

March 20, 1998

Minutes

November 19, 1997 Meeting

UN Third-Party Certification Agencies

The Nassif Building

400 Seventh Street, SW.

Washington, D.C. 20590

The Research and Special Programs Administration's Office of Hazardous Materials Safety held a meeting on November 19, 1997 with the approved United Nations Third Party Certification Agencies. The Associate Administrator for the Office of Hazardous Materials Safety, Alan Roberts, opened the meeting and welcomed the UN Third Party participants. These meetings are held every few years so that RSPA can update the third-party labs on any new policies or interpretations that could affect their activities under the approved third-party program. All parties introduced themselves and stated who they represented. Handouts were provided. A draft "Questions and Answers" document was provided and the group was advised that a final Q & A document would be published at a later date. Mr. Roberts made some general remarks about the third party certification system, discussed current trends and compliance with the regulations, and the on-going contract with Tobyhanna testing facility. He stressed the importance RSPA places on the third party labs, and stated that RSPA takes its responsibilities in this area very seriously and noted that the labs are recognized by RSPA as performing a function that is an extension of RSPA. He further noted that the enforcement arm of OHMS looks at a third party certification agency as a regulated entity in the same way they would look at a packaging manufacturer. He then went on to emphasize that they were considered a very valuable resource and asked for their feedback and information on the program as RSPA wants to be the beneficiary of the lab personnel's knowledge.

Mr. Roberts discussed the agreement RSPA has with the Army's Packaging, Storage, and Containerization Center in Tobyhanna, Pennsylvania, to perform testing of UN packagings on behalf of RSPA and explained that packagings were being purchased off-the-shelf by OHMS enforcement personnel and then tested. He encouraged those in attendance to go and see the facility at Tobyhanna, stating that nothing is secret and everything done is videotaped and is a matter of public domain. The group was informed that the afternoon session would be devoted to enforcement and would expand on the Tobyhanna testing and results.

Approvals Overview

Jim Jones and Christine Whitney of the Approvals office updated the group regarding current administrative and filing procedures. Ms. Whitney asked all of the labs to make sure their names, addresses, and telephone numbers were correct on the two listings that were provided.

The group was also asked to provide a FAX number, as several letters were returned to DOT due to postal "forwarding order expired" messages.

Ms. Whitney told the group that their approval letter was being revised in a new format and will include three new important paragraphs. The first paragraph states that if a company is a third party agency and also manufactures packagings, that company cannot certify a packaging and mark it with the "+" mark if it manufactured the packaging or any component of the packaging. Although this point has been stressed at previous meetings, it is important to have it included in the approval letters. The second new paragraph emphasized training. Each hazmat employee performing a function under the terms of the approval must receive training in addition to that required by 49 CFR 172.700-704, that is, they must receive function-specific training. The third area concerned "misrepresentation." As set forth in 49 CFR 171.2(c), it is unlawful for a lab to represent or mark a container, package, or packaging (or component of a container, package, or packaging) for transportation of a hazardous material unless it meets the requirements of each applicable regulation prescribed.

Internet Availability

The Approvals office then provided a description and brief overview of the Office of Hazardous Materials Safety's web site, available at <http://hazmat.dot.gov>. Dr. Richard Tarr of the Approvals office pointed out that all current exemptions and many interpretations are available through the web site. He also discussed additional information that will be included in the future.

Regulatory Update

Mr. Ed Mazzullo of the Office of Hazardous Materials Standards noted that DOT Dockets will soon be available on the Internet, and comments on rulemaking proceedings should be available on the internet within a day or two of their receipt by RSPA. This service may be available in early 1998. Mr. Mazzullo also announced the expanded operations of the Information Center and RSPA's toll free number (1-800-HMR-4922). It is now available from 9:00 a.m. to 5:00 p.m. Eastern Standard Time continuously on weekdays. Previously the center was open from 9:00 a.m. to 4:00 p. m. and was not available during the lunch hour. While Mr. Mazzullo recommended using the service, he pointed out that RSPA cannot always guarantee the reliability of the answers obtained by telephone, and that "official" answers must be obtained in writing. He said that his office is striving to improve its turnaround time on letters of interpretation, and that customer service is a high priority.

