipping papers. The current HMR require the additional description requirements of §§ 172.202 and 172.203 to be provided in the NOTOC. These additional information requirements necessitate the inclusion of items such as descriptions of the physical or chemical form of radioactive materials, an indication that the materials being transported are packaged under limited quantity exceptions, an indication that marine pollutants are present, etc. By more closely aligning with the ICAO TI, PHMSA believes that the removal of additional description requirements from the NOTOC will result in decreased complexity and training costs for operators without negatively impacting safety. However, we invite comment from the ARFF community pertaining to the effect this proposed rule would have had on past incident or accident responses.

The current HMR contain a requirement that a notification prepared in accordance with the ICAO TI must also include any additional elements required to be shown on shipping papers by subpart C of part 171 of this subchapter. The additional elements currently required are: an indication of the "EX Number" for

Division 1.4G safety devices; an indication of "RQ" and technical names if applicable for hazardous substances; an indication that the hazardous material is a "Waste" for hazardous wastes; and the inclusion of the words "Poison-Inhalation Hazard" or "Toxic-Inhalation Hazard" and the words "Zone A," "Zone B," "Zone C," or "Zone D" for gases, or "Zone A" or "Zone B" for liquids, as appropriate for Division 2.3 materials meeting the definition of a material poisonous by inhalation. PHMSA proposes to remove the requirement for a NOTOC made in accordance with the ICAO TI to include these additional elements. This information would still be required on shipping papers.

General harmonization between the HMR NOTOC requirements and those found in the ICAO TI will ensure consistency for operators subject to both regulatory systems, thus reducing inconsistencies and the cost of complying with two different sets of standards. However, minor differences between the two regulations will remain even if PHMSA adopts the provisions of this NPRM into a final rule. One noteworthy difference is that the HMR requires that the date of the flight be included on the NOTOC. We believe that maintaining the flight date provides a benefit by adding another safety control to ensure pilots have the correct form and will result in a negligible compliance burden by those required to prepare and maintain a NOTOC under the HMR.

D. Amendments to Package Inspection (P-1671) and Securing Requirements

Labelmaster Services petitioned PHMSA to amend § 175.30(c)(1) by removing

language prohibiting any package, outside container, or overpack containing hazardous materials from being transported on an aircraft if it has holes. See P-1671.[7] The petitioner notes that airlines and freight forwarders have declined to transport packages with minor abrasions, tears, dents, cuts, small holes, or other minor damage from normal conditions of transportation and handling. Even where these examples of minor damage or holes did not compromise the packaging's integrity, airlines and freight forwarders declined to transport them on the basis of § 175.30(c)(1). The petitioner asks that PHMSA add a new paragraph § 173.24(b)(5) to provide transport guidance on packages with minor damage, as the HMR do not presently address this issue.

PHMSA agrees that the wording of the current requirement may be construed to prohibit carriage of such items whenever any hole is found in the package, outside container, or overpack. PHMSA believes the current restriction prohibiting acceptance of any of these containment methods with holes to be overly prescriptive, especially as the paramount safety requirement is that there must not be any indication that the integrity of the containment method has been compromised. In this NPRM, consistent with the ICAO TI, PHMSA proposes to amend § 175.30(c)(1) to remove language prohibiting packages, outside containers, or overpacks containing hazardous materials from being transported on an aircraft simply due to the presence of holes when the holes do not compromise the integrity of the containment device. Under the proposed amendment to § 175.30(c)(1), aircraft operators would be authorized to accept packages with small holes that do not compromise the integrity of the containment method during transportation aboard an

[7] https://www.regulations.gov/docket?D=PHMSA-2015-0281

aircraft. However, we note that operators may continue to have more restrictive standards as a part of their business practice. Moreover, operators are ultimately responsible for their decision to accept such a package for transportation, as the acceptance of the package is tantamount to the operator's determination that the hole will not compromise the integrity of the package.

The petitioner's request to add a new paragraph in § 173.24 is outside the scope of this rulemaking and may be considered in a future rule.

Additionally, we propose to amend § 175.88(c) to require hazardous materials loaded in an aircraft be protected from damage, including by the movement of baggage, mail, stores,[8] or other cargo and during loading operations, so that accidental damage is not caused through dragging or mishandling.

III. Section-by-Section Review

The following is a section-by-section review of the amendments proposed in this NPRM:

Part 172

[8] References to stores in this rule are consistent the ICAO TI's definition under ICAO TI Part 1; 3.1.1. Stores (supplies). a) Stores (supplies) for consumption; and b) Stores (supplies) to be taken away.

> Stores (supplies) for consumption. Goods, whether or not sold, intended for consumption by the passengers and the crew on board aircraft, and goods necessary for the operation and maintenance of aircraft, including fuel and lubricants.
>
> Stores (supplies) to be taken away. Goods for sale to the passengers and the crew of aircraft with a view to being landed.

Section 172.101

Section 172.101 contains the Hazardous Materials Table (HMT) and provides instructions for its use. Section 172.101(h) describes column (7) of the HMT, which specifies codes for special provisions applicable to hazardous materials. PHMSA proposes revisions to the column (7) special provisions. Please review all changes for a complete understanding of the amendments and see "Section 172.102 special provisions" for a detailed discussion of the proposed deletions to the special provisions addressed in this NPRM.

PHMSA specifically proposes to remove: (1) special provision A3 from all assigned PG I HMT entries in column (7); and (2) special provision A6 from all assigned liquid HMT entries in column (7). Table 1 illustrates the HMT entries for which changes are proposed:

Table 1

Proper Shipping Name	UN ID Number	SP Deletion Proposed
Acetaldehyde	UN1089	A3
Acetic acid, glacial o*r* Acetic acid solution, with more than 80 percent acid, by mass	UN2789	A6
Acetic acid solution, not less than 50 percent but not more than 80 percent acid, by mass	UN2790	A6
Acetic anhydride	UN1715	A6
Acetyl chloride	UN1717	A6
Alkali metal alloys, liquid, n.o.s	UN1421	A3
Alkali metal amalgam, liquid	UN1389	A3

Alkali metal dispersions, flammable or Alkaline earth metal dispersions, flammable	UN3482	A3
Alkali metal dispersions, or Alkaline earth metal dispersions	UN1391	A3
Alkylphenols, liquid, n.o.s. (including C2-C12 homologues) (PG I)	UN3145	A6
Allyl iodide	UN1723	A6
Amines, liquid, corrosive, flammable, n.o.s. or Polyamines, liquid, corrosive, flammable, n.o.s. (PG I)	UN2734	A3, A6
Amines, liquid, corrosive, n.o.s, or Polyamines, liquid, corrosive, n.o.s. (PG I)	UN2735	A3, A6
Amyl mercaptan	UN1111	A6
Antimony pentafluoride	UN1732	A6
Benzyl chloroformate	UN1739	A3, A6
Boron trifluoride diethyl etherate	UN2604	A3
Butyl mercaptan	UN2347	A6
Chlorite solution	UN1908	A6
2-Chloropropene	UN2456	A3
Chromium oxychloride	UN1758	A3, A6
Chromosulfuric acid	UN2240	A3, A6
Corrosive liquid, acidic, inorganic, n.o.s. (PG I)	UN3264	A6
Corrosive liquid, acidic, organic, n.o.s. (PG I)	UN3265	A6
Corrosive liquid, basic, inorganic, n.o.s. (PG I)	UN3266	A6
Corrosive liquid, basic, organic, n.o.s. (PG I)	UN3267	A6
Corrosive liquid, self-heating, n.o.s. (PG I)	UN3301	A6
Corrosive liquids, flammable, n.o.s. (PG I)	UN2920	A6
Corrosive liquids, n.o.s. (PG I)	UN1760	A6
Corrosive liquids, oxidizing, n.o.s.	UN3093	A6
Corrosive liquids, toxic, n.o.s. (PG I)	UN2922	A6
Corrosive liquids, water-reactive, n.o.s.	UN3094	A6
Dichloroacetic acid	UN1764	A6
Dichloroacetyl chloride	UN1765	A6
Difluorophosphoric acid, anhydrous	UN1768	A6
Disinfectant, liquid, corrosive, n.o.s.	UN1903	A6

