



Savannah in springtime was a delightful place to be, where hazmat professionals could discuss the issues of the day in the shade of the Spanish moss

## Questing time

**CONFERENCE REPORT** The theme for COSTHA's 2012 annual forum was 'The Quest for Global Compliance'. The fellowship of delegates had plenty of expert guides to lead them on that voyage, with a few stops along the way for refreshments

A matter of great concern to both industry and the regulatory authorities in recent years has been the gradual erosion in the level of expertise on matters relating to the transport of dangerous goods/hazardous materials. As the older members of both sides of the regulatory fence reach retirement, they are not necessarily being replaced and a lot of knowledge is disappearing.

Industry bodies have been looking at the problem and trying to find ways to encourage brighter young people to join the business – although this is not easy when the role is often ill-defined, not properly valued by employers and lacks a well defined career path. A number of proposals have been put forward that might help enhance the image of the hazmat professional and the latest findings were presented during the annual forum of the Council on Safe Transportation of Hazardous Articles (COSTHA) in Savannah this past April by Dr **Barbara McIntosh**, a professor at the

University of Vermont.

"Hazmat is a hidden profession," Barbara began. It is quite likely, in any large organisation, that others in the company do not know what the hazmat specialist does nor how important those tasks are to the organisation as a whole. COSTHA had recently undertaken a survey of its members to see how they fit into their organisation. Of the 171 respondents, only 49 had been hired or appointed into the job; for the rest, some element of job development had gone on since their appointment.

This means that the corporate HR department may not know what it is the hazmat specialist is doing and Barbara stressed that it is vital to keep on top of your job description. Does it reflect what you do now? Does it recognise the level of corporate risk attached to whether you do that job well or badly? Only 45 per cent of those surveyed by COSTHA reported that their job description fits what

they actually do.

Barbara mentioned that hazmat professionals often have a 'para-legal' role within the organisation; their tasks are much more complex than those of logistics managers and this should be reflected in salary levels. "You need to step forward," she encouraged the audience. "If you don't, who will know what you do and how important it is?"

What it comes down to is a need to be recognised. Barbara offered a three-step programme:

1. Start with your job description. Are your responsibilities properly recognised?
2. In any case, ask HR for a job re-evaluation.
3. Share your experiences with others in the profession.

She called on the audience to "Leave a legacy!" It is only by passing on experience to younger professionals in the business that continuity of expertise can be ensured.

### Follow the money

The COSTHA meeting had already looked closely at what the US Department of Transportation (DOT) is doing in terms of domestic regulations (HCB May 2012, page 17). As ever, though, one of the most interesting presentations at the COSTHA event is the one that deals with the politics of regulation, given by COSHTA's general counsel **Rick Schweitzer**. This year he was preceded at the podium by **Kerry Tassopoulos**, vice-president of government relations and compliance at Mary Kay, who urged companies to take part in the legislative process. "All businesses need to be involved in politics, otherwise politics runs the business," he said. Companies should get involved at the local level and get to know their legislators.

"Lobbying is education," Rick agreed, giving some examples of how COSTHA has been trying to educate the regulators recently, particularly in respect of the Special Permits and Approvals process. The Pipeline and Hazardous Materials Safety Administration (PHMSA) introduced new operational procedures on this process in October 2009. Some aspects of this were good: the modal administrations under DOT are coordinating with PHMSA on assessment of fitness and the online application system offers enormous benefits.

However, overall the renewal process is taking longer than before. Fitness criteria for approvals were issued without notice to industry and with no comment period; COSTHA felt this change was 'substantive' and should have been subject to the rulemaking procedure. Along with other industry associations it issued a petition for rulemaking in December 2010 but this was denied by PHMSA in July 2011. Rick said he felt PHMSA was "on very shaky ground". The Administration has since held a public meeting on fitness standards but there is still no rulemaking and no proposal for comment; there has been no cost/benefit analysis nor any attempt to validate the efficacy of current standards.

A number of other changes have been introduced to the Special Permits system. For a start, trade associations are no longer allowed to hold permits on behalf of their members. PHMSA has also denied some renewal applications when the corporate parent held the Special Permit on behalf of operating subsidiaries.