Mr. Mazzullo then ran through a list of current rulemaking actions, including HM-200 (Intrastate transportation); HM-166Y (Miscellaneous amendments); HM-206 (Hazard communication); HM-215B (Harmonization with International Requirements); HM-221(Fiber drums); and aviation safety initiatives. He also told the group to expect a notice of proposed rulemaking on infectious substances in early 1998. He said the notice would address packaging issues, mainly harmonization with international standards. Also, DOT has exceptions for certain diagnostic

specimens of biological products that international standards do not. He hinted that these exceptions may be phased out. In general, Mr. Mazzullo urged the lab representatives to submit “substantive comments” on regulatory proposals, by making suggestions or posing alternatives, rather than simply indicating opposition to proposals.

International Activities

Mr. Frits Wybenga, the Office of Hazardous Materials Safety’s International Standards Coordinator spoke to the meeting about recent international activities. Mr. Wybenga along with Mr. Bob Richard represent RSPA on the UN Committee of Experts on the Transport of Dangerous Goods, and on the ICAO Dangerous Goods Panel. They also participate with the U.S. Coast Guard on the delegation to the IMO’s IMDG Code Subcommittee. Mr. Wybenga pointed out that most new requirements in the UN Recommendations ultimately make their way into 49 CFR, making ongoing work at the UN Subcommittee of importance to U. S. companies.

It was noted that the 2-year cycle completed in December 1996 resulted in the 10th revised edition of the UN Recommendations, commonly referred to as the “Orange Book.” The biggest change in the Recommendations was their reformatting into “model regulations,” designed to facilitate their adoption or incorporation by reference in national regulations. The new format should minimize errors that had been introduced in translating the UN Recommendations into national regulations.

Mr. Wybenga explained that in the current biennium, the UN Subcommittee will include Packing Instructions for all Dangerous Goods into the UN Recommendations. These packing instructions will be similar in format to those in the ICAO Dangerous Goods regulations, but the packagings allowed would be more like the packaging authorizations that currently exist in 49 CFR. A U.S. paper proposing specific packing instructions for non-bulk packaging and IBCs will form the basis for UN discussions.

Other ongoing efforts included the authorization of regrind (used) plastic in the manufacturer of plastic drums (which will be proposed for adoption into 49 CFR), the addition of standards for “large” packagings (IBC-sized packagings used to contain inner packagings), and the development of new standards for packagings used to transport materials which are poisonous by inhalation (PIH materials).

The standards for “large” packagings, which will be incorporated in the 11th revised edition of the UN Recommendations, comprise certain requirements for non-bulk combination packagings now outlined in Chapter 9, and performance standards for IBCs now included in Chapter 16. A unique marking requirement is also specified.

With regard to PIH packagings, RSPA noted that the United States submitted a paper to the UN in July 1997, proposing packaging requirements for PIH materials similar to those now specified in 49 CFR. Mr. Wybenga stated that the paper was “well received” but that the general comment

was the standards are too specification-based. RSPA is now attempting to develop more performance-oriented standards, and is working with Mr. Bob Ten Eyck of Ten E Laboratories (a third-party representative) towards a possible puncture test as part of the performance-type approach.

Mr. Wybenga mentioned to the group that RSPA is their connection to the UN, and that if there are specific issues that the labs want raised at the UN, RSPA is willing to bring those issues forward, provided there is sufficient industry support and agreement. He also asked if any of the participants wanted a copy of the "Report of the Sub-Committee of Experts on the Thirteenth Session" in Geneva 7-17, 1997. Many participants requested such and copies were reproduced and made available to them before the meeting adjourned.

Technical Office Update

Mr. Charles Hochman of Hazardous Materials Technology (OHMT) introduced Mr. Don Burger, the new packaging engineer for OHMT. Mr. Hochman noted that Mr. Burger came from the Naval Weapons Station Earle in New Jersey, and has real experience as a packaging engineer. The labs were also urged to let RSPA's Technical Office know where the regulations can be improved.

RSPA Enforcement Update

Mr. John O'Connell and Mr. Doug Smith of the Office of Hazardous Materials Enforcement gave an informative presentation on RSPA's enforcement program. Mr. O'Connell noted the extensive enforcement field presence at the meeting, including representatives from RSPA's five regional offices as well as the headquarters office, which deals in national program areas such as radioactive materials, explosives, and cylinders. Mr. O'Connell noted that at present, approximately 50% of RSPA enforcement resources are devoted to shipper inspections, but that additional resources will be devoted to air shippers because of developments in the ValuJet investigation.