Dyes, liquid, corrosive, n.o.s. or Dye intermediates, liquid, corrosive, n.o.s (PG I)	UN2801	A6
Ethyl mercaptan	UN2363	A6
Ethyldichlorosilane	UN1183	A3
Fluoroboric acid	UN1775	A6
Fluorophosphoric acid anhydrous	UN1776	A6
Fluorosilicic acid	UN1778	A6
Fluorosulfonic acid	UN1777	A3, A6
Hexafluorophosphoric acid	UN1782	A6
Hydrazine, anhydrous	UN2029	A3, A6
Hydriodic acid (PG II)	UN1787	A6
Hydrobromic acid, with not more than 49 percent hydrobromic acid (PG II)	UN1788	A6
Hydrochloric acid (PG II)	UN1789	A6
Hydrofluoric acid and Sulfuric acid mixtures	UN1786	A6
Hydrofluoric acid, with more than 60 percent strength	UN1790	A6
Hydrofluoric acid, with not more than 60 percent strength	UN1790	A6
Hydrogen peroxide and peroxyacetic acid mixtures, stabilized with acids, water, and not more than 5 percent peroxyacetic acid	UN3149	A6
Hydrogen peroxide, aqueous solutions with not less than 20 percent but not more than 40 percent hydrogen peroxide (stabilized as necessary)	UN2014	A6
Lithium aluminum hydride, ethereal	UN1411	A3
Mercaptans, liquid, flammable, toxic, n.o.s. or Mercaptan mixtures, liquid, flammable, toxic, n.o.s (PG III)	UN1228	A6
Mercaptans, liquid, toxic, flammable, n.o.s. or Mercaptan mixtures, liquid, toxic, flammable, n.o.s., flash point not less than 23 degrees C	UN3071	A6
Methyldichlorosilane	UN1242	A3
Morpholine	UN2054	A6
Nitric acid other than red fuming, with at least 65 percent, but not more than 70 percent nitric acid	UN2031	A6

Nitric acid other than red fuming, with more than 20 percent and less than 65 percent nitric acid	UN2031	A6
Nitric acid other than red fuming, with not more than 20 percent nitric acid	UN2031	A6
Nitric acid other than red fuming, with more than 70 percent nitric acid	UN2031	A3
Nitrohydrochloric acid	UN1798	A3
Nitrosylsulfuric acid, liquid	UN2308	A6
Organotin compounds, liquid, n.o.s. (PG I)	UN2788	A3
Oxidizing liquid, corrosive, n.o.s (PG I)	UN3098	A6
Oxidizing liquid, n.o.s (PG I)	UN3139	A6
Oxidizing liquid, toxic, n.o.s (PG I)	UN3099	A6
Perchloric acid with more than 50 percent but not more than 72 percent acid, by mass	UN1873	A3
Phosphorus tribromide	UN1808	A6
Propanethiols	UN2402	A6
Propylene oxide	UN1280	A3
1,2-Propylenediamine	UN2258	A6
Propyleneimine, stabilized	UN1921	A3
Selenium oxychloride	UN2879	A3, A6
Silicon tetrachloride	UN1818	A6
Sulfur chlorides	UN1828	A3
Sulfuric acid, fuming with less than 30 percent free sulfur trioxide	UN1831	A3
Trichloroacetic acid, solution	UN2564	A6

Trifluoroacetic acid	UN2699	A3, A6
Valeryl chloride	UN2502	A6
Vanadium oxytrichloride	UN2443	A6
Vanadium tetrachloride	UN2444	A3, A6
Vinyl ethyl ether, stabilized	UN1302	A3
Xylyl bromide, liquid	UN1701	A6

Section 172.102 special provisions

Section 172.102 lists special provisions applicable to the transportation of specific hazardous materials. Special provisions contain packaging requirements, prohibitions, and exceptions applicable to particular quantities or forms of hazardous materials. PHMSA proposes, to replace the existing requirement for tightly closed metal receptacles in special provision A3 from § 172.102(b)(2), which applies only to transportation by aircraft, with a requirement for rigid and leakproof receptacles or intermediate packaging packed with absorbent material.

Part 175

Section 175.10

Section 175.10 provides exceptions for passengers, crewmembers, and air operators. PHMSA proposes to revise § 175.10(a)(18)(i) to authorize passengers and crewmembers to carry on board aircraft portable medical electronic devices containing lithium metal batteries with a lithium content exceeding 2 grams per battery, but not exceeding 8 grams of lithium content per battery, and no more than two individually

protected lithium metal spare batteries for these portable medical electronic devices each exceeding 2 grams of lithium content, but not exceeding 8 grams of lithium content, with the approval of the operator. Consistent with the ICAO TI and the current HMR prohibitions, spare lithium batteries (i.e. batteries that are not packed with or contained in equipment) of any type and for any application continue to be prohibited from checked baggage. FAA's Safety Alert to Operators (SAFO) 15010 *Carriage of Spare Lithium Batteries in Carry-on and Checked Baggage* provides additional guidance to operators on this issue.

Section 175.30

Section 175.30 prescribes requirements for the inspection and acceptance of hazardous materials. PHMSA proposes revising § 175.30(c)(1) to no longer prohibit packages, outside containers, overpacks, or ULDs containing hazardous materials from being transported on an aircraft if there are one or more holes present when the hole(s) or other indications do not indicate compromised integrity to the package, overpack, freight container, or ULD. This change will harmonize the HMR with language in ICAO TI part 7; 1.3.1(i), which states "the package, overpack, freight container or unit load device is not leaking and there is no indication that its integrity has been compromised."

Section 175.33

Section 175.33 establishes requirements for shipping papers and for the notification

of the pilot-in-command (NOTOC) when hazardous materials are transported by aircraft. PHMSA proposes to harmonize the HMR NOTOC requirements with those found in the ICAO TI. Specifically, we propose to more closely align the information that is required to be provided in the NOTOC; ensure the NOTOC is provided to dispatchers or when dispatchers are not utilized, other ground support personnel designated in the operator's manual assigned to the flight; harmonize with ICAO requirements addressing when the NOTOC must be provided to the pilots and dispatchers; require confirmation via signature or other appropriate indication by the pilot-in-command (PIC) to indicate that the required information was received; and require confirmation via signature or other appropriate indication by the person responsible for loading the aircraft that no damaged or leaking packages or packages showing evidence of damage or leakage have been loaded on the aircraft.

Finally, and consistent with the ICAO TI, we propose to amend § 175.33 by removing the requirement to include additional informational requirements in §175.33(a)(1)(i) and (ii). This information will continue to be required on shipping papers.

Section 175.88

Section 175.88 prescribes requirements for inspection, orientation, and securing packages of hazardous materials aboard aircraft. PHMSA proposes revisions to § 175.88(c) to require hazardous materials loaded in an aircraft to be protected from damage, including by the movement of baggage, mail, stores, or other cargo, consistent with general loading requirements found in the ICAO TI. This proposed change would

require that packages be protected from damage during loading operations through dragging or mishandling of packages containing hazardous materials and further harmonize specific portions of the general loading/securement requirements pertaining to appropriate securing and loading practices of the HMR with those found in the ICAO TI.

IV. Regulatory Analyses and Notices

A. Statutory/Legal Authority for this Rulemaking

This proposed rule is published under the statutory authority of the Federal hazardous materials transportation law (Federal hazmat law). 49 U.S.C. 5101 et seq. Section 5103(b) of the Federal hazmat law authorizes the Secretary of Transportation to prescribe regulations for the safe transportation, including security, of hazardous materials in intrastate, interstate, and foreign commerce. Section 5120(b) of the Federal hazmat law authorizes the Secretary of Transportation to ensure that, to the extent practicable, regulations governing the transportation of hazardous materials in commerce are consistent with standards adopted by international authorities. The Secretary has delegated these authorizations to the Administrator for PHMSA. See 49 CFR 1.97.

This rule proposes to amend regulations to increase alignment with international standards by incorporating various amendments, including changes to special provisions, packaging requirements, air transport notification of pilot-in-command (NOTOC) requirements, and allowances for hazardous materials to be carried on board an aircraft by passengers and crewmembers. To this end, this rule proposes to more fully align the HMR with the ICAO TI. The large volume of hazardous materials transported in international

commerce warrants the harmonization of domestic and international requirements to the greatest extent possible.

Harmonization serves to facilitate international commerce, while also promoting the safety of people, property, and the environment by reducing the potential for confusion and misunderstanding that could result if shippers and operators were required to comply with two or more conflicting sets of regulatory requirements. PHMSA's goal is to harmonize without sacrificing the current HMR level of safety or imposing undue burdens on the regulated community. Additionally, we consulted the Federal Aviation Administration in the development of this rule.

