Minutes
March 12, 1992 Meeting
UN Third-Party Certification Agencies
The Nassif Building
400 Seventh Street, SW.
Washington, D.C. 20590

In the opening remarks the Office of Hazardous Materials Safety (OHMS) welcomed the UN Third Party participants to the third biennial meeting. All parties introduced themselves and stated who they represented. The visitors were asked to take the handouts provided. (Although a Questions and Answers handout was provided, a revised copy of the Q & A's are being sent with these minutes.) OHMS commented generally about the importance of careful documentation of all package testing and certification, and it was stressed to be sure to separate any self-certification from third-party certification. As a Third-Party you cannot certify any of your own packagings and mark with your third party mark. You are permitted to self-certify and use a self-certification mark on the packagings.

Approvals Overview

The Approvals office gave a brief overview of the current approvals process, describing the application procedures, the information required and some changes that have been made in the inspection process since the first approval in 1985. Agencies were asked to review the current listing and make corrections, if necessary, as well as to provide a contact person to help direct the mail to the proper individual. It was stated that each agency is responsible for annually reporting their activity, including the UN designation number for each package and the name of each company for which the certification was performed to the OHMS by February 1st for each previous calendar year. It was also stressed that the actual reports should not be submitted.

Withdrawal

The possibility of withdrawing an approval was discussed. The OHMS can question whether agencies are operating independently as an agent of behalf of the United States Government. If it becomes obvious that there is a failure of judgment we may withdraw approval after due process is provided. In addition, enforcement action could also be instituted.

The HMIX Information System

The OHMS has created a new topic on its computer bulletin board (HMIX) entitled "RSPA International Activities Relating to the Transport of Dangerous Goods." Under this system, manufacturers of non-bulk packagings which meet the new UN requirements may list the types of packagings they produce and provide this information to potential users.

A copy of the Federal Register Notice establishing this system as well as instructions on how to enter information or to read what is available were provided as handouts.

Information on meetings of international bodies responsible for international regulations, including papers given before the UN Committees will also be available on this system. For information regarding HMIX, please call Mr. Bill Holt on (202)366-4448. The possibility of using the HMIX system in the future for other reporting requirements was also discussed.

Responsibility

The Third-Party Agencies were advised of the responsibility to certify to DOT (HM-181), ICAO and IMDG Regulations due to the fact that Foreign Governments do not always recognize 49 CFR. Since we want our packagings to move internationally without difficulty it is important that the testing agencies be familiar with all sets of regulations. It is important to establish the mode of transportation and if the tests are different it should be noted on the test report. Requirements such as packaging limits for air shipments are not necessarily the labs responsibility. However, DOT stressed the importance of the labs becoming familiar with all sets of regulations (49 C.F.R., ICAO, and IMDG). The testing agencies were asked for recommendations, such as reporting formats, etc., in order to provide a higher level of uniformity.

Certification/Recertification

Self-certification vs. Third-party certification was discussed. DOT explained that there are three 3) ways to certify packagings: (1) self certify, (2) have a testing lab test, but self-certify and (3) Third Party test and certify. OHMS explained that registration of a symbol for self=certification was optional in lieu of the name and address. A question was asked whether it was permissible for someone to retest and continue to use the original third-party mark. OHMS's answer is yes, for a periodic retest, however if the testing is for a complete recertification the number must be changed. DOT emphasized the importance of understanding what the third-party lab is providing and keeping careful records. Certain third-party representatives strongly objected to letting someone keep the third-party mark if the third-party agency didn't perform the retesting. It was discussed that a new number for recertification could be a burden on manufacturers of drums, for instance who would have to change their dies. A question was asked if it is the third-party lab's responsibility to notify customers of their retest responsibility. OHMS answered it is not their responsibility but it might be a good marketing tool and a good idea for both parties. A question was asked if you could compare the packagings being produced with the packagings that were originally tested rather than actually perform all the required tests.

