U.S. Department
of Transportation

**Research and
Special Programs
Administration**

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

JUL 13 2000

Mr. Stephen E. Danek
Southcorp Packaging USA, Inc.
6047 Guion Road
Indianapolis, IN 46254

Ref. No. 99-0137

Dear Mr. Danek:

This is in response to your letter requesting clarification of selective testing under Variation 5, with regard to testing different closures or gaskets on similar packages, under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). I apologize for the delay in responding and hope it has not caused any inconvenience. Your questions are paraphrased and answered as follows:

Q1. Are qualifying tests required for non-removable head UN 1H1 or UN 3H1, 5 or 6 gallon capacity plastic packagings, with different threaded non-vented or vented closures? Can different closure/gasket combinations with a design qualification covering a 5-gallon removable head drum (UN 1H2) with 70mm threaded closures and gaskets, for example, "W and Y", "X and Z", "X and Y", or "W and Z", respectively, be used without further testing?

A1. When a closure device has been qualified by means of the tests referenced in Variation 5, § 178.601(g)(5), that closure device may be used on any packaging of the same type with at least the same integrity. If four different closure devices have been qualified through the specified "qualifying tests," any one of those closure devices or any combination of those closure devices may be used. For single packagings ranging in size from 5 to 6 gallons capacity, and provided the only difference between the packagings is the size or capacity, tests run on the packagings with the greatest size or capacity will qualify all packagings with a lesser size or capacity.

Q2. What does the phrase "provided an equivalent level of performance is maintained", § 178.601(g)(5), mean?

A2. The phrase "provided an equivalent level of performance is maintained" means that the packaging must be equally effective and the testing method used must be equivalent to that of the tested design type.

Q3. Are periodic retests required for single packagings (UN 1H1 or UN 3H1) installed with different closure devices (e.g., 70mm threaded vented or non-vented closure devices), or do periodic retests done, for example, on crimp-on-fittings, cover only crimp-on fittings that fit the same neck finish that have previously passed the qualifying tests under Variation "5"?

990137

178.601

A3. Single packagings (e.g., UN 1H1 or UN 3H1) that differ from a tested design type only to the extent that the closure device or gasketing differs from that used in the originally tested design type, may be used without further testing, provided an equivalent level of performance is maintained, subject to the conditions prescribed under Variation "5".

Q4. Are closures with only minor differences considered a design change; and when one of these closures is certified, are the others certified as well? For example, the Rieke® FS-70 has a 3/4" diameter threaded recess, the bottom of which can be bored out by the end user for insertion of a faucet; the FS-80 has a flat top surface; and the FS-80T is the same as the FS-80 except that it has a tamper-evident ring with additional plastic (which does not affect the performance of the package) at the base of the neck opening to catch the ring and break it off when the container is initially opened.

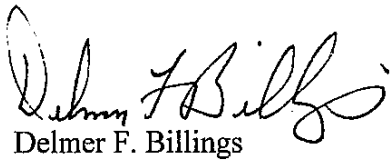
A4. Changes in closures on single packagings are permitted without further design testing under the conditions prescribed in §178.601(g)(5). If the tests required in §178.601(g)(5) have been successfully completed, the new closure system would not be considered a design change.

Q5. If multiple closures and/or gaskets, having passed the qualifying tests under Variation 5, are certified under a single periodic retest, must the periodic retest report indicate all of the closures and/or gasket combinations that are covered? Can an archived report showing evidence of previously passed qualifying tests along with a current periodic retest report that only reports the single closure and gasket combination used for the testing be used to prove certification of multiple closures and/or gaskets?

A5. A test report must be completed for each packaging design qualification test and each periodic retest. Section 178.601(l) sets forth the information that must be included in each test report. A person applying a selective testing variation is not required to make a note of it in the documentation of a tested design type or a periodic retest report.

I hope this satisfies you inquiry. If we can be of further assistance, please contact us.

Sincerely,



Delmer F. Billings
Chief, Regulations Development
Office of Hazardous Materials Standards

SOUTHCORP PACKAGING USA, INC.

6047 Guion Road
Indianapolis, Indiana 46254
Telephone 317-387-0902
Facsimile 317-387-0949

Enrum
§178.601

May 25, 1999

Mr. Edward Mazzullo
Director, Office of Hazardous Materials Standards (DHM-10)
Research and Special Programs Administration
Department of Transportation
400 Seventh Street, S.W.
Washington, D.C. 20590-0001

Dear Mr. Mazzullo

Please clarify Title 49 CFR §178.601(g)(5), known as Selective Testing Variation 5, with regard to the testing requirements for using different closures or gaskets on similar packages. In the questions below "qualifying tests" are those tests required by Selective Testing Variation 5. (While Selective Testing Variation 5 does not call for a design qualification to be completed in order to apply the testing variation, but rather "the qualifying tests," it is our practice to complete a design qualification. Some of the questions may be worded with this practice in mind.)