B. Executive Order 12866, Executive Order 13563, and DOT Regulatory Policies and Procedures

This proposed rule is not considered a significant regulatory action under section 3(f) of Executive Order 12866, "Regulatory Planning and Review," 58 FR 51735 (Oct. 4, 1993), and, therefore, was not reviewed by the Office of Management and Budget. This proposed rule is not considered a significant rule under the Regulatory Policies and Procedures of the Department of Transportation. 44 FR 11034 (Feb. 26, 1979).

Executive Order 13563, "Improving Regulation and Regulatory Review," 76 FR 3821 (Jan. 21, 2011), supplements and reaffirms Executive Order 12866, stressing that, to the extent permitted by law, an agency rulemaking action must be based on benefits that justify its costs, impose the least burden, consider cumulative burdens, maximize benefits, use performance objectives, and assess available alternatives.

Benefits of Harmonization

Pursuant to Executive Order 13563, PHMSA analyzed the expected benefits of these proposed provisions. Typically the benefits of rules are derived from (1) enhanced health and safety factors and (2) reduced expenditures, such as private-sector savings, government administrative savings, gains in work time, harmonization impacts, and costs of compliance. In the case of this NPRM, most of the benefits from the rule will be derived from health and safety factors, and reduced compliance costs.

The quantifying health and safety benefits specifically attributable to modifications of the NOTOC requirements are not easily calculable with any degree of accuracy. The pilot signature and stronger confirmation requirements from the person responsible for loading the aircraft will result in more effective and efficient response in the event of an aviation incident. The proposed requirement that packages be protected from damage during loading operations will result in increased safety and environmental protection. Benefits would also be realized through a more efficient response time as a result of emergency response personnel having quicker access to hazardous materials information for each flight.

The primary reduced expenditures benefits expected from this NPRM result from reduced packaging costs in relation to the removal of special provision A3 from all assigned PG I HMT entries and special provision A6 from all assigned liquid HMT entries, as well as cost savings from general harmonization of NOTOC requirements.

Currently, compliance with special provisions A3 and A6 requires domestic

shippers to use extra[9] or more expensive[10] materials. Shippers also incur higher freight charges for shipping packages with higher package weights.[11] PHMSA estimates that the partial removal of A3 and complete removal of A6 for liquids, as well as that of the associated intermediate packaging requirements, from the HMR will provide an undiscounted annual benefit of $1,814,643 in reduced packaging costs to shippers.

To arrive at this benefit, PHMSA (1) analyzed commodity flow survey data for commodities assigned A3, A6, or both in the HMR, (2) determined an estimate of total tons of freight for affected commodities offered for transportation by aircraft annually, (3) used this general commodity flow survey data to estimate the number of impacted packages, and (4) determined a cost basis for packages prepared under existing requirements versus proposed requirements.

The reduced expenditure cost savings associated with general harmonization are not easily calculable with any degree of accuracy. Inconsistent hazardous materials regulations result in additional compliance costs for industry and increase compliance training efforts, whereas consistency of regulations reduces regulatory compliance costs and helps to avoid rejected or frustrated shipments. PHMSA expects the increased harmonization of the HMR and ICAO TI NOTOC provisions to generate cost savings by streamlining the processes for NOTOC generation.

Costs of Harmonization

[9] A metal container enclosing either a plastic or glass container.
[10] A metal or glass container rather than a plastic container.
[11] Having a metal container enclosing a plastic/glass container will add weight. Likewise using a metal or glass container rather than a plastic container will add weight.

The primary costs associated with this NPRM are time costs related to proposed requirements for (1) confirmation via signature or other appropriate indication by the person responsible for loading the aircraft that no damaged or leaking packages were loaded on the aircraft, and (2) confirmation via signature or other appropriate indication by the pilot-in-command to indicate that the required information was received. PHMSA estimates the annual costs associated with harmonizing the HMR NOTOC requirements with those found in the ICAO TI to be $705,590. PHMSA notes that many air operators already comply with the ICAO TI NOTOC requirements; therefore, the estimated cost of harmonizing likely is overestimated in this analysis. The HMR currently requires confirmation that no damaged or leaking packages have been loaded on the aircraft. In satisfying this current requirement, it is assumed that many operators are already using the proposed specific confirmation requirement (signature or other indication) from the person responsible loading the aircraft and are already be accounted for in time costs. Under current practice, the NOTOC is transmitted to the pilot-in-command. We assume the additional provision of identical NOTOC information to the dispatcher (or other personnel) will incur negligible costs, if any, especially as we understand this to be a common industry practice. PHMSA invites comments on this assumption and on any unanticipated costs associated with this proposed requirement.

PHMSA expects the adoption of the proposal to eliminate the intermediate packaging requirements provided in special provision A6 for liquids (and A3 for PG I materials) to yield a modest increase in safety costs due to increased transport volumes that may result from the reduced packaging costs. Based on an estimated 10 percent increase in

transport volumes of commodities currently assigned special provisions A3 and A6, PHMSA estimates the annual increased safety cost attributable to the removal of these special provisions as proposed in this NPRM is $2,051.

Net Benefit

Based on the previous discussions of benefits and costs, PHMSA estimates the net benefit associated with this NPRM (2137-AF10) to be $1,107,002.

C. Executive Order 13132

This proposed rule was analyzed in accordance with the principles and criteria contained in Executive Order 13132, "Federalism," 64 FR 43255 (Aug. 10, 1999). This proposed rule may preempt 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 material 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 certain covered subjects, as follows:

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

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

(3) The preparation, execution, and use of shipping documents related to hazardous material 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; and

(5) The design, manufacture, fabrication, inspection, marking, maintenance, recondition, repair, or testing of a packaging or container represented, marked, certified, or sold as qualified for use in transporting hazardous material in commerce.

This proposed rule addresses covered subject items (2), (3), and (5) above and preempts State, local, and Indian tribe requirements not meeting the "substantively the same" standard. This proposed rule is necessary to harmonize with international standards. If the proposed changes are not adopted into the HMR, U.S. companies—including numerous small entities competing in foreign markets—would be at an economic disadvantage because of their need to comply with a dual system of regulations. The changes in this proposed rulemaking are intended to avoid this result. Federal hazardous materials transportation law provides at 49 U.S.C. 5125(b)(2) that, 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 be 90 days from publication of a final rule in this matter.

D. Executive Order 13175

This proposed rule was analyzed in accordance with the principles and criteria contained in Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments," 65 FR 67249 (Nov. 9, 2000). Because this proposed rule does not have tribal implications, does not impose substantial direct compliance costs, and is required by statute, the funding and consultation requirements of Executive Order 13175 do not apply.

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

This proposed rule was developed in accordance with Executive Order 13272, "Proper Consideration of Small Entities in Agency Rulemaking," 67 FR 53461 (Aug. 16, 2002), and DOT's Policies and Procedures to promote compliance with the Regulatory Flexibility Act, 5 U.S.C. 601 et seq., and ensure that potential impacts of draft rules on small entities are properly considered. The Regulatory Flexibility Act requires an agency to review regulations to assess their impact on small entities, unless the agency determines that a rule is not expected to have a significant impact on a substantial number of small entities.

This proposed rule facilitates the transportation of hazardous materials in international commerce by increasing consistency with international standards. It applies to offerors and carriers of hazardous materials, some of whom are small entities, such as chemical manufacturers, users and suppliers, packaging manufacturers, distributors, aircraft operators, and training companies. As previously discussed in Section IV,

Subsection B ("Executive Order 12866, Executive Order 13563, and DOT Regulatory Policies and Procedures"), PHMSA expects that the majority of amendments in this proposed rule will result in cost savings and ease the regulatory compliance burden for shippers engaged in domestic and international commerce, including trans-border shipments within North America. Many companies will realize economic benefits as a result of these amendments. Additionally, the changes effected by this NPRM will relieve U.S. companies, including small entities competing in foreign markets, from the burden of complying with a dual system of regulations. However, PHMSA requests comment on the economic impacts of the proposed rule on a small entities.

F. Paperwork Reduction Act

PHMSA currently has approved information collection under Office of Management and Budget (OMB) Control Number 2137-0034, "Hazardous Materials Shipping Papers and Emergency Response Information." We anticipate that this proposed rule will result in an increase in the annual burden of this information collection because of an increase in the amount of time needed to complete the NOTOC due to additional requirements for (1) confirmation via signature or other appropriate indication by the person responsible for loading the aircraft that no damaged or leaking packages were loaded on the aircraft, and (2) confirmation via signature or other appropriate indication by the pilot-in-command that the required information was received.