Enforcement Statistics

According to Mr. Smith, RSPA conducted 1,881 inspections in a recent 18-month period. He noted that the 34% of packaging manufacturer inspections resulted in fully half of all enforcement actions initiated. He added that there were 9 inspections (only 0.5% of all inspections) of packaging certifiers (labs).

Mr. Smith then broke down the enforcement actions as follows: (1) 352 actions were generated from the 1,881 inspections; (2) 175 of the enforcement actions were pure civil penalty actions; and (3) 63 tickets were issued. He gave an explanation of the "ticket" program. RSPA began a 2-year pilot program of issuing tickets for certain violations not directly affecting safety, like operating under the terms of an expired exemption. The 2-year pilot ends in May but likely will

be extended. According to Mr. O'Connell, the ticketing program has accomplished its goal of reducing the workload on RSPA attorneys. The penalty assessed on a ticket is typically 50% of what the penalty would be under ordinary civil penalty actions. The average ticketing case takes 40 days to adjudicate, whereas the average traditional civil penalty action takes 16 months to adjudicate.

Mr. Smith outlined some of the "violation trends" and shared that people are still manufacturing and certifying packagings to the old DOT specifications (49 CFR no longer authorizes their manufacture). He noted a difference in the severity of the violation based on whether the packaging actually meets the standard to which it is marked. If the DOT-marked packaging meets the requirements for the outdated specification to which it is marked, a ticket is issued. However, if the DOT-marked packaging does not meet the outdated specification to which it is marked, RSPA usually initiates a civil penalty action. He also provided examples of other violations that inspectors are finding are: marking a packaging as meeting Packing Group I requirements when the packaging was only tested to Packing Group II; not conducting the leakproofness test on a drum marked "Salvage Drum"; failing to conduct periodic retesting; improperly testing or using an improper number of samples; and incomplete records. He noted that incomplete records create doubt in the inspector's mind as to whether testing was done or done properly.

Mr. Smith then noted typical violations committed by third party labs. They included: miscalculation of the weight needed to conduct the stack test; using the wrong height for the drop test; incomplete records; or failure to conduct function-specific training for employees. However, he said that with the third party labs, violations are usually because of an interpretive matter (the lab misunderstood the requirements) or simply a mistake. He noted that under the UN system, it is more difficult for inspectors to determine if there is a violation than it was under the DOT specification-based system and said that it is very prevalent among self-certifiers to find packagings marked as meeting UN standards, when no tests were performed. Also, he said that box manufacturers often assume the shipper who asks him to make boxes and mark them to the UN standards has conducted the proper tests, when in fact the shipper has not. Some box manufacturers, he said, are not even aware there is a test requirement.

What to Expect During an Inspection by RSPA Enforcement Personnel

Mr. Skip Skeggs and Mr. John Heneghan, two RSPA inspectors from regional offices, outlined for the group what they can expect during an inspection. The labs were asked how many had been visited by an enforcement member. The majority of the group raised their hands. To answer the question "What brings a RSPA inspector in?", Mr. Skeggs explained that: (1) the lab's name is on a list, and an inspector will eventually get to each lab; (2) while inspectors are out doing inspections at other facilities, they come across packaging markings that identify specific labs; and (3) labs might be identified through complaints from competitors or shippers.

Mr. Heneghan explained that he always arrives unannounced for an inspection, and expects all records to be available for his review. He evaluates a lab's capability to perform the tests for which they are approved, for the packagings they are approved to test. To do this, he looks at the equipment, the controls on the conditioning room or chamber, and the lab's method of performing the tests, specifically checking drop heights and stacking weights. All records are reviewed for completeness. There was a question as to whether the original approval request and all other records had to be on file and made available to enforcement staff during an inspection. The inspector asked that the approval letter be amended to include a requirement that a copy of the original approval request as well as all subsequent information required to be submitted must be on file and available to DOT representatives upon request. The headquarters office agreed and will add those words in the upcoming revised approval. Both inspectors suggested that the labs document all tests thoroughly, to help in verifying that all the tests were properly performed. Inspectors are also checking for training records documenting function-specific training. Mr. Heneghan noted that lack of training is a problem with self-certifiers.

Testing at Tobyhanna

Mr. Smith explained that in May 1995 RSPA signed an interagency agreement with the Army's package testing facility in Tobyhanna, Pennsylvania, to conduct testing for RSPA. The testing began in the fall of 1996.

