COSTHA: READ ALL ABOUT IT

// BY PETER MACKAY ON 13 SEP 2024

The US regulators have been surprisingly busy lately. Fortunately, COSTHA's Annual Forum offered an ideal meeting point to come up to speed

The Council on Safe Transportation of Hazardous Articles (COSTHA) held its Annual Forum this year for the first time as a purely in-person event since the arrival of the Covid pandemic in 2020. There was a clear desire to get back together, with some 220 people gathering in Fort Myers, Florida this past 21 to 26 April for a week of conference sessions, roundtable discussions, workshops, networking and training. Much of this can be done online, if seldom as effectively as in real life, but it is the opportunities for networking that make the event so valuable to so many – not least the possibility of sitting down over dinner or drinks with the regulators from DC.

It is also worth noting that the Annual Forum provides much more than a regulatory update, although that is certainly an important element. And, with big changes looming in the international, regional and national rulebooks in 2025, it represented a significant slice of the event's coverage. HCB has already reported on some of the presentations (HCB June 2024, page 16) and this second part of our report concentrates on issues relating to North America.

PHMSA'S PLANS

The Pipeline and Hazardous Materials Safety Administration (PHMSA), the agency of the US Department of Transportation (DOT) most intimately involved with the transport(ation) of hazardous materials, had a big presence in Florida. Matthew Nickels and Steven Andrews of PHMSA's Office of Hazardous Materials Safety (OHMS), Standards and Rulemaking Division, gave an overview of developments in the US.

PHMSA has been on something of a recruitment drive of late and several new names were introduced to the conference delegates – these are the people who will be on the other end of the phone when dutyholders ring for advice (or make a complaint). Some of them, it must be said, hardly look old enough to have graduated from high school, though in fact all have had a good education and some also have plenty of experience in related government agencies.

Moving on to what is actually going on with rulemakings, Matthew and Steven listed PHMSA's priorities for 2024. The final rule under HM-215Q, the biennial international harmonisation rule, had recently been published, somewhat later than originally planned. Along with many other federal agencies, PHMSA had got behind during the Trump administration, which frowned on 'new' regulation, even if it was welcomed by industry, but is now catching up – perhaps just in time for a second Trump administration.

Also recently completed was HM-219D, which brought together 18 petitions for rulemaking and made miscellaneous changes to the Hazardous Materials Regulations (HMR), increasing regulatory flexibility – and, as a welcome by-product, easing PHMSA's own burden of work. Some examples are the streamlining of hazard communication requirements by allowing appropriate marking exceptions for lithium button cells installed in equipment, and by allowing additional descriptions for certain gas mixtures. There were also updates to various publications incorporated by reference in HMR.

Two new proposals had recently closed their comment periods: a notice of proposed rulemaking (NPRM) under HM-257A seeks to revise the classification and approval process for certain low-hazard fireworks and tracer ammunition; and an advance NPRM addresses 46 distinct topics with the broad ambition of

modernising HMR. This latter rulemaking, under docket HM-265A, attracted 62 sets of comments, which PHMSA is currently evaluating. It wanders wide across HMR, including for instance the extension of periodic testing intervals for non-bulk packagings, intermediate bulk containers (IBCs) and large packagings; the use of non-bulk package test samples for multiple tests; exceptions for small quantities of Division 4.3, PG I material; the recycling of safety devices; the use of non-destructive examination techniques; placards for IBCs; and emerging technologies.

CUTS BOTH WAYS

Regulation is not just a one-way street: the HM-219D rulemaking stemmed from petitions from industry and Matthew and Steven looked at a number of open petitions still under consideration. Several of these were put forward by COSTHA itself, including:

- An amendment to §172.602(b) to authorise alternative means of compliance with electronic documentation requirements
- Adoption of a special provision for the transport of vehicle fuel tanks containing hydrogen, to harmonise with SP 392 in the UN Model Regulations
- Amendment of §172.315(a)(2) to allow a reduced size LQ marking on shipping labels, as currently allowed by Special Permit SP-21015
- An amendment to §174.33(c)(3) to remove a duplicative requirement for documents that was introduced in HM-259 and has been confirmed by a subsequent letter of interpretation
- An amendment to SP 182 in §172.102 to add the proper shipping names of the alternative classifications and amend the Hazardous Materials Table to add a numerical cross-reference list of UN numbers following the alphabetical list.