DOT responded that 49 CFR 178.601(c)(2) requires that you must do all the tests. The Associate Administrator advised that agencies cannot cut any corners and explained one of the purposes of these meetings was to explain the regulations and to require all labs to play by the same rules. Also, several areas have changed since 1985, such as the current vibration capability requirement.
Some labs represented that they are aware of people circumventing the requirements.

Enforcement

The Enforcement office gave an overview of the office organization consisting of the Washington Headquarters and three field offices; an Eastern Regional Office (New Jersey), a Central Regional Office (Illinois) and a Western Regional Office (California). It was explained that these field offices have just been established in the past year. The thrust of enforcement efforts are in the following areas: shippers, port facilities, 3rd party cylinder retesters, and packaging manufacturers. Inspection and enforcement of third-party lab activities are still in the planning stages, as this is a unique and complex environment. However, keep in mind that they are subject to enforcement.

The OHMS has a contract with a testing lab to conduct tests for us and it was stressed that future testing will be directly related to how we determine compliance with the Regulations under HM-181. Although the other modes of DOT also have responsibilities in the compliance area, RSPA's job is hazardous materials and we specialize in the packaging areas. A question was asked whether failure of a packaging would be considered non-compliance. OHMS replied that we would conduct a thorough investigation before any enforcement action was taken. Again you must document what you have done and what you haven't done. Referred agencies to 49 CFR 178.2 regarding notification. With regard to retesting, it was stated that after the 1991 effective date of HM-181 for packagings that are UN marked for purposes of international or domestic transport, the retesting would have to be performed in 1992 or 1993 depending on the type of packaging.

A question was asked if the labs are obligated to give a certificate if the packaging passes the minimum requirements even though they believe it is not suitable for shipment. OHMS Counsel answered "No, you are not required by DOT to provide a certification, but you should refer to any contract you have with the manufacturer." Document your reservations and add caveats when you know you will need to protect yourself. Another lab questioned how far does the certification go, should they also test from the production. DOT answered again document exactly what was tested. The packaging manufacturers must insure that the packagings actually produced are identical to those that were tested.

The enforcement office also encouraged the labs to call with complaints or known violations. It has been DOT's experience that most of the complaints are motivated by costs involved with doing business. This is a fact of life. Anonymous complaints will be taken. Since complete information is needed, a written complaint is preferable to a phone call, but phone calls will be accepted. The labs were again asked to provide input.

General Discussion

A question was brought up regarding plastic packagings where a "date wheel" is used to indicate the month and year of manufacture. When the date wheel is used the year of manufacturer would not appear as part of the sequence of UN markings, is this o.k? OHMS responded, No, the last 2 digits of the year must appear in sequence. However, 49CFR 178.503(a)(6) and 9.5.1(e) of the UN Recommendations provide that for plastic packagings, the month can appear separate from the UN sequence.

Another commenter asked if the date marked on the package should be the date of manufacturer or the date of testing. The answer is the date of manufacture. A comment was made that the third-party certifications are not hazardous materials product specific. The marking avers compliance with a certain level of testing.. Third parties do not have to involve themselves with specific product lists, however, it is important for the labs to be familiar with all sets of regulations.

One of the labs brought up the subject of pre-certified kits for the shipment of hazardous materials. These kits are combination packagings consisting of inner packaging, cushioning material and outer packaging. The question was asked, "Is the kit permitted under HM-181? The answer is yes, however, documentation must be provided stating how the packaging is to be assembled. A lab asked how they could be certified without knowing which hazardous material was going to be shipped. OHMS responded that you can certify a packaging to a certain packing group and maximum gross mass and the shipper will have to determine whether the packaging is appropriate for a specific hazardous material. The labs should indicate if no compatibility testing was involved.

Another commenter asked, if a 4 x 1 gallon metal paint can combination package is UN certified for air shipment, would the placement of a I quart glass bottle in this I gallon can be covered under the original certification? (The I quart bottle will not meet the pressure test requirement and is being placed in the can as permitted by Section 173.27(c)(3)(i). It was discussed that the addition of a I quart bottle inside the metal can would be covered under the original certification, as the glass bottle constitutes additional packaging not required, assuming the inner bottle will not adversely affect results of the test.