This rulemaking identifies a revised information collection that PHMSA will submit to OMB for approval based on the requirements in this NPRM. PHMSA has

developed burden estimates to reflect changes in this NPRM and estimates that the information collection and recordkeeping burden in this rule are as follows:

OMB Control Number 2137-0034	
Annual Increase in Number of Respondents	150
Annual Increase in Annual Number of Responses	1,976,475
Annual Increase in Annual Burden Hours	5,474
Annual Increase in Annual Burden Costs	$483,083

Under the Paperwork Reduction Act of 1995, no person is required to respond to an information collection unless it has been approved by OMB and displays a valid OMB control number. Section 1320.8(d) of 5 CFR requires that PHMSA provide interested members of the public and affected agencies an opportunity to comment on information and recordkeeping requests. PHMSA specifically invites comments on the information collection and recordkeeping burdens associated with developing, implementing, and maintaining these proposed requirements. Address written comments to the Dockets Unit as identified in the "ADDRESSES" section of this rulemaking. We must receive comments regarding information collection burdens prior to the close of the comment period as identified in the "DATES" section of this rulemaking. In addition, you may submit comments specifically related to the information collection burden to PHMSA Desk Officer, Office of Management and Budget, at fax number 202-395-6974. Requests for a copy of this information collection should be directed to Steven Andrews or T. Glenn

Foster, Standards and Rulemaking Division (PHH-10), Pipeline and Hazardous Materials Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001. If these proposed requirements are adopted in a final rule, PHMSA will submit the revised information collection and recordkeeping requirements to OMB for approval.

G. 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 contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

H. Unfunded Mandates Reform Act

This proposed rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of $141.3 million or more, adjusted for inflation, to either State, local, or tribal governments, in the aggregate, or to the private sector in any one year, and is the least burdensome alternative that achieves the objective of the rule.

I. Environmental Assessment

The National Environmental Policy Act of 1969, 42 U.S.C. 4321–4375, requires that Federal agencies analyze proposed actions to determine whether the action will have a

significant impact on the human environment. The Council on Environmental Quality (CEQ) regulations that implement NEPA, 40 CFR parts 1500–1508, require Federal agencies to conduct an environmental review considering (1) the need for the proposed action, (2) alternatives to the proposed action, (3) probable environmental impacts of the both the proposed action and the alternatives, and (4) the agencies and persons consulted during the consideration process. 40 CFR 1508.9(b).

1. Purpose and Need

In this NPRM, PHMSA proposes to amend the HMR in to increase harmonization with international standards and to address four petitions for rulemaking submitted by shippers, carriers, manufacturers, and industry representatives. These proposed revisions are intended to harmonize with international standards, while also maintaining or enhancing safety. Specifically, PHMSA, consistent with P-1487, proposes to harmonize the HMR with the 2015–2016 ICAO TI requirements for the NOTOC, the ICAO TI requirement for the air operator to provide a copy of the NOTOC to the flight dispatcher, and the ICAO TI requirement for the air operator to obtain and retain a confirmation that the NOTOC was received and agreed to by the pilot. This NPRM addresses three additional petitions for rulemaking (P-1637, P-1649, and P-1671), proposing to: (1) more closely harmonize with the ICAO TI in regard to intermediate packaging requirements for certain low and medium danger hazardous materials; (2) add an exception to allow passengers to bring on board an aircraft portable medical electronic devices containing lithium batteries that exceed the lithium battery limits in § 175.10(a)(18)(i), as well as

spare batteries for these devices with the approval of the operator; and (3) remove language prohibiting any package, outside container, or overpack containing hazardous materials from being transported on an aircraft if it has holes when there is no indication that the integrity of the containment method has been compromised. All of these proposals more closely harmonize U.S. regulations with international standards.

This action is necessary to: (1) fulfill our statutory directive to promote transportation safety; (2) fulfill our statutory directive under the Administrative Procedure Act (APA) that requires Federal agencies to give interested persons the right to petition an agency to issue, amend, or repeal a rule, 5 U.S.C. 553(e); (3) align the HMR with international transport standards and requirements to the extent practicable in accordance with Federal hazmat law, see 49 U.S.C. 5120; and (4) simplify and clarify the regulations in order to promote understanding and compliance. Specifically, this rulemaking achieves these goals by responding to petitions (P-1487, P-1637, P-1649, and P-1671).

With this action, we intend to more closely align the HMR with international transport standards and requirements, without diminishing the level of safety currently provided by the HMR or imposing undue burdens on the regulated public.

2. Alternatives

In proposing this rulemaking, PHMSA is considering the following alternatives:

No Action Alternative:

If PHMSA were to choose this alternative, we would not proceed with any rulemaking on this subject and the current regulatory standards would remain in effect.

Preferred Alternative:

This alternative is the current proposal as it appears in this NPRM, applying to transport of hazardous materials by air. The proposed amendments included in this alternative are more fully addressed in the preamble and regulatory text sections of this NPRM. However, they generally include the following:

1) More closely harmonize the HMR and ICAO TI notification requirements. In this NPRM, PHMSA proposes to more closely align NOTOC requirements between the HMR and the ICAO TI. This includes information required in the notification, when the NOTOC must be provided to pilots and dispatchers, and requirements for verifying that the information was received by the pilot-in-command.

2) More closely harmonize with ICAO TI in regard to intermediate packaging requirements for certain low and medium danger hazardous materials. In this NPRM, PHMSA proposes to remove all references to special provision A6 assigned to liquids in the Hazardous Materials Table. Additionally, this NPRM proposes to amend special provision A3 to authorize additional intermediate packagings.

3) Add an exception to allow passengers, with the approval of the operator, to bring on board an aircraft a portable medical electronic device that exceeds the lithium battery limits in § 175.10(a)(18)(i). In this NPRM, PHMSA proposes to amend § 175.10(a)(18)(i) to increase the quantity limits applicable to the transportation of portable medical electronic devices containing lithium metal batteries and spare batteries for these devices carried on an aircraft. The current HMR limit all lithium metal batteries to a lithium content of not more than 2 grams per battery regardless of end use, whereas the ICAO TI

allow portable medical electronic devices containing lithium metal batteries to contain up to 8 grams of lithium (as well as spare batteries for these devices) to be carried on board an aircraft.

4) Amend the Package Inspection and Securing Requirements. In this NPRM, PHMSA proposes to amend § 175.30(c)(1) to remove language prohibiting any package, outside container, or overpack containing hazardous materials from being transported on an aircraft if it has holes. Additionally, PHMSA proposes revisions to § 175.88(c) to require hazardous materials loaded in an aircraft to be protected from damage, including by the movement of baggage, mail, stores, or other cargo, consistent with general loading requirements found in the ICAO TI.

3. Probable Environmental Impacts of the Alternatives

No Action Alternative:

If PHMSA were to choose the No Action Alternative, we would not proceed with any rulemaking on this subject and the current regulatory standards would remain in effect. However, efficiencies gained through harmonization in updates to transport standards would not be realized. Foregone efficiencies in the No Action Alternative include freeing up limited resources to concentrate on air transport hazard communication (hazcom) issues of potentially much greater environmental impact.

Additionally, the Preferred Alternative encompasses enhanced and clarified regulatory requirements, which would result in increased compliance and less environmental and safety incidents. Not adopting the proposed environmental and safety

requirements in the NPRM under the No Action Alternative would result in a lost opportunity for reducing environmental and safety-related incidents.

Greenhouse gas emissions would remain the same under the No Action Alternative.

Preferred Alternative:

If PHMSA selects the provisions as proposed in this NPRM, we believe that safety and environmental risks would be reduced and that protections to human health and environmental resources would be increased. Consistency between U.S. and international notification requirements can enhance the safety and environmental protection of hazardous materials transportation, reduce compliance costs, increase the flow of hazardous materials from their points of origin to their points of destination (or diversion airport when required), and improve the emergency response in the event of a hazardous materials incident or accident.

