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November 27, 2006

Docket Management System  
U.S. Department of Transportation  
400 7<sup>th</sup> St., SW  
Nassif Building, Room PL-402  
Washington, D.C. 20590-0001

**Re: Comments on Docket HM-231 (PHMSA – 2006-25376); Hazardous Materials; Miscellaneous Packaging Amendments; Notice of Proposed Rulemaking**

To Whom It May Concern:

The Reusable Industrial Packaging Association (RIPA) appreciates this opportunity to comment on Docket HM-231. This proposed rulemaking raises important issues concerning hazardous materials packaging, many of which affect directly RIPA member companies.

RIPA represents companies throughout North America that manufacture, collect, transport, and recondition a wide variety of industrial packagings used for the storage and transportation of hazardous materials. Such packagings include steel, plastic and fiber drums, as well as rigid intermediate bulk containers.

**RIPA Comments**

(1) **Section 171.8 – definitions.** RIPA supports DOT’s decision to include a reference to the terms “Remanufactured packaging,” and “Reconditioned packaging.” in 171.8. However, we respectfully disagree with the agency’s decision to exclude a reference to the term “Reused packaging in the same section. DOT takes the position that because the meaning of the term “reuse” is evident to readers of 173.28, there is no need to also include a reference to the term in 171.8.

RIPA believes that the reuse of packagings for the transportation of hazardous materials is pervasive, and in the interest of clarity and safety, the agency should make an effort to direct users of the HMR to the packaging reuse provisions in 173.28. This can be accomplished easily by including the common term “Reused packaging” in 171.8, accompanied by a note referring readers to Section 173.28.

(2) **Section 171.8 - definitions.** DOT proposes to revise the current definitions of “bulk” and “non-bulk” packaging by listing specific packaging types (e.g., intermediate bulk container) that would be included in either or both packaging categories. In addition, DOT has asked for general comments on the concept of eliminating the volumetric capacity limits for bulk and non-bulk packagings.

RIPA does not support the proposed changes to the terms “bulk” and “non-bulk” packaging. We believe the package lists proposed by DOT could actually be more confusing to HMR users than existing text.

(3) Following are our answers to DOT’s questions about issues related to the possible elimination of volumetric limits for boxes, IBCs and portable tanks.

Question #1. Should DOT eliminate the volumetric limit for boxes, IBCs, and portable tanks?

Answer. RIPA believes the 450 liter delineation between bulk and non-bulk packaging is an integral component of the HMR, therefore, we oppose the elimination of volumetric limits. The basic definitions of these two packaging categories have remained largely unchanged for decades and, except in rare cases, are easily understood and applied by users of the regulations. Moreover, references to these terms are sprinkled in dozens of locations throughout 49 CFR.

To offer but one illustration of our concern, the elimination of volumetric limits would permit an IBC to be tested in the same manner as a 55-gallon drum. Currently, drums and IBCs are subject to different performance tests based in large part upon their volumetric categorization as different containers. IBC testing is less severe than drum testing, a fact that could encourage a drum producer to call his product an IBC.

This is possible if volumetric differences are eliminated because without volume-based references, only the definitions of “drum” and “intermediate bulk container” in 171.8 could be used to differentiate these two types of packagings. A “drum” can be just about any shape or size, as long as it is not a bulk packaging. An IBC is defined as nothing more than a “rigid...packaging” designed for mechanical handling. Today, both drums and IBCs are handled mechanically in nearly all factory settings. Thus, if volume were to be eliminated as a reference point, the definitional distinction between IBCs and drums would essentially vanish.

RIPA recognizes that the UN Model Regulations do not use the terms “bulk” or “non-bulk” and, therefore, at some point in time it may be beneficial for the U.S. to harmonize with the international system. However, given the large number of consequential changes that would arise if the terms were summarily deleted from the HMR, RIPA believes that a separate rulemaking on this matter is required.

Question #2. What are the regulatory and/or cost impacts of eliminating the volumetric limit for boxes, IBCs, and portable tanks?

Answer. See our answer to Question 1 concerning the safety and regulatory impacts of such change for IBCs.

Question #3. Would this be more consistent with the UN Recommendations?