SP 9275, which allows flammable materials to be sent by mail in air transport under certain circumstances, was renewed in August 2011 according to schedule, but PHMSA added new requirements for marking the company name and, where relevant, the words: "Contains ethyl

alcohol, exempted quantity". This change is effective on September 12, 2012. COSTHA has since filed a petition for modification, as Rick explained that it seems to be "a solution looking for a problem". COSTHA managed to get a provision included in H.R.7, the Surface Transportation Extension Bill, to require a one-year study on the value of continuing to regulate small quantities of ethyl alcohol. The House was comfortable with the proposal, Rick said, but the bill has stalled – and in any case would probably not have passed Senate. With the imminent presidential election in the US, a lot of legislation is not going to get through the process.

Senate has, however, passed a two-year highway bill, S.1813, although House could only agree on a three-month extension to the existing act. The Senate bill includes a lot of good things, Rick said, including a pilot e-freight project, mandating regulating of the loading and unloading of rail tank cars and trucks, standards for training enforcement personnel, amendment of the 'package opening rule', codification of the procedures for Special Permits and Approvals, and a requirement for a rulemaking on fitness standards. However, none of these 'good things' are in the House bill.

PHMSA is seeking authority to impose fees for Special Permit and Approvals applications; Congress agrees with industry that this is not necessary. The Hazmat Regulation Fund currently has a \$15m surplus and the Interested Parties Group, of which COSTHA is a member, is seeking a reduction in existing fees. Rick said it may be necessary to go to court to get any response from PHMSA.

### Work ahead

The COSTHA meeting is renowned for the time it devotes to providing face-to-face meeting opportunities. Delegates had already dressed like pirates, drank rum, networked with the regulators and mingled over lunches and breakfasts. By the time the final day of the conference rolls around, pretty much everyone is on first-name terms. This might make it difficult for those regulators who have been volunteered to bring the audience up to date on the upcoming international regulatory changes, since delegates are by now more likely to be sufficiently relaxed to ask awkward questions.

So hats off to **Jeff Hart**, head of the Dangerous Goods Division at the UK Department for Transport (DfT) and chairman of the UN Sub-committee of Experts on the transport of dangerous goods (TDG), for putting his head above the parapet. He gave a necessarily brief resumé of the changes that

have been agreed to the 18th revised edition of the UN model regulations, which is applicable as from January 1, 2013; the model regulations are, though, not mandatory and must be transposed into the international modal regulations and national legislation – "even in the USA!" – as from January 1, 2015. Why should delegates worry about something so far away, Jeff asked. He promised to give them two years' notice of what they will be struggling with, saying: "The earlier you take notice, the easier it will be."

The 18th revised edition will be based on the outcome of four meetings of the TDG Sub-committee during 2011 and 2012, so while some amendments have been agreed, there is always the chance that they will be changed before the final text is agreed this coming December.

Before the TDG Sub-committee agreed the amendments to the 18th revised edition, they also made some corrections to the 17th revised edition, which took effect from the beginning of 2011 and is due to enter into force through the modal regulations as from January 1, 2013. These are being picked up by the modal authorities and will appear in the final texts that will be published during the next few months.

A new 2.3.2.2 specifies exemptions from the packaging requirements for viscous flammable liquids. This has been moved from the Manual of Tests and Criteria for greater clarity. The UN model regulations provide relief for receptacles up to 450 litres, although the modal authorities have specified lower limits.

A new 2.6.3.2.3.3 is added to exempt from the Regulations medical equipment that has been drained of free liquid. Jeff said this may be reviewed. The experts have provisionally re-ordered the exemptions relating to transfusions and transplants but want more medical opinion before finalising the changes.

The limited quantity threshold for UN 2590 white asbestos has been aligned with other asbestos entries as 5 kg. Mercurous chloride has been assigned to UN 2025, Packing Group III. The term "pressure vessel" is replaced by "pressure receptacle" throughout the Regulations. And a new note is added to 2.9.4 to specify that batteries must be of a tested design type, even if the cells of which they are composed are of a tested design type.