Overall, harmonization will result in more targeted and effective training and thereby enhanced environmental protection. These proposed amendments will reduce inconsistent hazardous materials regulations, which can increase the time and cost of compliance training. For ease of compliance with appropriate regulations, air carriers engaged in the transportation of hazardous materials generally elect to accept and transport hazardous materials in accordance with the ICAO TI, as appropriate. Increasing consistency between these international regulations and the HMR allows shippers and carriers to more efficiently train hazmat employees in their responsible functions. PHMSA believes that these proposed amendments, which will increase standardization and

consistency of regulations, will result in greater protection of human health and the environment:

1) More closely harmonize the HMR and ICAO TI notification requirements. Harmonizing the HMR and ICAO TI notification requirements will (1) allow air carriers to streamline compliance and training programs, (2) result in emergency response personnel having quicker access to hazmat information for each flight, (3) remove the requirement to supply data elements required under shipping paper provisions, and (4) provide dispatchers access to hazmat information and relieve the flight crew of the responsibility of communicating this information to Air Traffic Control (ATC) and Aircraft Rescue and Firefighting (ARFF) personnel.

Greenhouse gas emissions would remain the same under this proposed amendment.

2) More closely harmonize with the ICAO TI in regard to intermediate packaging requirements for certain low and medium danger hazardous materials. Deleting the assignment of special provisions A3 (partial) and A6 (for liquids) more closely harmonizes the HMR with the packing instructions of the ICAO TI and removes a requirement that, according to the petitioner, is a barrier to trade for U.S. exports, while still maintaining an appropriate level of safety. Existing requirements in § 173.27(d) and (e) for inner packagings to have a secondary means of closure and to be placed in either a rigid and leakproof receptacle or an intermediate packaging with absorbent material make special provisions A3 and A6 redundant for PG I commodities. Additionally, the requirements in § 173.27(d) for inner packagings to have a secondary means of closure or a leakproof liner

or bag adequately address the hazards that special provision A6 was designed to mitigate for PG II and III liquid materials.

Greenhouse gas emissions would remain the same under this proposed amendment.

3) Add an exception to allow passengers, with the approval of the operator, to bring on board an aircraft a portable medical electronic device that exceeds the lithium battery limits in § 175.10(a)(18)(i). Harmonizing with the ICAO TI in this area would assist the traveling public who rely on their portable medical electronic devices. This revision will be consistent with the FAA Modernization and Reform Act. PHMSA has found no data on increased incidents in countries allowing the ICAO TI lithium battery limits for portable electronic medical devices.

Greenhouse gas emissions would remain the same under this proposed amendment.

4) Amend the Package Inspection and Securing Requirements. Harmonizing with the ICAO TI in this area will address the overly prescriptive requirements for package inspection and securing, which currently result in acceptance rejections from airlines and freight forwarders. Further, harmonization will result in more targeted and effective training and thereby enhanced environmental protection. These proposed amendments will reduce inconsistent hazardous materials regulations, which hamper compliance training efforts.

Greenhouse gas emissions would remain the same under this proposed amendment.

4. Agencies Consulted

PHMSA has coordinated with the U.S. Federal Aviation Administration in the development of this proposed rule. PHMSA will consider the views expressed in comments to the NPRM submitted by members of the public, State and local governments, and industry.

5. Conclusion

The provisions of this proposed rule build on current regulatory requirements to enhance the transportation safety and security of shipments of hazardous materials transported by aircraft, thereby reducing the risks of an accidental or intentional release of hazardous materials and consequent environmental damage. PHMSA believes the net environmental impact will be positive and that there are no significant environmental impacts associated with this proposed rule.

PHMSA welcomes any views, data, or information related to environmental impacts that may result if the proposed requirements are adopted, as well as possible alternatives and their environmental impacts.

J. Privacy Act

Anyone is able to search the electronic form of any written communications and comments received into any of our dockets by the name of the individual submitting the document (or signing the document, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the Federal

Register, 65 FR 19477 (April 11, 2000) or you may visit http://www.dot.gov/privacy.html.

K. Executive Order 13609 and International Trade Analysis

Under Executive Order 13609, "Promoting International Regulatory Cooperation," 77 FR 26413 (May 4, 2012), agencies must consider whether the impacts associated with significant variations between domestic and international regulatory approaches are unnecessary or may impair the ability of American business to export and compete internationally. In meeting shared challenges involving health, safety, labor, security, environmental, and other issues, international regulatory cooperation can identify approaches that are at least as protective as those that are or would be adopted in the absence of such cooperation. International regulatory cooperation can also reduce, eliminate, or prevent unnecessary differences in regulatory requirements.

Similarly, the Trade Agreements Act of 1979, Pub. L. 96-39, as amended by the Uruguay Round Agreements Act, Pub. L. 103-465, prohibits Federal agencies from establishing any standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. For purposes of these requirements, Federal agencies may participate in the establishment of international standards, so long as the standards have a legitimate domestic objective, such as providing for safety, and do not operate to exclude imports that meet this objective. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards.

PHMSA and the FAA participate in the establishment of international standards to

protect the safety of the American public, and we have assessed the effects of the proposed rule to ensure that it does not cause unnecessary obstacles to foreign trade. In fact, the proposed rule is designed to facilitate international trade by eliminating differences between the domestic and international air transportation requirements. Accordingly, this rulemaking is consistent with Executive Order 13609 and PHMSA's obligations under the Trade Agreement Act, as amended.

L. National Technology Transfer and Advancement Act

The National Technology Transfer and Advancement Act of 1995, 15 U.S.C. 272 note, directs Federal agencies to use voluntary consensus standards in their regulatory activities unless doing so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., specification of materials, test methods, or performance requirements) that are developed or adopted by voluntary consensus standard bodies. This proposed rule does not involve voluntary consensus standards.

V. List of Subjects and Regulations Text

49 CFR Part 172

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

49 CFR Part 175

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

In consideration of the foregoing, PHMSA proposes to amend 49 CFR chapter I as follows:

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

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

   Authority: 49 U.S.C. 5101–5128, 44701; 49 CFR 1.81, 1.96 and 1.97.

2. In § 172.101, the Hazardous Materials Table is amended by revising the following entries in the appropriate alphabetical sequence:

§ 172.101 Purpose and use of the hazardous materials table.

* * * * *

Sym-bols	Hazardous materials descrip-tions and proper shipping names	Hazard class or division	Identi-fication Numbers	PG	Label Codes	Special Provisions (§ 172.102)	(8)			(9)		(10)	
							Packaging (§ 173.***)			Quantity limitations (see §§ 173.27 and 175.75)		Vessel stowage	
							Excep-tions	Non-bulk	Bulk	Passenger aircraft/rail	Cargo air-craft only	Loca-tion	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	*		*		*		*		*		*		*
	Acetaldehyde	3	UN1089	I	3	B16, T11, TP2, TP7	None	201	243	Forbidden	30 L	E	
	*		*		*		*		*		*		*
	Acetic acid, glacial or Acetic acid solution, with more than 80 percent acid, by mass	8	UN2789	II	8, 3	A3, A7, A10, B2, IB2, T7, TP2	154	202	243	1 L	30 L	A	
	Acetic acid solution, not less than 50 percent but not more than 80 percent acid, by mass	8	UN2790	II	8	148, A3, A7, A10, B2, IB2, T7, TP2	154	202	242	1 L	30 L	A	
	*		*		*		*		*		*		*
	Acetic anhydride	8	UN1715	II	8, 3	A3, A7, A10, B2, IB2, T7, TP2	154	202	243	1 L	30 L	A	40
	*		*		*		*		*		*		*
	Acetyl chloride	3	UN1717	II	3, 8	A3, A7, IB1, N34, T8, TP2	150	202	243	1 L	5 L	B	40
	*		*		*		*		*		*		*
	Alkali metal alloys, liquid, n.o.s	4.3	UN1421	I	4.3	A2, A7, B48, N34	None	201	244	Forbidden	1 L	D	13, 52, 148
	Alkali metal amalgam, liquid	4.3	UN1389	I	4.3	A2, A7, N34	None	201	244	Forbidden	1 L	D	13, 40, 52, 148
	*		*		*		*		*		*		*