There are other petitions for rulemaking that were felt to be of interest to the COSTHA audience, each of which is also being considered by PHMSA. Greenbrier, a major manufacturer of rolling stock, has petitioned for changes to §179.100-12 to require a more robust way of connecting the manway protection housing to tank cars. The Compressed Gas Association (CGA) has proposed a revision to §180.209 to extend the cylinder requalification period for certain DOT specification 3AA cylinders to 15 years. The Portable Rechargeable Battery Association (PRBA) has asked for a revision to §173.6 to provide for a higher weight limit for Class 9 lithium ion and lithium metal batteries. And the Vinegar Institute – here making its first ever appearance in HCB – has proposed excepting certain bulk shipments of foodgrade vinegar by motor or rail carrier provided that certain conditions are met.

PHMSA currently has a docket under HM-219E, which will be used to adopt petitions and some of those mentioned above are likely to feature.

In recent years, PHMSA has also been combing its list of active Special Permits and converting those that it feels appropriate into regulations within HMR. This is good news for those who rely on those Special Permits, since it means they do not have to worry about renewing them, and also gives other parties access to their benefits, without the need to apply to PHMSA. As a result, it also reduces PHMSA's workload – although this may present shippers exporting to the US with problems, as the adoption of Special Permits into HMR moves HMR out of harmonisation with international standards. PHMSA is nevertheless currently working on the next round of Special Permit conversions, with a rulemaking under HM-233G currently in preparation.

YOU'RE SPECIAL

One reason for this is that PHMSA is facing an increasing number of applications for new Special Permits. During 2023, more than 2,300 applications were received, compared to an average of less than 2,000 in the previous three years. Steven said that one significant source of applications is the emerging use – or desire to use – unmanned aerial vehicles (UAVs) (or 'drones') for the transport of hazardous materials. This appears to be a major area of development and PHMSA is working collaboratively with

interested parties, having set up a team to visit players in the sector including Zipline, Amazon Air, Wing and Choctaw Nation.

Other Special Permits are more specific and time-constrained. For instance, there was the case of a tank container with 3,000 gallons (11,350 litres) of phosphorus trichloride that was involved in a rollover incident in Missouri recently. The damaged tank was taken to Caseyville, Illinois for storage but was spotted by local media, with a consequent public furore over its perceived dangers. The company in charge of responding to the incident, Environmental Works, applied for Special Permit to allow the tank to be moved safely to its facility in Arkansas for emptying and repair; this involved collaboration between PHMSA personnel, the Federal Motor Carrier Safety Administration (FMCSA), the US Environmental Protection Agency (EPA) and local authorities.

A similar Special Permit was arranged after a fire broke out on the cargo vessel *Genius Star XI*, anchored off Dutch Harbor, Alaska in December 2023; the fire involved lithium batteries carried in the hold, which made the response difficult. PHMSA, the US Coast Guard (USCG) and other agencies worked together to determine how to recover the damaged batteries and, under a Special Permit, transport them safely. Eventually the batteries were evaluated, repackaged and transported to San Diego.
PHMSA and USCG have also evaluated several Special Permits for vessel transportation of various compressed gases in foreign specification cylinders to Samsung, Air Products and others to help Samsung's new semi-conductor plant in Taylor, Texas achieve operational status.

Elsewhere, Special Permits have been used to support the commercial and federal government space industry. Launches often involve the one-time movement of large and potentially hazardous pieces of equipment and PHMSA has been working together with DOT's modal agencies to ensure that such transport can proceed, often in the face of time pressures.

PHMSA also notes that Special Permits are contributing to improving sustainability. Several recent successful applications have involved the transport of industrial refrigerating machines, air conditioners, aluminium cylinders and certain Division 2.1 gases.

AND THERE'S MORE

PHMSA is also very busy pushing out information to industry and asking industry for its opinions. For instance, the UN Sub-committee of Experts on the Transport of Dangerous Goods has been looking at the potential use of recycled plastics in packagings for the carriage of dangerous goods, with the aim of increasing sustainability by broadening the range of recyclates that are permitted. PHMSA published a request for information in April 2023 to get industry's views on the use of recycled plastics resins in specification packagings and what regulatory changes would be useful. A follow-up is due this year, which may result in amendments to the HMR.

PHMSA is aware that HMR is a complex document and not easy to navigate. It has recently begun issuing guidance in the form of frequently asked questions (FAQs), with documents on training requirements and incident reporting being published in March 2024 and August 2023, respectively. The latter was based on several historical letters of interpretation. It is now working on an FAQ document on the use of international regulations and HMR.

