DEPARTMENT OF TRANSPORTATION
Pipeline and Hazardous Materials Safety Administration

49 CFR Parts 171, 172, 173, 175, and 178

RIN 2137–AE54

Hazardous Materials: Revision to Requirements for the Transportation of Batteries and Battery-Powered Devices; and Harmonization With the United Nations Recommendations, International Maritime Dangerous Goods Code, and International Civil Aviation Organization’s Technical Instructions; Correction

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

ACTION: Final rule; corrections.

SUMMARY: On January 14, 2009, the Pipeline and Hazardous Materials Safety Administration (PHMSA) published a final rule amending the Hazardous Materials Regulations (HMR) to maintain alignment with international standards by incorporating various amendments, including changes to proper shipping names, hazard classes, packing groups, special provisions, packaging authorizations, air transport quantity limitations, and vessel stowage requirements. The revisions were necessary to harmonize the HMR with recent changes to the International Civil Aviation Organization’s Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI), the International Maritime Dangerous Goods Code (IMDG Code), Transport Canada’s Transportation of Dangerous Goods Regulations (TDG Regulations), and the United Nations Recommendations on the Transport of Dangerous Goods (UN Recommendations). These revisions also included amendments and clarifications addressing the safe transportation of batteries and battery-powered devices. This final rule corrects several errors in the final rule. Because these amendments do not impose new requirements notice and public comment procedures are unnecessary.

I. Background

On January 14, 2009, PHMSA published a final rule under Docket Numbers PHMSA–2007–0065 (HM–224D) and PHMSA–2008–0005 (HM–215J) revising the Hazardous Materials Regulations (HMR) to maintain alignment with international standards by incorporating various amendments, including changes to proper shipping names, hazard classes, packing groups, special provisions, packaging authorizations, air transport quantity limitations, and vessel stowage requirements. The revisions were necessary to harmonize the HMR with recent changes to the International Civil Aviation Organization’s Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI), the International Maritime Dangerous Goods Code (IMDG Code), Transport Canada’s Transportation of Dangerous Goods Regulations (TDG Regulations), and the United Nations Recommendations on the Transport of Dangerous Goods (UN Recommendations). These revisions also included amendments and clarifications addressing the safe transportation of batteries and battery-powered devices. This final rule corrects several errors in the final rule. Because these amendments do not impose new requirements notice and public comment procedures are unnecessary.

II. Appeals to the Final Rule

We received two appeals to the January 14, 2009 final rule from the Dangerous Goods Transport Consulting, Inc. (DGTC) and HMT Associates, LLC. Both DGTC and HMT Associates express concern about the provisions of the final rule applicable to the transportation of fuel cell cartridges. These appeals are discussed in detail below.

A. Dangerous Goods Transport Consulting, Inc.

The January 14, 2009 final rule revised the requirements for the transportation of fuel cell cartridges under §173.230 of the HMR (49 CFR Parts 171–180). In addition to the proper shipping name for flammable liquid fuel cell cartridges (UN3473) already included in the §172.101 Hazardous Materials Table (HMT), the final rule added four new proper shipping names to the HMT to describe the range of fuels used in fuel cell cartridges: “Water-reactive substances,” UN3476; “Corrosive substances,” UN3477; “Liquefied flammable gas,” UN3478; and “Hydrogen in metal hydride,” UN3479.

As indicated by the expanded list of proper shipping names, fuel cell cartridges contain a number of different types of fuels with distinct hazards. Because of this variety of fuel types, we also amended §173.230 to provide comprehensive requirements including packaging to address the hazards for all fuel cell cartridge types. In its appeal, DGTC expressed concern that the provision in §173.230(g) prohibiting the air transport of fuel cell cartridges as limited quantities is not practical, reasonable or in the public interest. Specifically, DGTC asserts its understanding that prohibiting the air transport of fuel cell cartridges as limited quantities is not consistent with provisions in §173.230(b) that allow fuel cell cartridges conforming to §173.230(g) and defined as consumer commodities to be renamed “Consumer commodity” and reclassified as ORM–D since consumer commodities are authorized for transport by air in Column (9) of the HMT for the entry “Consumer commodity.” DGTC also asserts inconsistency with HMR provisions that allow for air transport of limited quantities of the fuel types typically found in the fuel cell cartridges in inner packagings subject to less stringent requirements than those for the fuel cell cartridges themselves.

DGTC further contends that the prohibition imposes unwarranted additional transportation costs and places emerging fuel cell technologies at a competitive disadvantage with other portable sources of electric power such as batteries and could be detrimental to their development as an alternative energy source.