To date, 30 package designs selected by RSPA have been tested at Tobyhanna. Of these 30 packaging designs, only 8 (27%) passed all required tests. A packaging that failed at least one required test is considered to have failed. However, he pointed out that RSPA is not purchasing "standard" packaging for testing. They are buying packagings they believe might fail, based on their package markings. For example, they are looking for packagings marked for PG I, for high specific gravity materials, or packagings indicating a high pressure test level, like 250-300 kPa.

Mr. Smith specifically highlighted steel packagings, for which he had more statistics, including 12 new steel packagings of varying capacities 5 gallons or higher, some closed head and some open head. During 93 drop tests, 29 failures (31%) occurred. Open head drums accounted for 25 of those failures. Of 42 leakproofness tests conducted, 13 failures (38%) occurred, 8 of them to open head drums. Of the 51 hydrostatic pressure tests conducted, 37 (73%) resulted in failure. None of 12 designs tested failed the stacking test, and one 5-gallon closed head packaging failed the vibration test. Of the 12 new steel drum designs tested, all were self-certified (none had been tested by a third party lab).

Mr. Smith noted that one reconditioned drum was tested, and failed 17 of the 24 tests performed. However, RSPA later realized that the drums had not been properly closed prior to testing, possibly affecting the test results, so enforcement action was not initiated.

With regard to polyethylene packagings, of the 9 tested, 2 passed and 7 failed. Of the 5 combination packagings tested, 2 passed and 3 failed. No IBCs have been tested at Tobyhanna

yet, though the lab is gearing up to do such testing. In response to a question, RSPA stated that no foreign-made packagings have been tested, as these packagings are difficult to obtain. Foreign-made packagings will be tested to the extent RSPA can obtain them.

All tests performed at Tobyhanna are videotaped, and a videotape of some testing was shown at the meeting. The video depicted some dramatic failures to various packagings. Again RSPA pointed out that these packagings were “suspect” based on package markings indicating unusually high performance levels. In response to questions from the meeting attendees as to whether these packagings had ever actually been tested, RSPA stated that all packagings tested at Tobyhanna have a test report from someplace indicating they have passed the required tests. Lab representatives wondered whether the packagings depicted in the video had been changed from their original designs, causing the dramatic failures seen. The enforcement representatives could not say whether that was the case.

In response to a question, RSPA stated that failure of the tests performed at Tobyhanna does not necessarily result in enforcement action against the person who certified the packaging. Noting that their first concern is compliance with the regulations, RSPA said that their first action is a letter to the manufacturer asking that the problems be corrected. Frequently, the packaging manufacturer will take a failed sample and have it analyzed to determine why it failed. If a significant number of failures occurred during testing of a particular packaging design, RSPA will take enforcement action. If there was a single failure, not repeated through additional testing, RSPA most likely issue a warning letter, or possibly a ticket.

RSPA staff fielded a number of questions from the labs on the testing program at Tobyhanna. There was great concern that Tobyhanna may be viewed as a “referee” lab. Mr. Smith noted that Tobyhanna can be viewed as completely impartial, since they do not test commercial packagings, and have nothing to gain whether the packaging passes or fails. But the lab representatives pointed out that some areas are interpretative; for example, each lab must make its own determination as to what part of the packaging is the “weakest part not tested in the first drop.” Will the labs be held responsible if a packaging they tested and certified then fails testing conducted at Tobyhanna?

A long discussion on the regulatory concept of each packaging being capable of withstanding required tests ensued. RSPA stated its expectation that each packaging meets the standard. Lab representatives pointed out that they cannot address the quality control practices of manufacturers. RSPA agreed that the third party lab cannot control the customer who “doctors” packagings sent for testing, or makes design changes subsequent to testing.

In the enforcement presentation, RSPA representatives said that they have a five-year statute of limitations and they do not look at things that happened more than five years ago. However, they do often ask for records going back more than five years, particularly where they need the

original design qualification test records for a packaging still being produced. They want to ensure nothing has been changed.

Specific Questions Addressed

Prior to the November meeting, RSPA had solicited questions from the third party labs. RSPA had prepared answers to some of those questions, but left many to be discussed at the meeting. Many of the questions resulted in spirited discussion among the meeting participants, but did not result in definitive answers from RSPA. A written summation of the questions and answers will be provided by RSPA at a later date, however, many of the questions were discussed as follows:

Non-Bulk Packaging Testing

RSPA stated that an open-head drum, qualified as a single packaging for liquids, may be used as an outer packaging for a combination packaging, without being retested as a combination packaging. Also, the inner packagings must not affect the performance of the outer packaging. Lab representatives wondered if the same applies to IBCs used as combination packagings, but RSPA stated that the “large packaging” requirements recently adopted at the UN will address that.