	Alkali metal dispersions, flammable or Alkaline earth metal dispersions, flammable	4.3	UN3482	I	4.3, 3	A2, A7	None	201	244	Forbidden	1 L	D	13, 52, 148
	Alkali metal dispersions, or Alkaline earth metal dispersions	4.3	UN1391	I	4.3	A2, A7	None	201	244	Forbidden	1 L	D	13, 52, 148
	*		*		*		*		*		*		*
	Alkylphenols, liquid, n.o.s.(including C2-C12 homologues)	8	UN3145	I	8	T14, TP2	None	201	243	0.5 L	2.5 L	B	
				II	8	IB2, T11, TP2, TP27	154	202	242	1 L	30 L	B	
				III	8	IB3, T7, TP1, TP28	154	203	241	5 L	60 L	A	
	*		*		*		*		*		*		*
	Allyl iodide	3	UN1723	II	3, 8	A3, IB1, N34, T7, TP2, TP13	150	202	243	1 L	5 L	B	40
	*		*		*		*		*		*		*
G	Amine, liquid, corrosive, flammable, n.o.s. or Polyamines, liquid, corrosive, flammable, n.o.s	8	UN2734	I	8, 3	N34, T14, TP2, TP27	None	201	243	0.5 L	2.5 L	A	52
				II	8, 3	IB2, T11, TP2, TP27	None	202	243	1 L	30 L	A	52
G	Amines, liquid, corrosive, n.o.s.,or Polyamines, liquid, corrosive, n.o.s.	8	UN2735	I	8	B10, N34, T14, TP2, TP27	None	201	243	0.5 L	2.5 L	A	52
				II	8	B2, IB2, T11, TP1, TP27	154	202	242	1 L	30 L	A	52
				III	8	IB3, T7, TP1, TP28	154	203	241	5 L	60 L	A	52
	*		*		*		*		*		*		*
	Amyl mercaptan	3	UN1111	II	3	A3, IB2, T4, TP1	None	202	242	5 L	60 L	B	95, 102
	*		*		*		*		*		*		*
	Antimony pentafluoride	8	UN1732	II	8, 6.1	A3, A7, A10, IB2, N3, N36, T7, TP2	None	202	243	Forbidden	30 L	D	40, 44, 89, 100, 141
	*		*		*		*		*		*		*

	Benzyl chloroformatef	8	UN1739	I	8	B4, N41, T10, TP2, TP13	None	201	243	Forbidden	2.5 L	D	40
	*		*		*		*		*		*		*
	Boron trifluoride diethyl etherate	8	UN2604	I	8, 3	A19, T10, TP2	None	201	243	0.5 L	2.5 L	D	40
	*		*		*		*		*		*		*
	Butyl mercaptan	3	UN2347	II	3	A3, IB2, T4, TP1	150	202	242	5 L	60 L	D	52, 95, 102
	*		*		*		*		*		*		*
	Chlorite solution	8	UN1908	II	8	A3, A7, B2, IB2, N34, T7, TP2, TP24	154	202	242	1 L	30 L	B	26, 44, 89, 100, 141
				III	8	A3, A7, B2, IB3, N34, T4, TP2, TP24	154	203	241	5 L	60 L	B	26, 44, 89, 100, 141
	*		*		*		*		*		*		*
	2-Chloropropene	3	UN2456	I	3	N36, T11, TP2	150	201	243	1 L	30 L	E	
	*		*		*		*		*		*		*
	Chromium oxychloride	8	UN1758	I	8	A7, B10, N34, T10, TP2	None	201	243	0.5 L	2.5 L	C	40, 66, 74, 89, 90
	*		*		*		*		*		*		*
	Chromosulfuric acid	8	UN2240	I	8	A7, B4, B6, N34, T10, TP2, TP13	None	201	243	0.5L	2.5L	B	40, 66, 74, 89, 90
	*		*		*		*		*		*		*
G	Corrosive liquid, acidic, inorganic, n.o.s	8	UN3264	I	8	B10, T14, TP2, TP27	None	201	243	0.5 L	2.5 L	B	40
				II	8	386, B2, IB2, T11, TP2, TP27	154	202	242	1 L	30 L	B	40
				III	8	IB3, T7, TP1, TP28	154	203	241	5 L	60 L	A	40
G	Corrosive liquid, acidic, organic, n.o.s	8	UN3265	I	8	B10, T14, TP2, TP27	None	201	243	0.5 L	2.5 L	B	40
				II	8	148,B2, IB2, T11, TP2, TP27	154	202	242	1 L	30 L	B	40

				III	8	386, IB3, T7, TP1, TP28	154	203	241	5 L	60 L	A	40
G	Corrosive liquid, basic, inorganic, n.o.s	8	UN3266	I	8	T14, TP2, TP27	None	201	243	0.5 L	2.5 L	B	40, 52
				II	8	386, B2, IB2, T11, TP2, TP27	154	202	242	1 L	30 L	B	40, 52
				III	8	IB3, T7, TP1, TP28	154	203	241	5 L	60 L	A	40, 52
G	Corrosive liquid, basic, organic, n.o.s.	8	UN3267	I	8	B10, T14, TP2, TP27	None	201	243	0.5 L	2.5 L	B	40, 52
				II	8	B2, IB2, T11, TP2, TP27	154	202	242	1 L	30 L	B	40, 52
				III	8	IB3, T7, TP1, TP28	154	203	241	5 L	60 L	A	40, 52
G	Corrosive liquid, self-heating, n.o.s.	8	UN3301	I	8, 4.2	B10	None	201	243	0.5 L	2.5 L	D	
				II	8, 4.2	B2, IB1	154	202	242	1 L	30 L	D	
G	Corrosive liquids, flammable, n.o.s.	8	UN2920	I	8, 3	B10, T14, TP2, TP27	None	201	243	0.5 L	2.5 L	C	25, 40
				II	8, 3	B2, IB2, T11, TP2, TP27	154	202	243	1 L	30 L	C	25, 40
G	Corrosive liquids, n.o.s	8	UN1760	I	8	A7, B10, T14, TP2, TP27	None	201	243	0.5 L	2.5 L	B	40
				II	8	B2, IB2, T11, TP2, TP27	154	202	242	1 L	30 L	B	40
				III	8	IB3, T7, TP1, TP28	154	203	241	5 L	60 L	A	40
G	Corrosive liquids, oxidizing, n.o.s.	8	UN3093	I	8, 5.1	A7	None	201	243	Forbidden	2.5 L	C	89
				II	8, 5.1	A7, IB2	None	202	243	1 L	30 L	C	89
G	Corrosive liquids, toxic, n.o.s.	8	UN2922	I	8, 6.1	A7, B10, T14, TP2, TP13, TP27	None	201	243	0.5 L	2.5 L	B	40
				II	8, 6.1	B3, IB2, T7, TP2	154	202	243	1 L	30 L	B	40
				III	8, 6.1	IB3, T7, TP1, TP28	154	203	241	5 L	60 L	B	40
G	Corrosive liquids, water-reactive, n.o.s	8	UN3094	I	8, 4.3	A7	None	201	243	Forbidden	1 L	E	13, 148
				II	8, 4.3	A7	None	202	243	1 L	5 L	E	13, 148

	*		*		*		*		*		*		*
	Dichloroacetic acid	8	UN1764	II	8	A3, A7, B2, IB2, N34, T8, TP2	154	202	242	1 L	30 L	A	
	*		*		*		*		*		*		*
	Dichloroacetyl chloride	8	UN1765	II	8	A3, A7, B2, B6, IB2, N34, T7, TP2	154	202	242	1 L	30 L	D	40
	*		*		*		*		*		*		*
	Difluorophosphoric acid, anhydrous	8	UN1768	II	8	A7, B2, IB2, N5, N34, T8, TP2	None	202	242	1 L	30 L	A	40
	*		*		*		*		*		*		*
G	Disinfectant, liquid, corrosive, n.o.s.	8	UN1903	I	8	A7, B10, T14, TP2, TP27	None	201	243	0.5 L	2.5 L	B	
	*		*		*		*		*		*		*
G	Dyes, liquid, corrosive, n.o.s. or Dye intermediates, liquid, corrosive, n.o.s	8	UN2801	I	8	11, B10, T14, TP2, TP27	None	201	243	0.5 L	2.5 L	A	
				II	8	11, B2, IB2, T11, TP2, TP27	154	202	242	1 L	30 L	A	
				III	8	11, IB3, T7, TP1, TP28	154	203	241	5 L	60 L	A	
	*		*		*		*		*		*		*
	Ethyl mercaptan	3	UN2363	I	3	T11, TP2, TP13	None	201	243	Forbidden	30 L	E	95, 102
	*		*		*		*		*		*		*
	Ethyldichlorosilane	4.3	UN1183	I	4.3, 8, 3	A2, A7, N34, T14, TP2, TP7, TP13	None	201	244	Forbidden	1 L	D	21, 28, 40, 49, 100
	*		*		*		*		*		*		*
	Fluoroboric acid	8	UN1775	II	8	A7, B2, B15, IB2, N3, N34, T7, TP2	154	202	242	1 L	30 L	A	