PHMSA is currently also working on electronic hazard communication as an alternative to the current requirements for physical documentation. A request for information drew 41 sets of comments from a wide range of stakeholders and the agency reached out to hold one-to-one meetings with those who commented. PHMSA says it is now keen to move forward with pilot projects, that will be facilitated by Special Permits, to authorise carriers to maintain hazmat shipping documents electronically, rather than solely in paper form. PHMSA believes this can increase safety while reducing sots for hazmat shippers and carriers.

THE RAIL QUESTION

The freight train derailment in East Palestine, Ohio in February 2023 has thrown a spotlight back onto the safety of hazmat transport in rail tanks and PHMSA was quick to respond. On 2 March 2023 it issued a safety advisory alerting tank car owners and shippers of the potential harm to certain manway assemblies with aluminium protective housing covers when exposed to extreme heat, as had happened at East Palestine. A second safety advisory was published a day later, alerting those engaged in the rail transport of hazmat to their obligation to appropriately plan for emergencies and share info about available emergency response resources, as well as urging actions to ensure emergency responders are adequately equipped to respond to rail transport incidents involving hazardous materials.

A third safety advisory was issued on 22 March, emphasising concerns about the survivability of DOT-111 tank cars in accident scenarios. It encouraged tank car owners and shippers of flammable liquids to voluntarily upgrade their tank car fleets to the DOT-117 specification or, at the very least, to take actions that could reduce the risks inherent in the continued use of DOT-111 tank cars.

On 13 July a fourth safety advisory was issued, encouraging 911 call centres to download, register, train on and use available technologies, such as the AskRail app, that are designed to provide critical information to first responders in the event of a rail incident. The AskRail app was developed by the railroads and Association of American Railroads (AAR) and PHMSA made a grant to enable Class III railroads using Wabtec transport management systems to interface with Railinc to integrate the app.

PHMSA is also responding to Congressional mandates in the rail sector. The Fixing America's Surface Transportation (FAST) Act 2015 mandated PHMSA to issue a regulation to require Class I railroads to provide real-time train consist information concerning hazardous materials to fusion centres operated by state governments. In 2017, PHMSA issued an ANPRM seeking feedback from stakeholders, which confirmed that the fusion centres could not adequately receive train consist information and transmit it to responders during emergencies. The rulemaking was put on hold pending a legislative fix.

That arrived in 2021 in the shape of the Bipartisan Infrastructure Law, which modified the mandate in the FAST Act and removed the requirement for train consist information to be provided to fusion centres. In its place, it required that such information be transmitted to "authorised State and local first responders, emergency response officials, and law enforcement personnel that are involved in the response to, or investigation of, an accident, incident, or public health or safety emergency involving the rail transportation of hazmat". PHMSA's response was an NPRM, published in June 2023, to require all railroads in the US transporting hazmat to maintain real-time train consist information electronically and transmit it to emergency responders in the event of an incident.

At the time of the COSTHA Annual Forum, it was expected that the final rule under this rule would be published late in 2024; however, such was the public interest in seeing a regulatory response to the East Palestine derailment that the final rule was pushed through more quickly, being published in June.

PHMSA is still working on other topics resulting from the East Palestine derailment, including the potential expansion of the definition of high-hazard freight trains (HHFTs) and modifying the operating requirements for HHFTs and other train configurations.

One more initiative in the rail sector has been the suspension of the authorisation for the transport of LNG in rail tank cars, which had been in place since a final rule published in July 2020. PHMSA is working towards a resumption of such transport through a revised rulemaking that would modify the requirements for such transport, with a cut-off date of 30 June 2025.

The Federal Rail Administration (FRA) is also working on some projects resulting from the East Palestine derailment, and worked with PHMSA on the real-time train consist rulemaking. Mark Maday, staff director

of the Hazardous Materials Division at FRA's Office of Railroad Safety, spoke about the role of rail transport in the US economy and the Administration's strategic initiatives. These have been rather overtaken by the focus on East Palestine, with FRA now looking at carrying out audits of railroads' safety cultures. Also on the agenda are HHFT route assessments, a review of the progress of the phasing out of legacy DOT-111 tank cars, and work on wayside detectors and advanced braking systems under the Rail Safety Advisory Committee.