The requirements applicable to the transportation of fuel cells adopted in the January 14, 2009 final rule were initially proposed in a notice of proposed rulemaking (NPRM) published July 31, 2008 (73 FR 44820) and are consistent with standards adopted internationally in the revised editions of the ICAO TI, the IMDG Code, and the UN Recommendations. Commenters to the NPRM supported the fuel cell proposals; no commenter addressed the potential economic impact of the proposals. We note, with regard to DGTC’s concern about the economic impact of the limited quantity prohibition, that harmonization
promotes safety and facilitates international trade by minimizing the costs and other burdens of complying with multiple or inconsistent safety requirements. Thus, the benefits of a harmonized domestic and international transportation regime outweigh the costs that may be incurred. As DGTC acknowledged in its appeal, the 2009–2010 ICAO TI also prohibit the transportation of fuel cell cartridges as limited quantities on aircraft.

Authorizing limited quantity exceptions for fuel cell cartridges in the HMR would be name apparent with the ICAO TI; such differing domestic and international requirements could cause confusion for both shippers and carriers, thereby adversely affecting safety.

We agree that the prohibition of air transport of limited quantities of fuels when contained in fuel cell cartridges is inconsistent with the current authority that allows for air transport of limited quantities of the same fuels found in fuel cell cartridges when shipped under the proper shipping name appropriate to the fuel (e.g., “Methanol, UN1230”). The ICAO Dangerous Goods Panel is currently considering adoption of limited quantity exceptions, based in part on a proposal from the U.S. Fuel Cell Council (FCC). Based on the decision of the ICAO Dangerous Goods Panel, we will consider adopting limited quantity exceptions for air transport of fuel cell cartridges in a future rulemaking. Therefore, in this final rule, we are not revising the current prohibition of air transport of fuel cell cartridges as limited quantities.

B. HMT Associates, LLC

The January 14, 2009 final rule also revised the packaging requirements for the transportation of fuel cell cartridges under § 173.230 of the HMR. Specifically, paragraph (e) of this section provides for authorized packagings; paragraph (f) sets forth additional requirements for transportation by aircraft. HMT Associates expressed concern that the provision to § 173.230(e) to require intermediate packaging for fuel cell cartridges packed with equipment for all modes of transportation, not just air transport, differs from the packaging requirements for fuel cell cartridges packed with equipment under international standards for highway, rail, and vessel transport. Specifically, HMT Associates states:

As it relates to fuel cell cartridges packed with equipment, the [UN Recommendations, as well as the IMDG Code] Packing Instruction P004 requires: (i) for fuel cell cartridges * * * packed with equipment, strong outer packagings. When fuel cell cartridges are packed with equipment, they shall be packed in inner packagings or placed in the outer packaging with cushioning material or divider(s) so that the fuel cell cartridges are protected against damage that may be caused by the movement or placement of the contents within the outer packaging.

With regard to the packaging requirements for fuel cell cartridges packed with equipment in the January 14, 2009 final rule, § 173.230(e)(2)(i) requires fuel cell:

Cartridges packed with equipment to be packed in intermediate packagings together with the equipment they are capable of powering. The fuel cell cartridges and the equipment must be packaged with cushioning material or dividers or inner packagings so that the fuel cell cartridge(s) are protected against damage that may be caused by the shifting or placement of the equipment and the cartridges within the outer packaging.

HMT Associates noted that the use of an intermediate packaging is required under the ICAO TI only when fuel cell cartridges packed with equipment are transported by aircraft (re: Packing Instruction 217).

Additionally, HMT Associates indicated that the wording of § 173.230(e)(2)(i) as adopted in the final rule is not as it was proposed in our NPRM. The wording was revised based on a comment submitted to the docket by FCC. The NPRM did not propose use of an intermediate packaging. In the preamble of the final rule [74 FR 2223], we agreed with FCC that the packaging requirements should be consistent with the UN Recommendations and the ICAO TI and indicated that revisions made to the regulatory text of the NPRM were intended to achieve consistency.

Finally, HMT Associates indicated that under the additional provisions for transportation by aircraft in § 173.230(f), the language specific to packaging requirements for fuel cell cartridges packed with equipment in the final rule differs from the proposed language in the NPRM. They noted that the proposed language is consistent with international standards by limiting the intermediate packaging requirement to the additional requirements for air transport rather than the language in the final rule that has additional requirements supplementing the general requirements for transport of fuel cell cartridges packed with equipment and transported by all modes.

HMT Associates is correct that the final rule language highlighted in its appeal was adopted in error. We intended that the requirement for intermediate packaging of fuel cell cartridges packed with equipment should be limited to packaging prepared for air transport consistent with the ICAO TI. This is also consistent with the suggested revisions to § 173.230(e) and (f) in comments we received from FCC in response to the July 31, 2008 NPRM. FCC suggested that we revise the language in paragraph (f) to include a requirement that:

For transportation by aircraft * * * when fuel cell cartridges are packed with equipment, they must be packed in intermediate packagings together with the equipment they are capable of powering * * *

Therefore, HMT Associates’ appeal is granted. In this final rule, we are correcting paragraphs (e)(2)(i) and (f)(4) in § 173.230 to fully align the fuel cell cartridges packaging requirements with the multimodal packaging requirements as prescribed in ICAO TI Packing Instruction 217 and UN Recommendations Packing Instruction P004. We are also making clarifying corrections to paragraphs (e) and (f) for consistency with changes made based on the appeal and for consistent use of terms in the section. For example, in paragraph (f)(2) we are correcting “fuel cells” to read “fuel cell cartridges” to clarify the applicability to fuel cell cartridges.