Work on the 18th revised edition has covered a lot of subjects so far, not least batteries. In addition, the experts have been looking hard at a number of special provisions. In SP 135, for instance, a clarification has been included that dehydrated salts of UN 2465 which are exempted from the provisions by virtue of SP 135 may nevertheless be subject

## regulations

to the regulations if they meet the criteria for being environmentally hazardous. SP 251 and Packing Instruction P901 are amended to require chemical and first aid kits containing dangerous goods must conform to the Packing Group II packaging requirements, though no indication is required on the transport document. SP 367 will allow a shorter shipping name for mixed consignments of paints and paint-related material, or printing inks and related material.

The new, harmonised limited quantity provisions have thrown up some interesting questions. One will be addressed by 3.4.8 and 3.4.9, which will make it clear that dangerous goods packed in limited quantities in accordance with the International Civil Aviation Organisation (ICAO) Technical Instructions for air transport, including marking and labelling, but not consigned by air, may be carried by surface transport. In a similarly permissive mode, 4.1.1.5.2 will allow the use of supplementary packagings within an outer packaging even if not required by the packing instruction, provided that any cushioning material is suitable for use with the substance consigned.

Pyrophoric solids will now be permitted in fibreboard outers for combination packagings, as pyrophoric liquids are already. Plastics inner packagings will be permitted in P601 and P602 combination packagings. The provisions in P906 for transformers, condensers and other similar devices have been slightly revised.

Intermediate bulk containers (IBCs) of a design type that has been approved for liquids may be used for solids that may become liquid during transport. A note to 6.1.3.1(e) will permit the last two digits of the year of manufacture to be displayed in the month 'clock' symbol for 1H and 3H plastics IBCs. A new definition and provisions will be in 6.6.5.1.9 for large salvage packagings of 400 kg/450 litres or more.

### Look ahead for major shifts

Perhaps the most significant change Jeff mentioned was the revision to 6.1.1.1(d), which will now read: "Packagings for liquids, other than combination packagings, with a capacity exceeding 450 litres". This means that:

- (a) no package for liquids or solids can have a net mass exceeding 400 kg;
- (b) single and combination packagings should have a maximum capacity of 450 litres if containing liquids but could exceed 450 litres if containing solids; and
- (c) combination packagings with inners containing solids or liquids can have a volume capacity exceeding 450 litres provided the net mass does not exceed 400 kg.

There is a lengthy list of further amendments on which the Sub-committee still has to make decisions. These include several relating to explosives, lithium batteries, uncleaned waste packagings, light bulbs containing small quantities of dangerous goods, radioactive materials and the use of electronic data transmission. The experts want to look at extending the provisions for the control of electrostatic discharge, already applicable to IBCs, to other forms of packaging, although Jeff admitted this might be "challenging". He asked industry to get involved in particular in discussions relating to the application of issues related to the globally harmonised system of classification and labelling of chemicals (GHS) which, he said, could have major consequences for transport.

In closing, he pointed delegates to where they could find the texts of the proposed amendments and asked them to make COSTHA staff aware of industry's views. COSTHA attends the meetings of the TDG Sub-committee and can make those views heard.

Looking at more immediate changes facing industry, **Janet McLaughlin**, deputy director of the Office of HazMat Safety at the US Federal Aviation Administration (FAA), reported on the revisions that will appear in the 2013-2014 edition of the ICAO Technical Instructions (TIs). Work to finalise the new edition was carried out by the Dangerous Goods Panel in October 2011 in Montreal as well as by a specially convened Working Group of the Whole on lithium batteries, which met in February 2012.

In addition to the technical changes to the TIs, revisions have been agreed to the definitions for 'state of origin' and 'state of destination'. The experts have been talking for some time about overflights and sovereign rights but no way of resolving the issue has so far been found. There is a problem when approvals need to be sought from the states of origin, operator and destination as well as all the states of overflight.

Some states feel that the TIs should address helicopters more specifically. A first attempt has been made in this regard by explaining to what extent the TIs apply to internal and external loads. Janet said that there is likely to be some degree of variation in the application of this change, although helicopter operations subject to the TIs – for instance, to supply offshore oil and gas installations – is by and large a domestic issue.