ROAD AND AIR

The volume of work going on in the rail sector is understandable given the high profile of recent accidents. However, it is still the case that 93 per cent of the hazardous materials transported in the US travel by road – 2.75bn tons last year. Hazmat ton-miles increased by some 31 per cent over the period from 2012 to 2017, reported Clay Greene, FMCSA's Hazardous Materials Program Manager. FMCSA is now looking to re-tool its hazmat programme to reduce and prevent hazmat crashes, injuries and fatalities. It will align and leverage federal and state resources across its outreach, compliance and enforcement programmes and plans to launch a new strategic plan, aligned with DOT's aims. Clay said FMCSA will integrate its hazmat Courses of Actions within its core safety systems and operations as part of its drive to combat commercial motor vehicle fatalities, injuries and crashes.

FMCSA has already published proposals to revise its road carrier Safety Measurement System (SMS), with a request for comments published in February 2023. FMCSA is now reviewing the comments received, with plans for regulatory amendments being developed.

The SMS concept is also coming to the air sector. Ryan Pohlke, division manager at the Federal Aviation Administration's (FAA) Office of Hazardous Materials Safety, explained that SMS is a formal, top-down, organisation-wide approach to managing safety risk and assuring the effectiveness of safety risk controls. It includes systematic procedures, practices, and policies for the management of safety risk. It is integral to operational decision-making and cannot be seen as a standalone safety programme.

FAA published an advisory circular in August 2023, inviting regulated entities to voluntarily implement an SMS – available at www.faa.gov/documentLibrary/media/Advisory_Circular/AC_120-119.pdf. FAA is encouraging larger organisations in the sector to develop their own SMS, using the principles addressed in the circular, to identify, analyse, mitigate and control the risks involved in the transport of dangerous goods by air.
The idea is that such organisations will, once they have developed an SMS, submit it to FAA for review. FAA will continue to collaborate with the organisation in the implementation of the plan and maintain oversight of the SMS. Companies will benefit from having a dedicated subject matter expert from FAA on hand to help guide the implementation of the plan and help direct the creation of a more proactive approach to safety.

PARALLEL LINES

There has been plenty of regulatory action north of the border too, as Katy Joncas, acting manager of the Regulatory Development Division of Transport Canada's Transportation of Dangerous Goods (TDG) Directorate, reported.

Last year Transport Canada (TC) brought forward some administrative changes to the TDG Regulations, which were published in a rulemaking on 23 June. More significant was the long-awaited rulemaking introducing the new Client Identification Database (CID), which was published on 25 October. This aims to create an accurate and reliable inventory of regulated parties and sites where dangerous goods are imported, offered for transport, handled or transported in Canada. More details about the programme can be found at https://tc.canada.ca/en/dangerous-goods/client-identification-database-cid.

Still going through the regulatory process is an order fixing fees for registration for facilities involved in the manufacture, assembly, retesting or repair of means of containment (MOC). The proposals were published in Canada Gazette Part I on 25 March 2023 and TC is currently finalising the digital solutions necessary to put the programme in place, and putting together the necessary guidance material. Publication of the final rule in Canada Gazette Part II is expected this year.

A lengthy rulemaking proposal was published in Canada Gazette Part I in November 2022, with plans to modernise outdated domestic requirements and to align the TDG Regulations more closely with the latest international codes. TC has since then analysed the comments received and undertaken further informal consultation. It is now engaged in drawing up the final rule, which is due for publication over the winter months, along with accompanying awareness material and guidance.

Another broad update to the TDG Regulations is planned, following a lengthy process of development and consultation going back as far as 2015. This rulemaking aims to update and clarify the regulations to align with modern industry practices and to address comments that have been received over the years. The proposals appeared in Canada Gazette Part I in December 2023 and the final rule is expected to be published in Part II in the spring of 2025.

Like PHMSA, TC is looking at the safety of the use of remotely piloted aircraft (drones) to transport dangerous goods, in collaboration with the Civil Aviation Directorate. The two agencies have held several consultations with various bodies and have carried out simulations and held informal consultations. TC is aiming to have proposals finalised in spring 2025 for publication in Canada Gazette Part I.

Finally, TC is planning an overhaul of the training requirements, on the basis of a revised Canada General Standards Board standard, published in November 2020. Since then it has published proposals in Canada Gazette Part I, consulted with industry and developed a revised approach. It is currently undertaking a full review of policy and approach and will re-issue its proposals in Canada Gazette Part I at a later date.

COSTHA's 2025 Annual Forum is scheduled to take place in Atlanta, Georgia from 4 May to 9 May; registration is expected to open shortly. More information can be found on the COSTHA website at www.costha.com/page/costha-2025–may-4-9-1673.html.