III. Corrections and Amendments

In this final rule, we are making editorial corrections and clarifying amendments to sections that were amended by the January 14, 2009 final rule for purposes of consistency with grammatical conventions and for consistency with similar provisions within the HMR. We are also making conforming amendments to sections in the HMR affected by the January 14, 2009 final rule. None of the clarifying or conforming amendments are new requirements but provide for a better understanding of the requirements adopted in the January 14, 2009 final rule. The corrections and amendments are as follows:

Part 171
Section 171.7

This section lists material incorporated by reference into the HMR. In the January 14, 2009 final rule, we updated the address for ICAO reference materials; however, we did not include the most current address. In this final rule, we are correcting the entry to reflect the current address.
Part 172

Section 172.101

This section outlines the purpose and instructions for use of the Hazardous Materials Table (HMT). We are removing an obsolete transitional period in paragraph (l)(3) and replacing it with a transition period specific to marking of cylinders containing “Chlorine, UN1017.” Under HM–215J, we revised the proper shipping name entry for “Chlorine” to include Division 5.1 (oxidizer) as an additional subsidiary hazard. Based on this revision, chlorine cylinders marked in accordance with CGA C–7, Appendix A (see § 172.400a) must now include the Division 5.1 subsidiary hazard number as part of the marking. To allow for additional time to incorporate this subsidiary hazard number as part of the marking, we are authorizing the use of preprinted cylinder markings without the Division 5.1 subsidiary hazard number until January 1, 2011.

We are also making a number of editorial corrections to entries in the § 172.101 Hazardous Materials Table (HMT). The editorial corrections are as follows:

- For the entry “Gasoline includes gasoline mixed with ethyl alcohol, with not more than 10% alcohol, UN1203,” the Special provisions in Column (7) are corrected to read “144, 177, B1, B33, IB2, T4, TP1.”
- The proper shipping name for the entry “Regulated medical waste, n.o.s. or Clinical waste, unspecified, n.o.s. or (BIO)Medical waste, n.o.s., or Biomedical waste, n.o.s. or Medical waste, n.o.s., UN3291” is corrected to read “Regulated medical waste, n.o.s. or Clinical waste, unspecified, n.o.s. or (BIO)Medical waste, n.o.s., or Biomedical waste, n.o.s. or Medical waste, n.o.s., UN3291.” This correction is a “remove/add.”
- The proper shipping name for the entry “Trimethylchlorosilane, UN1298” is corrected to read “Trimethylchlorosilane.” This correction is a “remove/add.”
- The information contained in the HMT for the following entries is being corrected by placing the information in the appropriate Columns of the:
  - “Receptacles, small, containing gas or gas cartridges (non-spillable) without release device, not refillable and not exceeding 1 L capacity, UN2037.”
  - “Receptacles, small, containing gas or gas cartridges (oxidizing) without release device, not refillable and not exceeding 1 L capacity, UN2037.”

Section 172.202

This section sets forth requirements for the description of hazardous materials on shipping papers. In paragraph (a)(4) of this section, we are correcting the last sentence to enclose the phrase “for example, ‘PG II’” in parentheses. The parentheses were inadvertently omitted in the January 14, 2009 final rule.

Section 172.322

This section specifies marking requirements for packaging used to transport marine pollutants. In paragraph (e)(2)(ii), the number “4” is corrected to read “3.9” and in paragraph (e)(2)(ii), the number “10” is corrected to read “9.8” for consistency with similar marking and labeling size specification requirements in the HMR.

Section 172.407

This section establishes specifications for labels printed on or affixed to packaging. In the January 14, 2009 final rule, we adopted a new CARGO AIRCRAFT ONLY label in § 172.448 of the HMR. The new label contains text that differs from the previous label—specifically, the phrase “CARGO AIRCRAFT ONLY” replaces the word “DANGER.” When we adopted the new label, we failed to make conforming amendments to the label specifications in § 172.407 that reference text from the old label. In this final rule, we are amending paragraph (c)(2) of § 172.407 to correctly reference the phrase “CARGO AIRCRAFT ONLY” and amending the text size specifications to require the letters to measure at least 6.3 mm (0.25 inches) in height. The size requirement for the letters has been reduced to accommodate the greater amount of text that must be displayed on the label as shown in § 172.448.

Section 172.448

This section specifies the design of the “CARGO AIRCRAFT ONLY” label. For consistency with the revisions discussed above in § 172.407, we are amending paragraph (c) of this section to emphasize conformance with the label specifications for a “CARGO AIRCRAFT ONLY” label in § 172.407 in addition to the specifications outlined in paragraph (c) of this section.