Also, in the case of single tested and approved packages (steel drums or cans) that people must overpack for passenger aircraft, must it be retested as in a corrugated overpack box? OHMS stated that if a combination packaging with a UN standard packaging as an outer packaging is required, the steel inner packaging must be tested in the outer corrugated box. If the packaging prescribed for air transportation is UN standard combination packaging, the combination must be tested.

Design Type Definition

OHMS explained the definition of a different packaging per 49CFR 178.601(c)(4) and that a packaging design must be tested for each different manufacturer of a packaging and must be tested and marked separately. Similarly, for a plastic packaging, a change from one plastic resin to another requires retesting of the packaging. This raised several questions and discussion about what constitutes a change in manufacturer.If a single packaging manufacturer is using a number of different material suppliers, packagings manufactured from each supplier's material must be tested separately unless the packaging manufacturer can ensure that the materials are virtually identical; eg., for fiberboard, materials have the same burst strength, construction, Cobb rating, etc. Each different packaging manufacturer is subject to the testing requirements even if using materials and design the same as another manufacturer.

Marking

DOT explained that although the UN series of markings contains a lot of information, it does not tell you everything about how a packaging can be used. For instance, DOT has authorized a number of variations to packagings (178.601) which are permitted without further testing of the packaging. If a packaging is being used under one of these variations, the variation will not be indicated in the marking or test certification report.

There are also a number of provisions in HM-181, Section 173.24a, for the use of packagings based on their package markings. For instance, a single or composite packaging tested and marked for liquids may be used for certain solids. Also, a package tested and marked for Packing Group I liquids may also be used for Packing Group II and III liquids with higher specific gravity. DOT pointed out that these provisions are not extended to combination packagings. Separate testing for liquid and solid contents is specifically required for combination packagings in the UN Recommendations.

DOT clarified that for combination packagings, the "S" mark is used, not a hydrostatic pressure, even when the inner packagings have been pressure tested. A lab representative asked whether there is any marking necessary to indicate that a packaging is suitable for shipment by air. DOT responded that some type of marking such as "Suitable for shipment by air" is desirable, but it was pointed out that another marking "Not suitable for shipment by air" might be advisable in other cases.

In response to a question, DOT stated that minimum size requirements for markings are prescribed in 178.3. In response to another question, DOT stated that no particular location for the markings is specified, but that the location of markings is being considered at the UN. The markings may not be applied only to a removable head.

DOT noted that the amendments to HM-181 added a provision to clarify that a certifier may apply more than one UN mark to a packaging. DOT said that the packaging must comply with both standards, and each marking must be complete. Also, it must be clear under which conditions each marking applies.

DOT stated that the "USA" marking may only be applied to packagings which are actually manufactured in the U.S. A lab representative asked whether a packaging which is actually fabricated in Mexico, but tested and certified in the U.S., could be marked "USA." DOT said that a packaging must be certified and marked in the U.S. to be marked "USA."

A lab representative asked whether a packaging which has been tested and marked with one sequence of marks could be tested again with, say, different inner packagings, and then marked with two UN sequences. DOT said yes, and also said that a packaging which could be marked with two markings could also be marked at the time of assembly of the completed packaging with the single mark that is appropriate.

In response to a question about the required "permanence" of the markings, DOT stated that, for packagings liable to undergo a reconditioning process, most of the mark must be "permanent" enough to withstand the reconditioning process. For other packagings, the markings must comply with 178.3, which says they must be legible, and of sufficient permanence. Stamping with ink or applying a sticker would be adequate in this latter instance. A lab representative related that his standard for permanence of a sticker is that if you try to remove it, the sticker is destroyed.

A lab representative asked whether, when water is used for drop testing to qualify a combination packaging for a material with specific gravity of 1.2, what is the maximum gross mass marking. DOT responded that the maximum gross mass marking would be the mass achieved by filling the packaging 98% full with a 1.2 specific gravity material, and pointed out that the stacking test would have to be done based on the weight of packagings filled with 1.2 specific gravity material.