	Fluorophosphoric acid anhydrous	8	UN1776	II	8	A7, B2, IB2, N3, N34, T8, TP2	None	202	242	1 L	30 L	A	
	*		*		*		*		*		*		*
	Fluorosilicic acid	8	UN1778	II	8	A7, B2, B15, IB2, N3, N34, T8, TP2	None	202	242	1 L	30 L	A	
	Fluorosulfonic acid	8	UN1777	I	8	A7, A10, B6, B10, N3, N36, T10, TP2	None	201	243	0.5 L	2.5 L	D	40
	*		*		*		*		*		*		*
	Hexafluorophosphoric acid	8	UN1782	II	8	A7, B2, IB2, N3, N34, T8, TP2	None	202	242	1 L	30 L	A	
	*		*		*		*		*		*		*
	Hydrazine, anhydrous	8	UN2029	I	8, 3, 6.1	A7, A10, B7, B16, B53	None	201	243	Forbidden	2.5 L	D	40, 52, 125
	*		*		*		*		*		*		*
	Hydriodic acid	8	UN1787	II	8	A3, B2, IB2, N41, T7, TP2	154	202	242	1 L	30 L	C	
				III	8	IB3, T4, TP1	154	203	241	5 L	60 L	C	8
	*		*		*		*		*		*		*
	Hydrobromic acid, with not more than 49 percent hydrobromic acid	8	UN1788	II	8	A3, B2, B15, IB2, N41, T7, TP2	154	202	242	1 L	30 L	C	
				III	8	A3, IB3, T4, TP1	154	203	241	5 L	60 L	C	8
	*		*		*		*		*		*		*
	Hydrochloric acid	8	UN1789	II	8	386, A3, B3, B15, B133, IB2, N41, T8, TP2	154	202	242	1 L	30 L	C	
				III	8	A3, IB3, T4, TP1	154	203	241	5 L	60 L	C	8
	*		*		*		*		*		*		*

	Hydrofluoric acid and Sulfuric acid mixtures	8	UN1786	I	8, 6.1	A7, B15, B23, N5, N34, T10, TP2, TP13	None	201	243	Forbidden	2.5 L	D	40
	*		*		*		*		*		*		*
	Hydrofluoric acid, with more than 60 percent strength	8	UN1790	I	8, 6.1	A7, B4, B15, B23, N5, N34, T10, TP2, TP13	None	201	243	0.5 L	2.5 L	D	12, 25, 40
	Hydrofluoric acid, with not more than 60 percent strength	8	UN1790	II	8, 6.1	A7, B15, IB2, N5, N34, T8, TP2	154	202	243	1 L	30 L	D	12, 25, 40
	*		*		*		*		*		*		*
	Hydrogen peroxide and peroxyacetic acid mixtures, stabilized with acids, water, and not more than 5 percent peroxyacetic acid	5.1	UN3149	II	5.1, 8	145, A2, A3, B53, IB2, IP5, T7, TP2, TP6, TP24	None	202	243	1 L	5 L	D	25, 66, 75
	*		*		*		*		*		*		*
	Hydrogen peroxide, aqueous solutions with not less than 20 percent but not more than 40 percent hydrogen peroxide (stabilized as necessary)	5.1	UN2014	II	5.1, 8	A2, A3, B53, IB2, IP5, T7, TP2, TP6, TP24, TP37	None	202	243	1 L	5 L	D	25, 66, 75
	*		*		*		*		*		*		*
	Lithium aluminum hydride, ethereal	4.3	UN1411	I	4.3, 3	A2, A11, N34	None	201	244	Forbidden	1 L	D	13, 40, 148
	*		*		*		*		*		*		*
	Mercaptans, liquid, flammable, toxic, n.o.s. or Mercaptan mixtures, liquid, flammable, toxic, n.o.s	3	UN1228	II	3, 6.1	IB2, T11, TP2, TP27	None	202	243	Forbidden	60 L	B	40, 95, 102
				III	3, 6.1	B1, IB3, T7, TP1, TP28	150	203	242	5 L	220 L	A	40, 95, 102
	Mercaptans, liquid, toxic, flammable, n.o.s. or Mercaptan mixtures, liquid, toxic, flammable, n.o.s., flash point not less than 23 degrees C	6.1	UN3071	II	6.1, 3	IB2, T11, TP2, TP13, TP27	153	202	243	5 L	60 L	C	40, 102, 121
	*		*		*		*		*		*		*
	Methyldichlorosilane	4.3	UN1242	I	4.3, 8, 3	A2, A7, B6, B77, N34, T14, TP2, TP7, TP13	None	201	243	Forbidden	1 L	D	21, 28, 40, 49, 100
	*		*		*		*		*		*		*

	Morpholine	8	UN2054	I	8, 3	T10, TP2	None	201	243	0.5 L	2.5 L	A	
	*		*		*		*		*		*		*
	Nitric acid other than red fuming, with at least 65 percent, but not more than 70 percent nitric acid	8	UN2031	II	8, 5.1	B2, B47, B53, IB2, IP15, T8, TP2	None	158	242	Forbidden	30 L	D	66, 74, 89, 90
	Nitric acid other than red fuming, with more than 20 percent and less than 65 percent nitric acid	8	UN2031	II	8	B2, B47, B53, IB2, IP15, T8, TP2	None	158	242	Forbidden	30 L	D	44, 66, 74, 89, 90
	Nitric acid other than red fuming with not more than 20 percent nitric acid	8	UN2031	II	8	B2, B47, B53, IB2, T8, TP2	None	158	242	1 L	30 L	D	
	*		*		*		*		*		*		*
	Nitric acid other than red fuming, with more than 70 percent nitric acid	8	UN2031	I	8, 5.1	B47, B53, T10, TP2, TP12, TP13	None	158	243	Forbidden	2.5 L	D	44, 66, 89, 90, 110, 111
	*		*		*		*		*		*		*
	Nitrohydrochloric acid	8	UN1798	I	8	B10, N41, T10, TP2, TP13	None	201	243	Forbidden	2.5 L	D	40, 66, 74, 89, 90
	*		*		*		*		*		*		*
	Nitrosylsulfuric acid, liquid	8	UN2308	II	8	A3, A7, B2, IB2, N34, T8, TP2	154	202	242	1 L	30 L	D	40, 66, 74, 89, 90
	*		*		*		*		*		*		*
	Organotin compounds, liquid, n.o.s.	6.1	UN2788	I	6.1	N33, N34, T14, TP2, TP13, TP27	None	201	243	1 L	30 L	B	40
				II	6.1	A3, IB2, N33, N34, T11, TP2, TP13, TP27	153	202	243	5 L	60 L	A	40
				III	6.1	IB3, T7, TP2, TP28	153	203	241	60 L	220 L	A	40
	*		*		*		*		*		*		*
G	Oxidizing liquid, corrosive, n.o.s	5.1	UN3098	I	5.1, 8	62	None	201	244	Forbidden	2.5 L	D	13, 56, 58, 138
				II	5.1, 8	62, IB1	None	202	243	1 L	5 L	B	13, 56, 58, 138
				III	5.1, 8	62, IB2	152	203	242	2.5 L	30 L	B	13, 56, 58, 138
G	Oxidizing liquid, n.o.s	5.1	UN3139	I	5.1	62, 127, A2	None	201	243	Forbidden	2.5 L	D	56, 58, 138