Part 173

Section 173.4a

This section specifies conditions for exception from the HMR requirements for the transport of non-spillable batteries. In this final rule, we are correcting the section heading “Exceptions for Non-spillable batteries” to read “Exceptions for non-spillable batteries.” In addition, in paragraph (b), we are correcting the word “nonspillable” in each place it appears to read “non-spillable.”
Section 173.206
This section specifies the packaging requirements for chlorosilanes. In the January 14, 2009 final rule, we added this new packaging section to the HMR to harmonize the new packaging requirements for water-reactive chlorosilanes adopted in the Fifteenth revised edition of the UN Recommendations. In our effort to harmonize with the international standards, we inadvertently omitted the authorization to use cylinders for these materials. Cylinders were previously authorized for use in transport of these materials under §§173.201 and 173.202. In this final rule, we are correcting paragraphs (e)(2) and (f) are correcting paragraphs (e)(2) and (f) are correcting paragraphs (e)(2) and (f) to reference the correct provision, specifically, Section 173.230, in this final rule, we clarified the provisions for the transport of batteries and battery-powered devices including the transport of vehicles and equipment powered by batteries. In paragraph (d), we included an incorrect reference to §173.185 regarding an exception to the prohibition of lithium metal batteries aboard passenger-carrying aircraft. In this final rule, we are correcting paragraph (d) to reference the correct provision, specifically, §172.102, Special Provision A101.

Section 173.230
This section specifies packaging requirements for fuel cell cartridges. Per the section II discussion of HMT Associates’ appeal, in this final rule, we are correcting paragraphs (a)(2) and (f) in §173.230 to clarify and align fully the fuel cell cartridge packaging requirements with the multimodal packaging requirements as prescribed in the ICAO TI Packing Instruction 217 and UN Recommendations Packing Instruction P004.

Sections 173.306
This section specifies conditions for exception from the HMR requirements for transportation of limited quantities of compressed gases. In the January 14, 2009 final rule, we adopted provisions for the transportation of limited quantities of Division 2.2 (non-flammable) compressed gases in nonrefillable plastic receptacles packaged in a strong outside packaging. These provisions are set forth in conditions for shipment of these gases in specification 25 and non-DOT specification plastic containers (§173.306(a)(5)) and in a new specification 25 for the construction of these plastic containers (§173.33b). See 74 FR at 2265, 2268–69. These requirements are consistent with revisions adopted in the Fifteenth revised edition of the UN Recommendations (6.2.4.2.2) and the 2009–2010 edition of the ICAO TI (6.4.2.3). We concluded that these inner plastic containers provide a level of safety equivalent to other authorized packaging, and we could eliminate the need for issuance of a special permit to allow the use of plastic containers for transport of limited quantities of Division 2.2 gases with no subsidiary risk.

Inner metal containers authorized for transport of limited quantities of compressed gas have historically been subjected to a hot water bath after filling to ensure the containers are free of leaks prior to being offered for transportation. See §173.306(a)(3)(v). Consistent with UN Recommendations and the ICAO TI, in the January 14, 2009 final rule, we adopted in §173.306(a)(5)(v) a similar hot water bath test requirement for the specification 25 and non-DOT specification plastic containers. The hot water bath test for plastic containers must be performed at temperatures and for a duration sufficient to achieve internal pressure requirements. These elevated temperatures may be destructive to the contents of containers or to the material of construction of plastic containers. Thus, the hot water bath test includes instruction for containers with contents sensitive to heat or containers made of plastic materials which soften at higher temperatures to be tested at a lower temperature. However, in adopting the hot water bath test provisions, we inadvertently left out the language specific to plastic materials which soften at the test temperature. In this final rule, we are correcting paragraph (a)(5)(v) to include language that plastic materials which soften at the higher test temperature of the hot water bath must be tested at the lower temperature range of 20 °C (68 °F) to 30 °C (86 °F).

Additionally, as part of the conditions for the shipment of limited quantities of Division 2.2 (non-flammable) compressed gases in plastic containers, we intended to adopt test methods alternative to the hot water bath test in §173.306, specifically, pressure and leakage tests subjected to each container prior to filling and a leakage test subjected to each container after filling. The provisions for alternative pressure and leakage tests to the hot water bath were incorrectly placed in §173.33b–8, rather than in §173.306 where they properly belong. In doing so, we inadvertently required manufacturers of the specification 2S plastic containers to perform the alternative pressure and leakage tests as part of their production run and then also required the filler to perform the hot water bath test. This misplacement of the pressure and leakage tests would put domestic manufacturers or fillers at a disadvantage as they were afforded the opportunity to utilize these tests as an alternative to the hot water bath test as they would be if transporting under the ICAO TI or under other international regulations that have adopted these provisions based on the UN Recommendations. We believe this intent was understood by the public and the regulated community. Therefore, to correct this error, in this final rule, we are (1) removing the alternative pressure and leakage test method provisions currently found in §173.33b–8(b); (2) adding these provisions to §173.306 as a new paragraph (a)(5)(vi); and (3) redesignating current paragraph (a)(5)(vi) containing the packaging marking requirements as new paragraph (a)(5)(vii).