Answer. Because the UN system does not have a volumetric break-point for or any reference to non-bulk packaging, it is axiomatic that the elimination of the volumetric distinction between bulk and non-bulk packaging would be more consistent with the UN Model Regulations. However, RIPA does not view consistency with international regulations to be a factor of interest with respect to this issue at this time. It is our position that until DOT offers a comprehensive proposal that highlights the specific regulatory modifications that would result from such a change in the HMR, we remain deeply concerned that transportation safety may be compromised.

Question #4. How should marking, labeling and placarding issues be addressed if the volumetric limit is removed or changed?

Answer: For the reasons stated above, we urge the agency not to eliminate volumetric limits related to the definitions of bulk and non-bulk packaging at this time.

We do believe, however, that DOT should consider creating a new category of packaging for intermediate bulk containers with a lower limit of 119 gallons (i.e., 450 L), and an upper limit of 550 gallons (i.e., 2080 L). IBCs of this size represent the fastest growing segment of the industrial packaging business in North America, and are widely used throughout the world. Presently, more than 2.5 million composite IBCs between 260 gallons and 360 gallons are sold for use annually in the U.S., as well as several hundred thousand additional units somewhat larger in size (i.e., 360 - 550 gallons) made of all plastic or metal.

This action would (a) recognize the widespread use of rigid and flexible intermediate bulk containers in the noted size category; and, (b) allow DOT to develop a regulatory structure that fits both the size and handling characteristics of these packagings.

These small IBCs are handled much more like drums than bulk packagings (e.g., tank trucks), and are transported both empty and full in quantities more in keeping with their non-bulk cousins than tank cars or trucks. For example, due to highway weight limitations, a shipper is generally limited to approximately 110 55-gallon drums, or 20 rigid 275-gallon IBCs per truck. The containers are loaded and unloaded individually (some drums are palletized), and are handled in warehouse and factory settings in similar fashion. Ladings are loaded and un-loaded from tank cars and trucks with the use of hoses; specific attendance rules apply to such activities; and, the off-loaded material is generally stored in holding tanks before use. Ladings from small IBCs are released through a valve or bung directly into the production process. In addition, the referenced IBCs typically are sold with the product - similar to a drum or other non-bulk packaging - unlike a tank car or tank truck that is reused and does not change ownership after delivery of the contents.

4) **173.12(c) – Reuse of packagings.** DOT proposes to deny a 1997 RIPA petition seeking extension of the existing minimum thickness criteria for reuse to steel and plastic drums reused for one-time movements of hazardous wastes. The agency asserts that current conditions for the transport of such packagings (e.g., one time movement by highway, controlled loading and unloading, and a 24-hour waiting period) are adequate to protect transportation and public safety.

As a matter of safety, RIPA respectfully disagrees with DOT on this issue. Often, little is known about the characteristics of the wastes to be shipped, including vapor pressure. Since the drums in question do not have to be leak tested, the only evidence of reduction in integrity available to a shipper is leakage from the drum. An assessment of damage to the body of the drum, its closure mechanisms, or other visual clues that may indicate potential problems in transportation, is not required.

The drums in question do not necessarily meet the minimum thickness criteria for reuse, which were established by DOT to protect the public and the environment from spills caused by inadequate packaging. In HM-181, the agency stated, “[F]or repeated use, a minimum thickness standard must be established to ensure that the packaging can withstand the rigors of the transportation environment.” The agency also said in support of its view that used packagings should be reconditioned before reuse, “RSPA believes that if a packaging shows evidence of a reduction in integrity from any cause, actions must be taken to restore the packaging to a condition such that it conforms in all respects to the requirements of the subchapter.” (FR Vol. 55, No. 246; pages 52427 and 52428.)

For these reasons, RIPA continues to believe that for safety purposes, all used drums should be subject to the provisions of 173.28. Therefore, we ask DOT to grant the RIPA petition.

5) **173.22(a)(4) – Shippers responsibility.** RIPA opposes a new regulation that would require shippers to retain copies of closure notifications and other documentation on equivalent level of performance under the selective testing variations. In addition, RIPA does not support the DOT proposal imposing a 375-day period for record retention.