Vibration testing

DOT clarified the vibration standard of HM-181. The requirement is that each non-bulk packaging be capable of withstanding the test. Actual testing is not mandatory. If a packaging were to fail in transportation and DOT was testing to determine compliance with the requirements, DOT would apply the vibration test and the packaging must pass. It was recommended that if a third party lab does not perform the vibration test, the reasons for not doing it should be noted on the test and certification report. For example, the shipper may have had testing done elsewhere or have certified that the packaging "is capable of withstanding" the test. DOT pointed out that such a statement would not absolve the third party lab of responsibility for certifying a packaging which does not comply with the vibration standard. However, it was noted that the vibration capability standard is a shipper responsibility (49 CFR 173.24a).

DOT said that the U.S. is still pursuing a vibration standard at the UN, but that one has not yet been adopted into the Recommendations. DOT urged the third party labs to give us any data they have in support of or against the use of vibration testing.

The group discussed the difference between vertical- and rotary-motion vibration tables. The third party representatives explained that rotary vibration tables "overtest" a packaging, and that a packaging which passes the test on a vertical motion machine may fail on a rotary motion machine. DOT stated that for enforcement purposes, we would use the minimum standard. Use of a rotary motion machine is optional.

Retesting

DOT again clarified that for periodic retesting of packagings, all tests must be performed again, every 12 or 24 months, depending on the type of packaging. These retesting provisions began going into effect on the October 1, 1991 effective date of HM-181. Therefore, a UN packaging certified in 1990 must be retested by October 1, 1992 or October 1, 1993, depending on the type of packaging.

DOT stated that the inner packagings of combination packagings may be reused without being retested. However, the complete packaging, including inners, must comply with 178.28; that is, it must be in such condition that it complies with all requirements, including the capability of passing all tests.

Number of samples

DOT stressed that where we specify a certain number of samples for a particular test, that number must be tested, unless a reduced number has been specifically approved by the Associate Administrator. In other words, where 5 samples are required, 5 samples must be tested. Testing one sample 5 times does not meet the requirements. DOT pointed out that hazardous materials may be substituted with non-hazardous materials for testing, and inner packagings or articles may be reused for testing.

Interpretation of results

DOT discussed in general how the results of tests should be interpreted and referred the third party representatives to question 16 of the Question and Answer handout.

Alternative leak tests

DOT outlined the alternative leak testing methods - helium, pressure differential, solution over seams, and solution over partial seams (T-zone). DOT pointed out that these tests are now authorized for design qualification as well as periodic and production testing, and that the test pressure for the T-zone test is 7 psi.

Drop test orientation

The group discussed the difference between diagonal drops, which are specified in HM-181, and drops where the center of gravity is vertically over the point of impact, which are specified in the UN, ICAO, and the IMDG Code. The consensus was that diagonal drops in which the center of gravity is vertically over the point of impact are the most severe drops and should be required. DOT will consider the issue.

Infectious substances packagings

A third party representative asked whether any marking requirements were being considered for infectious substances packagings, which are subjected to very vigorous testing. DOT responded that these packagings historically have not been marked, but that the U.S. will consider the issue for possible presentation at the UN. DOT anticipates a proposal from a European country on this subject at the sixth session of the UN Subcommittee on the Transport of Dangerous Goods.

IBC's

The group discussed IBC's, and DOT stated that certain IBC's are authorized for use in this country only under exemption. DOT said they are working on a rulemaking which would incorporate standards for IBC's based on the UN Chapter 16 standards into 49 CFR.

In response to a question about the application of pressure in a hydrostatic pressure test, DOT stated that the regulations do not specify the rate of application of pressure. In response to another question, DOT stated that "puffs" and "spurts" on impact in a drop test are not specifically permitted for the inners of combination packagings, but that the third party labs should use judgement in determining whether a test result is considered passing or failing.

A third party representative asked what effects HM-208 (Registration) will have on the third party labs, and whether each subsidiary of a company will have to register (and pay) separately. DOT stated that the labs will have to wait and see how the rule is published, but advised that if a subsidiary is incorporated separately, it is considered a separate entity for purposes of registration.