Part 175
Section 175.10
This section specifies conditions for exception from the HMR requirements for the transport of hazardous materials aboard passenger aircraft by passengers, crewmembers, and air operators. In the January 14, 2009 final rule, we revised paragraph (a)(18) to expand the types of fuel cell cartridges permitted in carry-on baggage. Fuel cell cartridges permitted for transport by passengers and crewmembers must continue to conform to the rigorous performance criteria outlined in this section. For consistency with the provisions for fuel cell cartridges in §173.230, in this final rule, we are clarifying paragraph (a)(18) of this section to indicate that the maximum quantity of fuel for hydrogen in a metal hydride fuel cell cartridges is based on the water capacity of the fuel cell cartridges rather than the net quantity of fuel as is the case of all other types of fuels. Also, in this final rule, we are correcting a grammatical error in paragraph (a)(15)(iv)(B) by correcting...
Section 178.33b–7

This section specifies design qualification testing requirements for Specification 2S packaging. In this final rule, we are correcting the section heading “Specification 2S; inner nonrefillable plastic receptacles” (Reserved) to read “Specification 2S; inner nonrefillable plastic receptacles.”

Section 178.33b–7

In this final rule, we are correcting the section heading “Specification 2S; inner nonrefillable plastic receptacles” (Reserved) to read “Specification 2S; inner nonrefillable plastic receptacles.”

Section 178.33b–8

This section specifies production testing requirements for Specification 2S packaging. In this final rule, we are correcting the section heading “§ 178.33b–8 Production Tests” to read “§ 178.33b–8 Production Tests” and correcting paragraph (b) by removing the pressure and leak test requirements as discussed in § 173.306 above.

Section 178.703

The section specifies the packaging marking requirements for IBCs. In the January 14, 2009 final rule, we included an additional marking requirement for IBCs to display a symbol specifying the maximum permitted stacking load applicable when an IBC is in use, with a transition date until January 1, 2011. In this final rule, we are correcting the language adopted in the January 14, 2009 final rule in § 178.703 by adding a new paragraph (b)(7) to specify that the symbol is in addition to the marking requirements already in place in paragraph (a)(1) and not a part of the that marking sequence. Additionally, we are clarifying that the marking of the figure “0” that is required as part of the marking sequence in § 178.703(a)(1) is not required in association with the symbol for IBCs not capable of being stacked.

IV. Regulatory Analyses and Notices

A. Statutory/Legal Authority for This Rulemaking

This final rule is published under the following statutory authorities:
1. 49 U.S.C. 5103(b) authorizes the Secretary of Transportation to prescribe regulations for the safe transportation, including security, of hazardous material in interstate, interstate, and foreign commerce. This final rule corrects several errors in the January 14, 2009 final rule.
2. 49 U.S.C. 5120(b) 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. This final rule corrects errors made during the development of the January 14, 2009 final rule and printing process and makes amendments to conform to amendments made in the January 14, 2009 final rule.

B. Executive Order 12866 and DOT Regulatory Policies and Procedures

This final rule is not a significant regulatory action under section 3(f) of Executive Order 12866 and was not reviewed by the Office of Management and Budget. This final rule is a non-significant rule under the Regulatory Policies and Procedures of the Department of Transportation (44 FR 11034). The revisions adopted in this final rule do not alter the cost-benefit analysis and conclusions contained in the Regulatory Evaluation prepared for the January 14, 2009 final rule. The Regulatory Evaluation is available for review in the public docket for this rulemaking.

C. Executive Order 13132

This final rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 (“Federalism”), and the President’s memorandum on “Preemption” published in the Federal Register on May 22, 2009 (74 FR 24693). This final rule preempts State, local and Indian Tribe requirements but does not propose any regulation that has substantial direct effects on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government. Therefore, the consultation and funding requirements of Executive Order 13132 do not apply. The Federal hazardous 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 for certain subjects. The subjects are:
1. (1) The designation, description, and classification of hazardous materials;
2. (2) The packing, repacking, handling, labeling, marking, and placarding of hazardous materials;
3. (3) The preparation, execution, and use of shipping documents related to hazardous materials and requirements related to the number, contents, and placement of those documents;
4. (4) The written notification, recording, and reporting of the unintentional release in transportation of hazardous material; and
5. (5) The design, manufacture, fabrication, marking, maintenance, recondition, repair, or testing of a packaging or container represented, marked, certified, or sold as qualified for use in transporting hazardous material.

This final rule addresses covered subject items (1), (2), (3), and (5) above and preempts State, local, and Indian Tribe requirements not meeting the “substantively the same” standard. This final rule is necessary to incorporate changes adopted in international standards, effective January 1, 2009. If the changes in this final rule are not adopted in the HMR, U.S. companies, including numerous small entities competing in foreign markets, are at an economic disadvantage. These companies are forced to comply with a
dual system of regulations. The changes in this rulemaking are intended to avoid this result. Federal hazardous materials transportation law provides at section 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. The effective date of Federal preemption is April 5, 2010.