RIPA believes that the closure instruction retention proposal constitutes a new and burdensome recordkeeping requirement. Heretofore, shippers have not been considered “subsequent distributors of packagings,” and therefore have not been asked to retain closure instructions for any other purpose than as back-up to ensure the adequacy of their own closure procedures.

RIPA is concerned this new requirement may force shippers to retain copies of all closure instructions which, in many cases, arrive regularly with every container and/or attached to shipping papers. As such, a large shipper could be forced to retain hundreds or thousands of documents, many of which say exactly the same thing.

If DOT elects to adopt this provision we suggest the regulation be clarified as follows:

- (a) Shippers need only retain one current copy of a manufacturer’s closure notification; and,
- (b) The mandatory record retention period should be limited to 365 days, in conformance with recently revised motor carrier record retention requirements in HM-240.

6) **173.24(b) – Stacking of bulk packages.** RIPA agrees with DOT that IBCs not designed for stacking should not have other IBCs stacked on them. However, DOT has already dealt with this issue in 178.703, wherein IBCs designed for stacking must bear a mark indicating the maximum permissible stacking test load. Conversely, IBCs not designed for stacking must be marked with an “O” in place of a stacking test load figure. Given these existing requirements, we do not see the benefit of the proposed additions to the HMR.

We do wish to draw DOT’s attention to ongoing UN work on this issue. The UN Sub-Committee of Experts adopted in July 2006 a new mark (symbol) for IBCs indicating the unit is or is not designed for stacking. Assuming the UN affirms this decision at the December 2006 meeting, we suggest DOT incorporate the marks (symbols) in the HMR.

7) **173.28 – Reuse, reconditioning and remanufacture of packagings.** DOT is proposing to add new provisions to subparagraphs (a) and (f) that would prohibit the remanufacture of any packaging not meeting the minimum thickness requirement for reuse.

RIPA strongly opposes this significant change to the HMR, for the following reasons:

(a) Remanufacturing was first authorized by the UN Committee of Experts in 1990 after extensive discussion, and was formally incorporated into the Orange Book (i.e., Model Regulations) the following year (chapter 1.2.1). DOT adopted the current remanufacturing provisions nearly sixteen years ago – through HM-181 - and they have been applied safely by industry since that time.

(b) Remanufacturing is an established practice for drums of all varieties and intermediate bulk containers used throughout the world. In fact, provisions virtually identical to the UN and DOT provisions appear in ICAO (Chapter 3, 3.1.1 and IATA Glossary, Appendix A); IMO IMDG - Definitions, Chapter 1.2, 1.2.1; Canadian General Standards Board (CGSB) Standard CAN/CGSB-

43.126-98; South African National Standard SANS 10406:2004 (4.1.2); as well as many national regulations worldwide.

(c) Remanufactured packagings are considered “new” packagings because they are required to conform to all the specifications of Part 178. Remanufacturers must perform all the functions of a manufacturer, including identification of a design type, performance of all applicable performance tests, and maintenance of records. New packagings are not subject to minimum thickness requirements.

(d) DOT has presented no supporting safety concerns or other evidence to justify its proposal.

Given that remanufacturing is an established practice worldwide, and DOT has not supported its proposal with evidence of safety or other concerns, RIPA asks that the proposal be rejected.

8) **178.2(c) – Notification (closure and related information).** DOT proposes to revise this section to ensure that closure instructions “...provide for a consistent and repeatable means of closure that is sufficient to ensure the packaging is closed in the same manner as it was tested.” Currently, DOT requires packaging manufacturers to notify persons to whom packaging is transferred of “all requirements not met at the time of transfer,” as well as information about closures and closure instructions.

RIPA believes this proposal should be withdrawn because it would impose sweeping, unnecessary, and potentially costly new compliance and paperwork requirements on shippers.

RIPA is unaware of any data or other evidence developed by DOT to support its proposal. In fact, it is quite probable that leaks from closures are more often the result of human error rather than the unavailability of adequate closure instructions. We believe DOT would gain more from emphasizing function-specific training at filling locations, as opposed to the creation of new compliance criteria for closure.

