



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

JAN 11 2016

Mr. Robert TenEyck  
Director, Technical Services  
TEN-E Packaging Services, Inc.  
1666 County Road 74  
Newport, MN 55055

Reference No. 16-0154

Dear Mr. TenEyck:

This letter is in response to your September 21, 2016, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the testing of non-bulk performance oriented packaging. Specifically, you ask about language in § 178.601(k)(2) that states, "provided the validity of the test results is not affected, several tests may be performed on one sample with the approval of the Associate Administrator."

You seek confirmation of your understanding that the approval of the Associate Administrator as referenced in § 178.601(k)(2) authorizes the reduction in number of samples for a particular test—such as reducing the number of drums for the drop test from 6 drums to 3 drums—and does not apply to the reuse of samples from one test sequence to the next. You further ask how this section has changed over time.

Your understanding is not correct. Section 178.601(k)(2) authorizes the use of one sample for more than one test, such as using one sample for both the drop test and stacking test, provided the validity of the tests is not affected and approval is granted from the Associate Administrator. The HMR requirements and guidance for modification of the testing protocol for non-bulk performance oriented packaging has remained consistent. See letters of interpretation 97-0215, 10-0016, and 12-0120, which are consistent with the 2001 guidance. It is the opinion of this Office that the October 11, 1995, denial letter was a misunderstanding of the incoming question because Steel Shipping Container Institute (SSCI) asked for approval to reduce the number of test samples and we responded with regard to reuse of a sample across multiple tests.

To reduce the number of samples for a particular test method, such as reducing the number of samples for a drop test from 6 drums to 3 drums, approval is required from the Associate Administrator in accordance with § 178.601(h). We apologize for any confusion.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

Dirk Der Kinderen  
Chief, Standards Development Branch  
Standards and Rulemaking Division

**Goodall, Shante CTR (PHMSA)**

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**From:** Betts, Charles (PHMSA)  
**Sent:** Wednesday, September 21, 2016 6:07 PM  
**To:** Goodall, Shante CTR (PHMSA)  
**Cc:** Robert.Teneyck@ten-e.com  
**Subject:** FW: DOT Clarification on the reuse of test samples  
**Attachments:** DOT Letter of Clarificaiton -178.601(k)(2).docx; DOT Clarifications - 178.601(k).pdf

Shante –

Please log and assign to a specialist for response. Please request expedited handling.

Thanks,  
Charles

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**From:** Robert Teneyck [<mailto:Robert.Teneyck@ten-e.com>]  
**Sent:** Wednesday, September 21, 2016 4:49 PM  
**To:** Betts, Charles (PHMSA)  
**Subject:** DOT Clarification on the reuse of test samples

Hi Charles,  
Please let me know if you have any questions concerning the attached. I know you guys are busy but if at all possible I would appreciate if a quick response or maybe at least an indication as to which way you see it.  
Thanks much.

Robert TenEyck  
**TEN-E Packaging Services, Inc.**  
1666 County Road 74  
Newport, MN 55055  
Phone: 651-459-0671  
Fax: 651-459-1430  
[www.ten-e.com](http://www.ten-e.com)



TEN-E Packaging Services, Inc.

September 21, 2016

Charles Betts  
**U.S. DEPARTMENT OF TRANSPORTATION**  
Pipeline and Hazardous Materials Safety Administration  
Standards Development, PHH-11  
1200 New Jersey Avenue S. E.  
Washington, D.C. 20590

**Ref.: 178.601(k)(2)**

Dear Charles:

TEN-E Packaging Services is seeking an interpretation on the above subject section of Title 49 CFR. We believe that the reference to obtaining approval from the Associate Administrator applies when someone wants to reduce the number of required samples for a given test sequence; for instance authorization to drop test 3 drums instead of the required 6 drums. Our understanding is that this section does not apply to the reuse of samples from one test sequence to the next; for instance 3 drums are used for the stack test and these same units are then used to carry out the hydrostatic pressure test.

The agency first attempted to clarify this matter shortly after adoption of Section 178.601(k) under Docket HM-215A. At that time the Steel Shipping Container Institute (SSCI) applied for a CAA to reuse samples and in a letter of interpretation dated October 11, 1995 their request was denied because according to the agency there was no prohibition on the reuse of test samples (see attached). Although Section 178.601(k) was later expanded upon under Docket HM-231 the language as stated in Section 178.601(k)(2) has remained unchanged.

TEN-E later followed in 2001 with basically the same question in a Third Party Agency Question and Answer session and received the same agency response as was provided to SSCI (see attached Question #17).

Are these two DOT clarifications still valid and if not when did the agency change its thinking on the reuse of packaging samples and the need to obtain a CAA for their reuse?

We look forward to hearing from you on this regulatory compliance matter.

Sincerely,

  
Robert J. Ten Eyck  
Director, Technical Services  
TEN-E Packaging Services, Inc.



U.S. Department  
of Transportation  
**Research and  
Special Programs  
Administration**

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

355  
October 11, 1995

Mr. Richard B. Norment  
Executive Director  
Steel Shipping Container Institute  
1101 14th Street, NW.  
Washington, D.C. 20005

Dear Mr. Norment:

This is in reply to your letter of June 5, 1995, requesting an approval under the provisions of 49 CFR 178.601(k) as adopted in Docket 215A. Your request was to authorize a reduction in the number of samples required for performing the tests in Subpart M of Part 178.