Language has been added to allow the onboard sale of portable electronic equipment containing lithium batteries. Another change will encourage entities other than the operator

(e.g. freight forwarders and airports) to report incidents to state authorities. ICAO has also adopted from the International Air Transport Association (IATA) the table on passenger and crew provisions, which Janet said is a "really good way" to organise the appropriate information. This will appear as Table 8-1 in Part 7.

The additional meeting on lithium batteries ended up making one significant change in Packaging Instructions P965 and P968. The limits for Section II batteries have been changed and a new Section IB is inserted; batteries shipped under Section IB will be regulated as Class 9 but do not require UN-specification packaging. Training is required [there was an error in HCB's report on this in the April edition] and an alternative document with summary information on the Notification to Captain (NOTOC) are also specified. These difficult changes will be supported by outreach material currently in preparation.

### Home and away

The situation regarding maritime transport is somewhat complicated by the International Maritime Organisation's (IMO) schedule for implementing the International Maritime Dangerous Goods (IMDG) Code. As LCdr **Doug Lincoln** of the US Coast Guard explained, Amendment 35-10 of the Code, which is the equivalent of the 2011-2012 edition of the ICAO TIs, has been mandatory only since January 1, 2012. Amendment 36-12 will enter into force on a voluntary basis on January 1, 2013, becoming mandatory one year later. He hoped that everyone in the audience was up to speed with Amendment 35-10, although there may be some minor corrections coming out of the Maritime Safety Committee (MSC) at its May meeting. The changes that will appear in Amendment 36-12 have been submitted to MSC for approval at the May session and are due to be adopted in December.

IMO is also responding to criticism over the cost of keeping up with the IMDG Code by making Amendment 36-12 the first consolidated edition; in future, consolidated editions will be published every four years, with interim amendments, corrections and updates issued online. This plan also aims to ensure that changes get out quickly. IMO has also made the changes that will appear in Amendment 36-12 available online via its Global Integrated Shipping Information System (<http://gis.imo.org>).

In Part 1 there are updated definitions, revised guidelines on marine pollutants and a reorganised section on security. Part 2 includes new guidance on excluding articles for Class 1 and exemptions for medical wastes. The most



significant changes can be found in Part 7, which has been completely rewritten. A table will be included to show correspondence with the old version and will be issued separately as an MSC circular. Updates were necessary to the Emergency Schedules (EmS), driven by the unique emergency response requirements for chemicals under pressure.

Away from the Code, IMO, along with the International Labour Organisation (ILO) and the UN Economic Commission for Europe (ECE) are revising their guidelines for the packing of cargo transport units (CTUs). This will be longer, more detailed and will appear as a stand-alone document. Shippers can also expect a revised circular from USCG on its inspection programme for containers carrying dangerous goods

For a North American audience, the European regulations can appear daunting at first. **Volker Krampe** of Beiersdorf AG was on hand to dispel some of those fears. For a start, it is very easy to find out what is going on: the process is transparent, with the full text of ADR published on the internet. The changes that will appear in the 2013 edition are already available, along with the various multilateral special agreements and country-specific information. In addition, Volker said, the US and Canada have voting rights at the joint meeting where many of the decisions are taken.

For US exporters, it is not really necessary to know too much about the ADR regulations, which provides for goods arriving by air and sea in accordance with the ICAO TIs or IMDG Code to travel to their first destination without having to comply with ADR. The only things to look out for are that the shipping document should specify: "Carriage in accordance with 1.1.4.2.1" and that the tunnel restriction code should also appear. US exporters should also be aware that the shipping document will need to be in the language of the forwarding country as well as one of the official languages (English, French or German).

ADR does not recognise consumer commodities shipped under the ORM-D classification, so exporters need to use the new limited quantity provisions. On the other hand, ADR offers some relief, including a blanket exception for pharmaceutical products packaged for retail supply. ADR also now allows some articles of Division 1.4S to take advantage of the limited quantity provisions, although a Swiss proposal to prohibit mixed loads of Class 1 limited quantity consignments has now made ADR more restrictive than the IMDG Code in that respect.