D. Executive Order 13175

This final rule was analyzed in accordance with the principles and criteria contained in Executive Order 13175 ("Consultation and Coordination with Indian Tribal Governments"). Because this final rule does not have Tribal implications, 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 Procedures and Policies

The Regulatory Flexibility Act (5 U.S.C. 601 et seq.) 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. The corrections and revisions contained in this final rule will have little or no effect on the regulated industry. Based on our assessment in the regulatory evaluation, to the January 14, 2009 final rule, I hereby certify that, while this rule applies to a substantial number of small entities, there will not be a significant economic impact on those small entities. A detailed Regulatory Flexibility analysis is available for review in the docket.

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

F. Paperwork Reduction Act

This final rule imposes no new information collection requirements.

G. Regulatory 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 final 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 to either State, local or Tribal governments, in the aggregate, or to the private sector, and is the least burdensome alternative that achieves the objective of the rule.

I. Environmental Assessment

The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to consider the consequences of major Federal actions and prepare a detailed statement on actions significantly affecting the quality of the human environment. In the January 14, 2009 final rule, we developed an assessment to determine the effects of these revisions on the environment and whether a more comprehensive environmental impact statement may be required. Our findings conclude that there are no significant environmental impacts associated with this final rule. Consistency in the regulations for the transportation of hazardous materials aids in shippers’ understanding of what is required and permits shippers to more easily comply with safety regulations and avoid the potential for environmental damage or contamination. For interested parties, a detailed environmental assessment is included in the January 14, 2009 final rule which is available in the public docket.

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

K. International Trade Analysis

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 participates in the establishment of international standards in order to protect the safety of the American public, and we have assessed the effects of the final rule to ensure that it does not exclude imports that meet this objective. Accordingly, this rulemaking is consistent with PHMSA’s obligations under the Trade Agreement Act, as amended.

List of Subjects

49 CFR Part 171

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

49 CFR Part 172

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

49 CFR Part 173

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

49 CFR Part 175

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

49 CFR Part 178

Hazardous materials transportation, Incorporation by reference, Motor vehicle safety, Packaging and containers, Reporting and recordkeeping requirements.
PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

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


2. In §171.7, in the paragraph (a)(3) table, the entry for “International Civil Aviation Organization (ICAO)” is revised to read as follows:

<table>
<thead>
<tr>
<th>Source and name of material</th>
<th>49 CFR reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Civil Aviation Organization (&quot;ICAO&quot;), 999 University Street, Montréal, Quebec H3C 5H7, Canada, 1–514–954–8219, <a href="http://www.icao.int">http://www.icao.int</a>:</td>
<td></td>
</tr>
<tr>
<td>ICAO Technical Instructions available from: INTEREG, International Regulations, Publishing and Distribution Organization, P.O. Box 60105, Chicago, IL 60660.</td>
<td></td>
</tr>
</tbody>
</table>

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

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


4. In §172.101, paragraph (l)(3) is revised and the Hazardous Materials Table is amended by removing, adding and revising entries, in the appropriate alphabetical sequence, to read as follows:

<table>
<thead>
<tr>
<th>Source and name of material</th>
<th>49 CFR reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>* * * * *</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$\text{§172.101 Purpose and use of the hazardous materials table.}$

<p>| * * * * * | |
| (l) * * * | |
| (3) Cylinders used for chlorine (UN1017) with preprinted markings conforming to §172.400a(a)(1)(ii) without the Division 5.1 subsidiary hazard number may continue to be used until January 1, 2011. | |</p>
<table>
<thead>
<tr>
<th>Symbols</th>
<th>Hazardous materials descriptions and proper shipping names</th>
<th>Hazard class or division</th>
<th>Identification numbers</th>
<th>PG</th>
<th>Label codes</th>
<th>Special provisions (§ 172.102)</th>
<th>Packaging (§ 173.***))</th>
<th>Quantity limitations</th>
<th>Vessel stowage</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
<td>(8)</td>
<td>(9)</td>
<td>(10)</td>
</tr>
<tr>
<td>[REMOVE]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulated medical waste, n.o.s. or Clinical waste, unspecified, n.o.s. or (BIO)-Medical waste, n.o.s., or Biomedical waste, n.o.s.</td>
<td>6.2UN3291 ... II ...</td>
<td>6.2 ... 134 ... 197 ... 197 ...</td>
<td>134 ... 197 ... 197 ...</td>
<td>No limit ... No limit ...</td>
<td>B ... 40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trimethyltrichlorosilane</td>
<td>3 UN1298 ... II ...</td>
<td>3, 8 ... A3, A7, B77, N14, T10, TP2, TP7, TP13.</td>
<td>None ... 206 ... 243 ... 1 L ... 5 L ...</td>
<td>E ... 40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[ADD]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulated medical waste, n.o.s. or Clinical waste, unspecified, n.o.s. or (BIO)-Medical waste, n.o.s., or Biomedical waste, n.o.s.</td>
<td>6.2UN3291 ... II ...</td>
<td>6.2 ... A13 ... 134 ... 197 ... 197 ...</td>
<td>No limit ... No limit ...</td>
<td>B ... 40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trimethylchlorosilane</td>
<td>3 UN1298 ... II ...</td>
<td>3, 8 ... A3, A7, B77, N14, T10, TP2, TP7, TP13.</td>
<td>None ... 206 ... 243 ... 1 L ... 5 L ...</td>
<td>E ... 40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[REVISE]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gasoline includes gasoline mixed with ethyl alcohol, with not more than 10% alcohol.</td>
<td>3 UN1203 ... II ...</td>
<td>3 ... 144, 177, B1, B33, IB2, T4, TP1.</td>
<td>150 ... 202 ... 242 ... 5 L ... 60 L ...</td>
<td>E ... 40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Receptacles, small, containing gas or gas cartridges (non-flammable) without release device, not refillable and not exceeding 1 L capacity.