1. Are qualifying tests using the specific packaging design in question required in order to use a replacement closure or gasket? Is it sufficient to simply have done testing that demonstrates that the replacement closure or gasket performs as well as the original closure or gasket?

   For instance:
   A. There is a design qualification covering a specific 6-gallon plastic jerrican (3H1) with a 70mm threaded non-vented closure.
   B. There is a design qualification covering the same 6-gallon plastic jerrican (3H1) with a similar 70mm threaded closure that is vented.
   C. There is a design qualification covering a specific 5-gallon round plastic non-removable head drum (1H1) with the 70mm threaded non-vented closure.

   Is the same 5-gallon round plastic non-removable head drum (1H1) with the 70mm threaded vented closure covered without further testing?

2. If the 5-gallon plastic round non-removable head drum (1H1) with the 70mm threaded vented closure above requires qualifying tests, does it also require periodic retests even if the 5-gallon plastic round non-removable head drum (1H1) with the 70mm threaded non-vented closure is periodically retested? Does the phrase "provided an equivalent level of performance is maintained" in Title 49 CFR §178.601(g)(5) require that periodic retests be performed?

3. If periodic retests are required, are they required for just the 6-gallon plastic jerrican (3H1) with the 70mm threaded vented closure or just the 5-gallon round plastic non-removable head drum (1H1) with the 70mm threaded vented closure in order to prove that "an equivalent level of performance" for the replacement closure "is maintained?" Or are they required for both the 6-gallon plastic jerrican (3H1) with the 70mm threaded vented closure and for the 5-gallon round plastic non-removable head drum (1H1) with the 70mm threaded vented closure?

namsc
Bennett

4. Can a closure/gasket combination on a package be certified indirectly based on logical interpretation of the regulation and existing design qualifications?

   First scenario:
   A. There is a design qualification covering a 5-gallon round plastic removable head drum (1H2) with 70mm threaded closure W and cover gasket of material Y.
   B. There is a design qualification covering the same 5-gallon round plastic removable head drum (1H2) with 70mm threaded closure X and cover gasket of material Z.

   Is the same 5-gallon round plastic removable head drum (1H2) with 70mm threaded closure X with cover gasket of material Y covered without further testing?

   Second scenario:
   A. There is a design qualification covering a 5-gallon round plastic removable head drum (1H2) with 70mm threaded closure W and cover gasket of material Y.
   B. There is a design qualification covering the same 5-gallon round plastic removable head drum (1H2) with 70mm threaded closure X and cover gasket of material Z.
   C. There is a design qualification covering the same 5-gallon round plastic removable head drum (1H2) with 70mm threaded closure W and cover gasket of material Z.

   Is the same 5-gallon round plastic removable head drum (1H2) with 70mm threaded closure X with cover gasket of material Y covered without further testing?

5. When it comes to certification, we consider closures with only minor cosmetic differences to be virtually identical.

   A. For instance, we consider the Rieke® FS-70 and the Rieke® FS-80 70mm threaded closures to be virtually identical. The Rieke® FS-80 has a flat top surface. The Rieke® FS-70 has a ¾" diameter threaded recess, the bottom of which can be bored out by the end user for insertion of a faucet. Otherwise, these closures are identical. Our history of testing has shown absolutely no difference in the performance and integrity of these two closures. When one of these closure is certified, we consider the other one certified also. Is this thinking correct?

   B. In addition, the Rieke® FS-80T is the same as the Rieke® FS-80 except that it has a tamper-evident ring. In order to work, the tamper-evident ring requires some additional plastic at the base of the neck opening to catch the ring and break it off when the container is initially opened. We consider the two closures to be virtually identical. Also, the additional plastic at the base of the neck is considered minor and incidental to the integrity of the package and, therefore, not a change in design of the container. Is this thinking correct?

6. We currently apply Selective Testing Variation 5 only to closures that require the same neck finish on a container. For instance, a unique single packaging design has multiple design qualifications, each with a different closure. When a periodic retest is done, the certification covers that design with those closures that require the same neck finish. For instance, a periodic retest done using a crimp-on fitting would cover only crimp-on fittings that fit on the same neck finish and have been previously passed the qualifying tests. Is this thinking correct?

7. If, by applying Selective Testing Variation 5, multiple closures and/or gaskets are certified under a single periodic retest, is it required that the periodic retest report indicate all of the closures and/or gasket combinations that are covered? Can an archived report showing evidence of previously passed qualifying tests along with a current periodic retest report that only reports the single closure and gasket combination used for the testing be used to prove certification of multiple closures and/or gaskets? If both are acceptable, which is the preferred method?

Thank you for your assistance in this matter.

Sincerely,

Stephen E. Danek

Stephen E. Danek
Southcorp Packaging USA, Inc.
6047 Guion Road
Indianapolis, IN 46254