One further area of disharmony with US provisions is in the use of the environmentally

hazardous mark, which in ADR follows the lead of the UN model regulations and the IMDG Code in being applicable to all goods that meet the criteria, not just those assigned to UN 3077 and 3082.

The ADR experts have also deferred any decision to accept the concept of flexible bulk containers – BK3 – until the next biennium. This is, Volker said, "a nightmare for harmonisation", although he might have been being somewhat hyperbolic on that point.

### Trains and boats and planes

The final session of the main conference was COSTHA's annual US modal briefing, with representatives from some of DOT's modal agencies reporting on their activities. **John Hardridge**, lead transportation specialist at the Hazardous Materials Division of the Federal Motor Carrier Safety Administration (FMCSA) kicked things off with a review of safety initiatives in road transport.

FMCSA has three areas of focus:

- to raise the bar for motor carriers looking to enter the business,
- to maintain a high standard of safety and compliance in order to stay in the business, and
- to remove unsafe drivers and carriers from the nation's roads.

FMCSA is increasingly using metrics to identify below-par performance and it is trying to be transparent about how it is doing so and what those metrics mean. As it moves forward, it is finding that some of the cut-off points change and there is a risk that some carriers will fall out of the Hazardous Materials Safety Permit programme. It is looking for "more appropriate" out-of-service rates to ensure that this does not happen.

FMCSA is still moving over from the old SafeStat system to the new Compliance, Safety and Accountability (CSA) initiative, which is much more comprehensive in terms of the data being measured. Again, the behavioural analysis safety improvement categories (BASICS) have been changed so as to separate hazmat and non-hazmat incidents more effectively and give a better indication of the safety performance of hazmat carriers.

John spoke about some other initiatives, including hours-of-service restrictions and distracted driving, that aim to improve road safety in the US. There is also targeted activity on fireworks transport. He finished with a few words on cargo tank rollovers, which he said are running at between three and ten per day. FMCSA has studied the problem, as have the National Transportation Safety Board (NTSB) and the National Tank Truck Carriers (NTTC) but, as John said, "We're at a dead end! Has

anyone got any ideas?"

The air mode was covered by **Angel Collaku**, manager of the Compliance and Enforcement Division at US FAA, which is unique insofar as it has independent enforcement authority over the hazardous materials programme. FAA covers 80 Part 121 air carriers and more than 3,000 Part 135 air carriers. Part 121 have generally been subject to a comprehensive inspection every two or three years but this is being changed and FAA is moving towards more focused inspections on a more regular basis, which should help improve contact between itself and the regulated industry.

FAA is finding that most violations of the hazardous materials provisions are related to the carrier's failure to conduct adequate acceptance inspections. This may seem a little unfair, since more than 60 per cent of all hazmat non-compliance cases opened relate to shippers, and more than 20 per cent to passengers.

Angel turned to the accident record to see how regulators have responded. He listed 13 major air accidents since 1973, of which eight involved materials that can both initiate and sustain a fire. The list began with the 1973 incident in which a PanAm Boeing 707 freighter was brought down near Boston, Massachusetts, after nitric acid spilled onto sawdust in the hold, causing an uncontrollable fire. This led to the modern FAA hazmat regulations. A NorthWest Airlines jet was victim to the first modern lithium battery incident in 1999 and lithium metal batteries have not been allowed as cargo on passenger aircraft ever since.

It is, though, a misconception that there has never been a lithium battery fire involving a shipment that was in compliance with the regulations, Angel said. In fact, that is impossible: the Hazardous Materials Regulations offer a performance standard and if there is a fire, by definition the packaging has failed to meet the standard.

Another misconception is that FAA is doing nothing about the risks. It is in fact pursuing a number of enforcement cases involving violation of the lithium battery requirements and is looking at them very closely.

Finishing the conference, **Billy Hines**, chief of PHMSA's Southwest Region, noted that there are more inspectors out in the field and they are finding more instances of non-compliance. Sadly, non-compliance relating to the training requirements remains at the top of the list and Billy found it hard to sympathise: "The rules are clear," he said.

COSTHA's 2013 annual forum will take place from April 21 to 24 at the Westin Hotel in San Diego, California. For more information, go to [www.costha.com](http://www.costha.com).