<table>
<thead>
<tr>
<th>UN2037</th>
<th>Description</th>
<th>MOD</th>
<th>306</th>
<th>304</th>
<th>None</th>
<th>1 kg</th>
<th>15 kg</th>
<th>B</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2</td>
<td>2.2</td>
<td>2.2</td>
<td>306</td>
<td>304</td>
<td>None</td>
<td>1 kg</td>
<td>15 kg</td>
<td>B</td>
<td>40</td>
</tr>
</tbody>
</table>

Receptacles, small, containing gas or gas cartridges (oxidizing) without release device, not refillable and not exceeding 1 L capacity.

<table>
<thead>
<tr>
<th>UN2037</th>
<th>Description</th>
<th>MOD</th>
<th>306</th>
<th>304</th>
<th>None</th>
<th>1 kg</th>
<th>15 kg</th>
<th>B</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2</td>
<td>2.2, 5.1</td>
<td>A14</td>
<td>306</td>
<td>304</td>
<td>None</td>
<td>1 kg</td>
<td>15 kg</td>
<td>B</td>
<td>40</td>
</tr>
</tbody>
</table>
§ 172.202 Description of hazardous material on shipping papers.
(a) * * *
(4) * * * The packing group may be preceded by the letters “PG” (for example, “PG II”); and

§ 172.322 [Amended]
6. In § 172.322, in paragraph (e)(2)(i) introductory text, the number “4” is revised to read “3.9” and in paragraph (e)(2)(ii), the number “10” is revised to read “9.8”.

§ 172.407 Label specifications.
(c) * * *
(2) The CARGO AIRCRAFT ONLY label must be a rectangle measuring at least 110 mm (4.3 inches) in height by 100 mm (3.9 inches) by 100 mm (3.9 inches) in width. The words “CARGO AIRCRAFT ONLY” must be shown in letters measuring at least 6.3 mm (0.25 inches) in height.

§ 173.159a Exceptions for non-spillable batteries.

§ 173.206 Packaging requirements for chlorosilanes.
(c) Except for transportation by passenger aircraft, the following single packagings are authorized:
Steel drum: 1A1
Steel jerrican: 3A1
Plastic receptacle in steel drum: 6HA1 cylinders (for liquids in PG I), specification or UN standard, as prescribed for any compressed gas, except Specification 3HT and those prescribed for acetylene cylinders (for liquids in PG II), specification, as prescribed for any compressed gas, except Specification 8 and 3HT cylinders.

In §173.220, in paragraph (d), the first sentence is revised to read as follows:

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

* * * * *
(d) Lithium batteries. Except as provided in §172.102, Special Provision A101 of this subchapter, vehicles, engines and machinery powered by lithium metal batteries that are transported with these batteries installed are forbidden aboard passenger-carrying aircraft.

* * * * *

§173.230 Fuel cell cartridges containing hazardous material.

* * * * *
(e) * * *
(2) * * *
(i) Fuel cell cartridges packed with equipment must be packaged with cushioning material or divider(s) or inner packagings so that the fuel cell cartridges are protected against damage that may be caused by the shifting or placement of the equipment and cartridges within the packaging.

(ii) Fuel cell cartridges contained in equipment must be protected against short circuits and the entire fuel cell system must be protected from unintentional activation. The equipment must be securely cushioned in the outer packaging.

(f) * * *
(2) For fuel cell cartridges contained in equipment, fuel cell systems must not charge batteries during transport.

(3) For transportation aboard passenger aircraft, for fuel cell cartridges contained in equipment, each fuel cell system and fuel cell cartridge must conform to IEC PAS 62282–6–1 Ed. 1 (IBR, see §171.7 of this subchapter) or a standard approved by the Associate Administrator;

(4) When packed with equipment, fuel cell cartridges must be packed in an intermediate packaging along with the equipment they are capable of powering, and the intermediate packagings packed in a strong outer packaging. The maximum number of fuel cell cartridges in the intermediate packaging may not be more than the number required to power the equipment, plus two spares.

§173.306 Limited quantities of compressed gases.

