



U.S. Department  
of Transportation

**Pipeline and  
Hazardous Materials Safety  
Administration**

JAN 31 2006

400 Seventh Street, S.W  
Washington, D.C. 20590

Mr. Charles E. Tudor  
Consultant  
3869 Mammoth Cave Court  
Pleasanton, CA 04588

Reference No.: 05-0238

Dear Mr. Tudor:

This responds to your letter concerning the approval of equivalent packagings under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Your questions are paraphrased and answered as follows:

Q1. When the HMR authorize a 4D packaging, may a 50D large packaging be substituted without obtaining an approval?

A1. The answer is no. There are no provisions in the HMR that authorize use of a large packaging in lieu of a non-bulk packaging.

Q2. May a plywood box that exceeds the size and volume of a non-bulk packaging be tested and certified as a 4D without obtaining an approval?

A2. The answer is no. A packaging that does not meet the definition in § 171.8 of a non-bulk packaging may not be tested and certified as a non-bulk packaging.

The HMR in § 178.801(i) authorize the use of a large packaging, as defined in § 171.8, if approved by the Associate Administrator. The large packaging must conform to the construction standards, performance testing and packaging marking requirements specified in United Nation's Recommendations on the Transport of Dangerous Goods. We may consider review of the HMR definitions for bulk, non-bulk, and large packagings at some future date.

I trust this satisfies your request.

Sincerely,

Hattie L. Mitchell  
Chief, Regulatory Review and Reinvention  
Office of Hazardous Material Safety



050238

173.26  
178.510

**CHARLES E. TUDOR, CP-P/MH**

Consultant

September 20, 2005

Hattie Mitchell  
Chief, RR and R (PHH-12)  
Pipeline and Hazardous Materials Safety Administration  
U.S. Department of Transportation  
400 Seventh Street, S. W.  
Washington, D.C. 20590

Corbin  
§ 173-26  
§ 178.500  
Packagings  
05-0238

Dear Hattie:

A few months ago you issued an interpretation on the definition of Non-bulk Package as it appears in the HMR in Para. 171.8. I recently came by it and realized it appears to present some problems that I would like to discuss. Actually I think the real problem lies with the definition itself as opposed to your interpretation. So here goes:

1. The definition does not appear consistent with Para. 173.26 Quantity Limitations, which defers to the package type definitions/standards in Subpart L of Part 178. In this part boxes are limited by net mass only not physical size.
2. I have been unable to find this definition in the UN Recommendations, ICAO TI or the IMDG Code. All these references defer to the package type standards which limit net mass only. They do contain the definition of Large Packaging, albeit the UN uses kg, L and cu M all in one sentence.
3. The definition uses liquid measure to size packages for solids (Not very appropriate). 450 L results in a cube only 30 x 30 x 30 inches—not a large box by any standard. It is logical that the 450 L refers to the maximum capacity of single containers or maybe even inner packagings containing liquids in combination packages and that the 400 kg applies when a combination package contains solids or articles.
4. The Definition, with your interpretation leaves many non-compliant packages in the distribution system. Namely those combination packages larger than 450L and rated for less than 400 kg net mass designed to contain large dimension light weight articles that have been tested and marked with non-bulk certification marks.

I don't recall the history behind the non-bulk definition but would guess that it was placed in the regulations when the definition of Large Packaging was entered. If the definition were to be removed, it would resolve most issues and create harmony with the UN Recommendations.

If the definition were to stay as is with your interpretation, there are many packages out there that

have to be dealt with that have been certified under non-bulk testing rules going back 15 or more years—long before the notion of Large Packagings.

Large light weight containers are common for explosive articles and a variety of high tech articles that have large physical size and little weight. Treating them as non-bulk does not create a safety issue as the performance test protocol is more thorough and severe than for Large Packagings.

Any package type other than non-bulk for this would require approval prior to use. It would be easy to declare these large light weights “Large Packagings” but there is no provision in the HMR to use one without approval. Note that there is no mention of Large Packagings in the HMR beyond the 171.8 definition other than an obscure reference in the Testing Subpart for IBCs that says a large package may be used in lieu of an IBC if approved by the Associate Administrator (see 178.801(i)). (I know of no application where it might be desirable to substitute a large combination package for an IBC.) Interestingly, 178.601(h) does not mention Large Package options where it more appropriately should be. *test in lieu of non bulk*

Large Packagings have been incorporated into the IMDG Code for routine authorized use. My understanding is that shipment originating in the US would still require approval.


By copy of this letter to Mr. Delmer Billings, this would be a very appropriate agenda item for the upcoming meeting of Third Parties November 9 in St Louis. Third Parties are directly affected by all this as well as shippers and the Approvals Branch. Indeed the Approvals Branch could be burdened with many approval requests and shippers would be burdened with applications and time delays. Should Third Parties be given authorization to bypass this approval process and automatically test to Large package protocols? E.g. where a 4D is an authorized non-bulk package for an explosive article, can a 50D be automatically be used without approval?

I soon will be in receipt of three such design types (plywood boxes) for test. My customer and NASA are expecting 4D markings. Do I hold up the process and tell them to contact the Approvals Branch?

Rapid resolution would be beneficial to all impacted persons.

Hattie, what do you think? Is this a ball of snakes or am I getting too old?

Sincerely,

  
Charles E. Tudor  
Third Party (+AS)

cc: Delmer Billings