We are concerned that the proposed new language would result in fillers being required to perform the closure function in “the same manner” as when the package design type was tested. We take this to mean that packagings would have to be closed in precisely the same manner as they are in test laboratories – a practical impossibility in most cases. Packaging design qualification tests in the U.S. are conducted by first- or third-party (i.e., self certification) testers in laboratories or similar highly controlled environments. Given that industrial packaging operations run the gamut from high-speed lines that are fully automated (including package closure), to slower lines that are essentially manually operated and dependent upon employees to perform the closure function, it is unlikely that fillers could duplicate the actual conditions in which packages are closed by testers.

9) **178.2(c) – notification (closure and related information): New proposal.** RIPA believes this subparagraph should be revised to authorize the use of electronic means (e.g., e-mail) to provide closure notification to shippers. Currently, DOT only accepts printed documents (e.g., letters, attachments to shipping papers, etc.) as the means of complying with this section. At a time when e-mail is the predominant means of business-to-business communication, it only makes sense that electronic notification via e-mail should also be authorized. DOT could easily clarify this matter by adding examples - “(e.g., letter, e-mail)” – in this section.

10) **178.3 – Marking of packagings.** DOT wants to allow steel drum manufacturers to apply a durable marking on the top or side of a steel drum which identifies a lower performance capability than is indicated by the permanent mark found on the drum bottom head.

RIPA opposes this idea for the following reasons:

(a) DOT fails to take into account the fact that the permanent mark appearing on the bottom of a metal drum is a partial mark and is not now nor has it ever been recognized as a full mark for enforcement purposes. It is not possible to “downgrade” the only legal marking on a packaging.

(b) The bottom permanent embossment was adopted in 1992 by the UN (with the support of the US delegation), and was deliberately made incomplete, lacking both the identity of the drum maker and the country of manufacture. The mark was never considered to be the manufacturer’s certification in 178.2(b).

(c) When section 173.22(a)(3) was adopted, DOT made it clear that the bottom mark is not the manufacturer’s certification. “Revised paragraph (a)(3)(i) is adopted as proposed to indicate that the marking appearing on the bottom of a metal or plastic drum in accordance with Sec. 178.503 is not an acceptable means of determining if the drum is an authorized packaging.” (HM-181 amendments adopted December 29, 1994; 59 Fed. Reg. 67398.)

(d) From a technical perspective, if the bottom embossment were to claim a higher level of performance, but is not the certified mark, then the bottom embossment also need not be supported by testing, a test report, or any other validation by the maker. Once the top/side durable mark is removed in the reconditioning process, the unsubstantiated bottom claim of original high performance is all that remains. That is why, when DOT adopted this provision, they said the bottom and top marks applied by the manufacturer had to be the same. The top or side mark, which is the certification supported by the test report, cannot be confused by an unverified, uncertified permanent claim of greater performance by some unknown person, that would last through multiple uses.

If, however, DOT wants to say the bottom embossment is the manufacturer's certification and that a lower durable marking may be placed on the top or side of the drum, then the marking requirements should be revised to (a) ensure the name of the manufacturer as the certifying party is permanently placed on the drum (thereby ensuring traceability); and, (b) oblige manufacturers to support both marks with a valid test report.

11) **178.503 – marking of packagings.** DOT would authorize the application of a durable UN mark that varies slightly from the examples given in 178.503, but which nonetheless conveys the intended meaning of the mark.

RIPA supports clear authorization from DOT to use a stenciled broken circle in a durable UN symbol. RIPA believes that DOT should approach the matter in a different way, however. The agency should simply authorize the use of stencils and apply a performance standard to the effect that the circle around the “UN” letters be recognizable as such from a normal reading distance.

By addition new subparagraph (D), the agency invites comment on the manner in which the letters ‘u’ and ‘n’ appear in the symbol. DOT proposes to revise the current regulation and stipulate that these letters appear “exactly” as depicted in 178.3(e)(1)(i). Although their intention is to prevent gaps in the letters, the impact of the proposal would be far greater. It enacted, the provision would make illegal any mark in which these letters appear in any way other than shown in the example. This would mean, for example, that spacing, font style, etc., would have to conform precisely to the example.