(a) * * *
(5) * * *
(v) Except as provided in paragraph (a)(5)(vi) of this section, each container must be subjected to a test performed in a hot water bath; the temperature of the bath and the duration of the test must be such that the internal pressure reaches that which would be reached at 55 °C (131 °F) or 50 °C (122 °F) if the liquid phase does not exceed 95% of the capacity of the container at 50 °C (122 °F). If the contents are sensitive to heat, or if the container is made of plastic material which softens at this test temperature, the temperature of the bath must be set at between 20 °C (68 °F) and 30 °C (86 °F) but, in addition, one container in 2,000 must be tested at the higher temperature. No leakage or permanent deformation of a container may occur except that a plastic container may be deformed through softening provided that it does not leak.

(vi) As an alternative to the hot water bath test in paragraph (a)(5)(vi) of this section, testing may be performed as follows:

(A) Pressure and leak testing before filling. Each empty container must be subjected to a pressure equal to or in excess of the maximum expected in the filled containers at 55 °C (131 °F) (or 50 °C (122 °F) if the liquid phase does not exceed 95% of the capacity of the container at 50 °C (122 °F)). This must be at least two-thirds of the design pressure of the container. If any container shows evidence of leakage at a rate equal to or greater than 3.3 × 10⁻² mbarC L/s at the test pressure, distortion or other defect, it must be rejected; and

(B) Testing after filling. Prior to filling, the filler must ensure that the crimping equipment is set appropriately and the specified propellant is used before filling the container. Once filled, each container must be weighed and leak tested. The leak detection equipment must be sufficiently sensitive to detect at least a leak rate of 2.0 × 10⁻¹ mbarC L/s at 20 °C (68 °F). Any filled container which shows evidence of leakage, deformation, or excessive weight must be rejected.

§175—CARRIAGE BY AIRCRAFT

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


20. In §175.10, paragraphs (a)(15)(iv)(B) and (a)(18)(ii) are revised to read as follows:

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

(a) * * *
(15) * * *
(iv) * * *
(B) Is removed and placed in a strong, rigid packaging marked “NONSPILLABLE BATTERY” (unless fully enclosed in a rigid housing that is properly marked); or

* * * * *
(18) * * *
(ii) The maximum water capacity of a fuel cell cartridge for hydrogen in a metal hydride may not exceed 120 mL (4 fluid ounces). The maximum quantity of fuel in all other fuel cell cartridge types may not exceed:

(A) 200 mL (6.76 ounces) for liquids;

(B) 120 mL (4 fluid ounces) for liquefied gases in non-metallic fuel cell cartridges, or 200 mL (6.76 ounces) for liquefied gases in metal fuel cell cartridges;

(C) 200 g (7 ounces) for solids.

* * * * *

PART 178—SPECIFICATIONS FOR PACKAGINGS

21. The authority citation for part 178 continues to read as follows:


22. In §178.33b, the section heading is revised to read as follows:

§178.33b Specification 25; inner nonrefillable plastic receptacles.

* * * * *

23. Section 178.33b–7 is revised to read as follows:

§178.33b–7 Design qualification test.

(a) Drop testing. (1) To ensure that creep does not affect the ability of the container to retain the contents, each new design must be drop tested as follows: Three groups of twenty-five filled containers must be dropped from 1.8 m (5.9 ft) on to a rigid, non-resilient, flat and horizontal surface. One group must be conditioned at 38 °C (100 °F)
for 26 weeks, the second group for 100 hours at 50 °C (122 °F) and the third group for 18 hours at 55 °C (131 °F), prior to performing the drop test. The closure, or sealing component of the container, must not be protected during the test. The orientation of the test container at drop must be statistically random, but direct impact on the valve or valve closure must be avoided.

(2) **Criteria for passing the drop test:**
The containers must not break or leak.

(b) Design qualification testing must be completed if the design is manufactured with a new mold or if there is any change in the properties of the material of construction.

■ 24. In §178.33b–8, the section heading is revised to read as follows and paragraph (b) is removed and reserved:

**§178.33b–8 Production tests.**

* * * * *

■ 25. In §178.703, paragraph (a)(1)(vii) is revised and a new paragraph (b)(7) is added to read as follows:

**§178.703 Marking of IBCs.**

(a) * * *

(1) * * *

(ii) **Display the symbol in a durable and visible manner.**

(iii) The symbol must not be less than 100 mm (3.9 inches) by 100 mm (3.9 inches).

(iv) For IBCs designed for stacking, the maximum permitted stacking load applicable when the IBC is in use must be displayed with the symbol. The mass in kilograms (kg) marked above the symbol must not exceed the load imposed during the design test, as indicated by the marking in paragraph (a)(1)(vii) of this section, divided by 1.8. The letters and numbers indicating the mass must be at least 12 mm (0.48 inches).

(vii) The stacking test load in kilograms (kg). For IBCs not designed for stacking, the figure “0” must be shown.

* * * * *

(b) * * *

(7) The symbol applicable to an IBC designed for stacking or not designed for stacking, as appropriate, must be marked on all IBCs manufactured, repaired or remanufactured after January 1, 2011 as follows:

(i)