				II	5.1	62, 127, 148, A2, IB2	152	202	242	1 L	5 L	B	56, 58, 138
				III	5.1	62, 127, 148, A2, IB2	152	203	241	2.5 L	30 L	B	56, 58, 138
G	Oxidizing liquid, toxic, n.o.s	5.1	UN3099	I	5.1, 6.1	62	None	201	244	Forbidden	2.5 L	D	56, 58, 138
				II	5.1, 6.1	62, IB1	152	202	243	1 L	5 L	B	56, 58, 95, 138
				III	5.1, 6.1	62, IB2	152	203	242	2.5 L	30 L	B	56, 58, 95, 138
	*		*		*		*		*		*		*
	Perchloric acid with more than 50 percent but not more than 72 percent acid, by mass	5.1	UN1873	I	5.1, 8	A2, N41, T10, TP1	None	201	243	Forbidden	2.5 L	D	66
	*		*		*		*		*		*		*
	Phosphorus tribromide	8	UN1808	II	8	A3, A7, B2, B25, IB2, N34, N43, T7, TP2	None	202	242	Forbidden	30 L	C	40
	*		*		*		*		*		*		*
	Propanethiols	3	UN2402	II	3	IB2, T4, TP1, TP13	150	202	242	5 L	60 L	E	95, 102
	*		*		*		*		*		*		*
	Propylene oxide	3	UN1280	I	3	N34, T11, TP2, TP7	None	201	243	1 L	30 L	E	40
	*		*		*		*		*		*		*
	1,2-Propylenediamine	8	UN2258	II	8, 3	A3, IB2, N34, T7, TP2	None	202	243	1 L	30 L	A	40
	Propyleneimine, stabilized	3	UN1921	I	3, 6.1	N34, T14, TP2, TP13	None	201	243	1 L	30 L	B	40
	*		*		*		*		*		*		*
	Selenium oxychloride	8	UN2879	I	8, 6.1	A7, N34, T10, TP2, TP13	None	201	243	0.5 L	2.5 L	E	40
	*		*		*		*		*		*		*
	Silicon tetrachloride	8	UN1818	II	8	A3, B2, B6, T10, TP2, TP7, TP13	None	202	242	Forbidden	30 L	C	40

	*		*		*		*		*		*		*
	Sulfur chlorides	8	UN1828	I	8	5, A7, A10, B10, B77, N34, T20, TP2	None	201	243	Forbidden	2.5 L	C	40
	*		*		*		*		*		*		*
	Sulfuric acid, fuming with less than 30 percent free sulfur trioxide	8	UN1831	I	8	A7, N34, T20, TP2,TP13	None	201	243	Forbidden	2.5 L	C	14, 40
	*		*		*		*		*		*		*
	Trichloroacetic acid, solution	8	UN2564	II	8	A3, A7, B2, IB2, N34, T7, TP2	154	202	242	1 L	30 L	B	
				III	8	A3, A7, IB3, N34, T4, TP1	154	203	241	5 L	60 L	B	8
	*		*		*		*		*		*		*
	Trifluoroacetic acid	8	UN2699	I	8	A7, B4, N3, N34, N36, T10, TP2	None	201	243	0.5 L	2.5 L	B	12, 25, 40
	*		*		*		*		*		*		*
	Valeryl chloride	8	UN2502	II	8, 3	A3, A7, B2, IB2, N34, T7, TP2	154	202	243	1 L	30 L	C	40
	*		*		*		*		*		*		*
	Vanadium oxytrichloride	8	UN2443	II	8	A3, A7, B2, B16, IB2, N34, T7, TP2	154	202	242	Forbidden	30 L	C	40
	*		*		*		*		*		*		*
	Vanadium tetrachloride	8	UN2444	I	8	A7, B4, N34, T10, TP2	None	201	243	Forbidden	2.5 L	C	40
	*		*		*		*		*		*		*
	Vinyl ethyl ether, stabilized	3	UN1302	I	3	T11, TP2	None	201	243	1 L	30 L	D	
	*		*		*		*		*		*		*
	Xylyl bromide, liquid	6.1	UN1701	II	6.1	A3, A7, IB2, N33, T7, TP2, TP13	None	340	None	Forbidden	60 L	D	40

	*		*		*		*		*		*		*

* * * * *

3. In § 172.102 paragraph (c)(2), special provision A3 is revised as follows:

§ 172.102 Special provisions.

* * * * *

(c) * * *

(2) * * *

A3 For combination packagings, if glass inner packagings (including ampoules) are used, they must be packed with absorbent material in tightly closed rigid and leakproof receptacles before packing in outer packagings.

* * * * *

PART 175—CARRIAGE BY AIRCRAFT

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

Authority: 49 U.S.C. 5101–5128, 44701; 49 CFR 1.81 and 1.97.

5. In § 175.10, paragraphs (a)(18) and (a)(18)(i) are revised to read as follows:

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

(a) * * *

(18) Except as provided in § 173.21 of this subchapter, portable electronic devices (e.g., watches, calculating machines, cameras, cellular phones, laptop and notebook computers, camcorders, medical devices etc.) containing dry cells or dry batteries (including lithium cells or batteries) and spare dry cells or batteries for these devices, when carried by passengers or crew members for personal use. Portable electronic devices powered by lithium batteries may be carried in either checked or carry-

on baggage. Spare lithium batteries must be carried in carry-on baggage only. Each installed or spare lithium battery must be of a type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, part III, sub-section 38.3 and each spare lithium battery must be individually protected so as to prevent short circuits (e.g., by placement in original retail packaging, by otherwise insulating terminals by taping over exposed terminals, or placing each battery in a separate plastic bag or protective pouch). In addition, each installed or spare lithium battery must not exceed the following:

(i) For a lithium metal battery, the lithium content must not exceed 2 grams. With the approval of the operator, portable medical electronic devices (e.g. automated external defibrillators (AED), nebulizer, continuous positive airway pressure (CPAP), etc.) may contain lithium metal batteries exceeding 2 grams but not exceeding 8 grams. No more than two individually protected lithium metal batteries each exceeding 2 grams, but not exceeding 8 grams, may be carried as spare batteries for portable medical electronic devices in carry-on baggage and must be carried with the portable medical electronic device they are intended to operate;

* * * * *

6. In § 175.30, paragraphs (c) and (c)(1) are revised to read as follows:

§ 175.30 Inspecting shipments.

* * * * *

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

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

* * * * *

7. Section 175.33 is revised to read as follows:

§ 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. The operator of the aircraft must provide the pilot-in-command and dispatcher (or other ground support personnel with responsibilities for operational control of the aircraft as designated in the operator's manual) assigned to the flight with accurate and legible written information as early as practicable before departure of the aircraft, but in no case later than when the aircraft moves under its own power, which specifies at least the following:

(1) The air waybill number (when issued);

(2) The proper shipping name, hazard class, subsidiary risk(s) corresponding to a required label(s), packing group 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 (IBR, see § 171.7 of this subchapter). In the case of Class 1 materials, the compatibility group letter also must be shown.

(3) The total number of packages;

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

(5) 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. For consumer commodities, the information provided may be either the gross mass of each package or the average gross mass of the packages as shown on the shipping paper;

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

(8) The airport at which the package(s) is to be unloaded;

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

(10) 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; and

(11) The date of the flight;

(12) For UN1845, Carbon dioxide, solid (dry ice), only the UN number, proper shipping name, hazard class, total quantity in each hold aboard the aircraft, and the

airport at which the package(s) is to be unloaded must be provided.

(13) For UN 3480, Lithium ion batteries, and UN 3090, Lithium metal batteries, the information required by paragraph (a) of this section may be replaced by the UN number, proper shipping name, class, total quantity at each specific loading location, and whether the package must be carried on cargo aircraft only. UN 3480 (Lithium ion batteries) and UN 3090 (Lithium metal batteries) carried under an approval must meet all of the requirements of this section.

(b)(1) The information provided to the pilot-in-command must also include a signed confirmation or some other indication from the person responsible for loading the aircraft that there was no evidence of any damage to or leakage from the packages or any leakage from the unit load devices loaded on the aircraft;

(2) A copy of the written notification to pilot-in-command shall be readily available to the pilot-in-command and dispatcher 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.

(3) The pilot-in-command must indicate on a copy of the information provided to the pilot-in-command, or in some other way, that the information has been received.

(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 waybill 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 (which includes emergency responders) at reasonable times and locations, the documents or information required to be retained by this paragraph. In the event of a reportable incident, as defined in § 171.15 of this subchapter, the aircraft operator must make immediately available to an authorized official of a Federal, State, or local government agency (which includes emergency responders), 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.

* * * * *

8. In § 175.88, paragraph (c) is revised to read as follows:

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

* * * * *

(c) Packages containing hazardous materials must be:

(1) Secured in an aircraft in a manner that will prevent any shifting or change in the orientation of the packages;

(2) Protected from being damaged, including by the movement of baggage, mail, stores, or other cargo;

(3) Handled so that accidental damage is not caused through dragging or mishandling; and

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

Issued in Washington, DC on November 21, 2016 under authority delegated in 49 CFR 1.97.

William Schoonover,
Acting Associate Administrator for Hazardous Materials Safety,
Pipeline and Hazardous Materials Safety Administration.

[FR Doc. 2016-28403 Filed: 12/2/2016 8:45 am; Publication Date: 12/5/2016]