Infectious Substance Packagings

RSPA stated that the markings for infectious substance packagings, adopted by the UN and ICAO will be considered for adoption in 49 CFR in a future rulemaking. At the same time, the differences between testing methods specified in 49 CFR and international standards should be resolved. In particular, 49 CFR specifies a drop test following water immersion, while ICAO requires a water spray test.

Salvage Drums

RSPA said that it is the responsibility of the person who marks a drum with the words “Salvage Drum” to ensure it has been leakproofness tested.

Capability Standards vs. Mandatory Testing

RSPA said that for the internal pressure capability requirement of 49 CFR 173.27(a), the person who offers a packaging for transportation by air is responsible to ensure the capability is met. No specific test is required, therefore, no test duration is recommended, and the test performed can be with water or air. Further, Mr. Mazzullo said that a general review of aviation requirements, including those in 49 CFR 173.27, will take place in 1998, and that clarification of the internal pressure capability requirement may be needed.

A lab representative asked whether RSPA had ever considered scrapping the “capability” requirements of the regulations in favor of actual test requirements. RSPA said that although they had maintained certain long-standing “capability” requirements when UN standards were adopted, they would consider changing them, particularly to the extent that the capability standards pose safety problems. However, RSPA noted that at least in the case of the vibration standard, the requirement differs from international standards.

Markings

RSPA said that markings can be handwritten, provided they are legible, but such markings may be questioned by carriers and enforcement personnel. Also, RSPA said that packagings with a gross mass of 30 kg. or less may be marked on the bottom only.

Design-type Changes

In response to questions from the third-party representatives, RSPA held fast to its long-standing policy of considering any change to a packaging a new design type, unless the person who certifies the packaging can show that the new packaging is “virtually identical” to the one originally tested. It was noted that the Fibre Box Association had come to RSPA for some relief with regard to fiberboard boxes, suggesting certain changes to fiberboard that could be made without retesting a box design. The Fibre Box Association was advised that RSPA has received their request and is in the process of developing an approval similar to one that was issued to the Steel Shipping Container Institute (SSCI) which has now been adopted into the regulations under 49 CFR 178.601(g)(8).

RSPA said that if a shipper has a material board analysis of sufficient detail that a second box maker can produce boxes that are virtually identical to boxes originally tested, new testing is not required. If a shipper has a detailed enough specification, he can buy boxes from several different suppliers without testing boxes from each supplier.

RSPA reiterated that the test documentation should be specific enough so that an inspector can determine whether a packaging is a “different” packaging. They noted that the third-party lab may have an agreement with their customer, indicating that the customer cannot change anything without nullifying the certification unless such changes are covered by the certification. RSPA said that the test report does not necessarily have to identify the box maker.

RSPA stated that they do recognize fluctuations in the manufacturing process, and don’t go to that degree of detail in looking for design changes. However, changing 190 lb. test board to 200 lb. board is definitely a change. Shippers should make sure their specifications are tight enough that the packaging supplier cannot make changes without the shipper’s knowledge.

CEN Standards

RSPA reported that any CEN or ISO standard on procedures for conducting UN packaging testing would not automatically be adopted into 49 CFR, but that if such a standard is incorporated into the UN Recommendations, it will likely be proposed for inclusion in the U.S. regulations (49 CFR). RSPA further said that a CEN-type standard is not currently being considered in the process of developing a North American Code, but again, consistency with the UN will be maintained.

Vibration Test for IBCs

There was discussion about the vibration test performed on IBCs. The question is whether the test should be performed with water, or with a test substance of the same specific gravity as the material to be shipped in the IBC. It was noted that many test labs use water for the vibration test, even though the IBC will be certified for liquids with higher specific gravity. Some labs noted that a test with water is often a more severe test than a test done with sand or lead shot as adding sand or lead shot does not always create a homogeneous mixture that simulates the material to be transported.

RSPA did not give a definite answer as to how the vibration test for IBCs should be performed. The participants were asked to give their opinions. Many of the participants urged RSPA to consider how the test should be performed so that the test can be reproducible and to try to keep the test as simple as possible so that consistency between labs can be achieved. Test standards (e.g. CTC, NMFC) have traditionally called for water to be used.