Unless DOT is concerned that a safety problem now exists in this regard, we would urge the agency to forego the use of the term “exactly,” and only require that the letters “u” and “n” in a mark should appear the same in any orientation.

12) **178.601(g)(1) – testing (general requirements).** Currently, DOT allows a packaging manufacturer to substitute different inner packagings in a combination packaging if the new inner packagings maintain an equivalent level of performance. DOT sets forth five tests to be met in making said determination. In the proposed rule, DOT would require packaging manufacturers to document in writing the methodology used to make such determination.

RIPA does not oppose this new requirement in principle, but asks the agency to take steps to ensure (a) that the amount of documentation required is not too great; and, b) existing combination packagings for which such determinations have already been made are grandfathered for compliance purposes.

13) **178.601(8) – testing (general requirements).** In response to a petition filed by the Steel Shipping Container Institute (SSCI), DOT proposes to extend the applicability of the selective testing provisions to steel drums greater than 12 L or about 3 gallons in size, but not drums with thickness increases greater than 1.35 mm. In addition, DOT would require new tests if there is any change from a tested design type in the “width of lugs or extensions in crimp/lug cover.”

RIPA believes that the SSCI petition, while somewhat unclear, is a good idea that DOT should enact. We understand SSCI to be asking DOT to permit drums manufactured from steel less thick than 1.35 mm to increase more than 10% without the need for new design-type testing. This would mean the 10% increase re-test requirement would apply only to drums of 1.35 mm or greater. We believe this idea makes sense from both a safety and an economic perspective. We understand that steel drums made from relatively thin steel can vary in thickness substantially more than 10% without affecting the forming or rolling operations, which are critical to safety in transport. The thicker the steel, the more difficult are these processes. By authorizing steel thickness variations greater than 10% in steel less than 1.35 mm thick, drum manufacturers could reduce testing costs without compromising safety.

We also ask DOT to clarify the meaning of new (E), which would apparently require testing of a drum or pail if there were *any* change in the width of a lug or crimp/lug cover extension. We suggest the phrasing should be “A change greater than 10% in the dimensions of lugs or crimp/lug cover extensions.”

14) **178.810 – IBC drop test.** Current DOT regulations mandate a drop test for an IBC “on the most vulnerable part of the base of the IBC being tested.” DOT proposes that flexible IBCs of 0.45 cubic meters (15.9 cubic feet) or less should be dropped a second time. However, this requirement is not extended to rigid IBCs.

RIPA opposes the proposal because it is arbitrary - it applies only to flexible IBCs - and therefore inadequate from a safety perspective. DOT has not explained why it has differentiated small flexible IBCs from similar size rigid IBCs (i.e., less than 0.45 cubic meters or 15.9 cubic feet), which would be exempt from a second drop test. If DOT were to adopt this proposal, it would be acting to favor one container over another in the marketplace. If, in fact, small rigid and flexible IBCs are being used to transport hazardous materials, DOT has a safety obligation to ensure both types of containers pass similar, if not the same, performance tests.

Moreover, both small rigid and flexible IBCs – even under this proposal - are subject to less stringent drop test requirements than other non-bulk packagings of similar size. Section 178.603, which applies

to all non-bulk packagings mandates two drops of three packagings each. The second drop sequence must be on “the weakest part not tested by the first drop...” DOT should, at the very least, be consistent and impose these same requirements on IBCs which, by definition, are the same size as other non-bulk packages, such as drums. Otherwise, the agency has an obligation to describe how this proposed regulatory inequality has been earned by the packaging design type in question.

15) **178.819 – vibration test.** We support DOT’s proposal clarifying that water may be used as a test medium for IBCs, and that either a rotary or vertical double amplitude motion is acceptable for the IBC vibration test.

RIPA appreciates this opportunity to comment on HM-231, and would be pleased to answer any questions you might have.

Sincerely,

A handwritten signature in black ink that reads "Paul Rankin". The signature is written in a cursive, slightly slanted style.

Paul W. Rankin  
President

Cc: P. DeWitt  
L. Bierlein