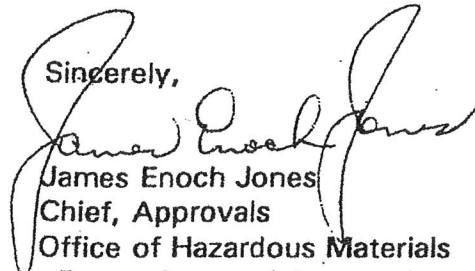
Your request for an approval is denied as unnecessary, for the following reason:

The Hazardous Materials Regulations do not prohibit the use of a single sample for more than one test, provided the correct number of samples is used for a particular test. In other words, samples which have been used for the stacking test or leakproofness test may be used to conduct the drop test or hydrostatic pressure test. The required number of samples must be maintained for each test; for example, six separate samples must be used for the drop test.

It appears that the adoption of the approval provision of 49 CFR 178.601(k) in Docket HM-215A has created some confusion with regard to the required number of samples for performance testing. The Research and Special Programs Administration is considering a clarification of the approval provision of 49 CFR 178.601(k).

If we can be of further assistance feel free to contact this office on 202-366-4512.

Sincerely,

  
James Enoch Jones  
Chief, Approvals  
Office of Hazardous Materials  
Exemptions and Approvals

## UN 3rd Party: 2001

The following questions and answers were developed as a result of agenda items discussed at the June 2000 Performance-Oriented Packaging Meeting in Chicago

14. 14) § 178.601: Should a packaging, where the surface treatment has an affect on the packaging, be considered a different packaging if the surface treatment is substituted, altered, or not applied? For example, a water repellant treatment is added as a surface treatment to a box so the packaging can pass the Cobb test. The surface treatment is subsequently switched and the packaging still passes the Cobb, but with differing results. Is this still an identical packaging?

The Cobb test required by § 178.516 applies to the base material, not the finished packaging. A packaging that differs only in surface treatment is not considered to be a different packaging.

15. 15) § 178.601: What is the minimum information that must be provided in the test report for a UN packaging?

RSPA has not specified the level of detail that a test report must contain. However, the test report must be sufficiently detailed so that the test can be reproduced, and the tested design type can be specifically identified through reference to the test report. Sufficient information must be provided to ensure there is no change to the structural design, size, material of construction, wall thickness, or manner of construction as provided by § 178.601(c)(4) and every packaging meets the design standard. RSPA encourages packaging manufacturers and testers to develop uniform guidelines for information contained in test reports.

16. 17) § 178.601: Why doesn't RSPA amend the HMR to allow box manufacturers and users to change liners and dividers in corrugated boxes, without the need for retesting the packaging?

As set forth in § 178.601(c)(4), a change in structural design, size, material of construction, wall thickness, or manner of construction is a different packaging. The only variances allowed are those set forth in § 178.601(c)(4)(i) through (vi) and § 178.601(g). We have encouraged industry associations to further refine design type definitions, as has been done for steel drums in § 178.601(g)(8), to ensure that minor variations in production processes do not result in different packagings. We are working with industry to define limits for fiberboard that may be considered identical to tested fiberboard. However, we have not received adequate industry input to establish specifics with regard to fiberboard boxes.

17. 18) § 178.601: Section 178.601(f) states: "The manufacturer shall conduct the design qualification and periodic tests prescribed in this subpart using random samples of packagings, in the number specified in the appropriate test section." Section 178.601(k) states: "Provided the validity of the test results is not affected and with approval of the Associate Administrator for Hazardous Materials Safety, several tests may be performed on one sample." Is this indicating that a sample may only be used once? Or, for example could three drums used for the drop test also be used to conduct the hydrostatic pressure test?

The HMR do not prohibit the use of a single sample for more than one test, provided the correct number of samples is used for a particular test. In other words, samples which have been used for the stacking test or leakproofness test may be used to conduct the drop test or hydrostatic pressure test. The required number of samples must be maintained for each test; for example, six separate samples must be used for the drop test.

18. 19) § 178.603: Would RSPA consider changing the pass criteria for the drop test to allow a momentary discharge of contents from inner packagings of combination packagings, as long as there is no continuous leakage, as is allowed for single packagings?

Under Docket HM-218 which was published in the Federal Register on August 18, 2000, [65 FR 50450] we revised § 178.603 to allow a slight discharge from a closure of a combination packaging if it ceases immediately after impact with no further leakage.

19. 20) § 178.603: When conducting drop tests on drums and jerricans in accordance with § 178.603, does the closure need to be in the same position (example: 6 o'clock position) for each of the three top diagonal drop samples, or is the tester given latitude to rotate the closure during each of the three drops? And, again, for each of the three samples in the second orientation?

The HMR do not address the appropriate position of the closure of a drum regarding drop testing. Therefore, the tester may change the position of the closure for each of the three diagonal drops. When testing in the second orientation (the weakest part not tested by the first drop) the closure should be in the same position for each of the three drops.

samples  
CA  
OK