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NEWSLETTER

Clouds Lifting Over Lithium Battery Supply Chain Uncertainties

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Two key actions on lithium battery air cargo shipment regulation point to a favorable resolution of this contentious issue.

In January, 2010, the U.S. Department of Transportation (DOT) proposed new regulations governing air cargo transportation of lithium batteries and the enormous range of products they power–cell phones, laptops, toys, and medical devices, among others.[1] The proposal threatened major disruptions of the electronic product supply chain and, accordingly, was highly controversial. Now, with the nearly simultaneous February 10 agreement by the International Civil Aviation Organization (ICAO) Dangerous Goods Panel to amend the international air regulations governing the transportation of lithium metal and lithium ion batteries, and the February 14 signing by President Obama of the FAA Modernization and Reform Act of 2012[2] that includes a provision mandating U.S. conformity with pertinent international regulations, those concerns seem likely to have been overcome.

The one remaining question is what steps DOT will take to reflect these developments in its rules. Possibilities include modifying and reopening for comment the 2010 rule, or simply withdrawing it and replacing it, eventually, with a new, much simpler proposal. Informal indications from government personnel suggest the latter course should be expected.

Background on the 2010 Proposal

The 2010 proposal capped a response by the DOT, Federal Aviation Administration (FAA), and Pipeline and Hazardous Materials Safety Administration (PHMSA) to heavy political pressures. As with most

Authors

David B. Weinberg
Senior Counsel
202.719.7102
dweinberg@wiley.law

George A. Kerchner
Consultant
202.719.4109
gkerchner@wiley.law

similar situations, this pressure came from several directions. Probably most important, however, was the long-running concern of the International Federation of Air Line Pilots' Association with the perceived safety risks associated with shipping these types of batteries. That concern was exacerbated by a long-running dispute between the pilots and some carriers about the level of fire protections provided to pilots of cargo planes compared to their passenger plane compatriots.

Those concerns, together with intragovernmental squabbling over air safety regulation jurisdiction and related issues, had resulted in several legislative efforts in 2008 and 2009 to mandate tighter regulation of these products under U.S. law than under the internationally-negotiated standards in place elsewhere in the world (and for non-U.S. carriers). Those legislative initiatives were unsuccessful, but the pressures underlying them were sufficient to lead PHMSA and the FAA to propose a comprehensive–but not well thought out–amendment to the lithium battery provisions in the DOT's hazardous materials transportation regulations in 2010.

The 2010 Proposal

The 2010 proposal would have mandated dramatic changes to the supply chain practices of lithium metal and lithium ion battery and portable electronic product manufacturers around the world. They also would have created confusion and likely increased, rather than decreased, the already-limited risks of shipping those products. And, perhaps equally important, they failed to focus on the documented root cause of the handful of transportation safety incidents that have arisen as the portable electronic product industry has grown: the failure of some shippers to comply with existing regulations or, indeed, even the most basic packaging safety requirements.

The proposal also evidenced a near-complete misunderstanding on the part of regulators of the nature of product production and supply practices and the volumes of materials shipped around the world. For example, DOT estimated the total annualized cost to industry of its 2010 proposal at $9.4 million annually, for a total of $70.5 million over 10 years. But a corrected analysis–performed using the same methodologies used by the FAA in analogous contexts–set that direct cost figure at $1.2 billion per year, and $8.5 billion in the first decade after promulgation. And implementation of the proposed rule would also have had a variety of other unintended and undesirable effects, such as disruption of highly successful used product and battery recycling programs.

An industry coalition, led by Wiley Rein client PRBA-The Rechargeable Battery Association, but drawing on the resources of many others, mounted an extensive effort to avoid these unnecessary disruptions. The coalition's effort was multifaceted but focused on assuring safety. It involved preparation of thorough, substantive comments on the proposed rule, advocacy before various other offices of the U.S. government and Congress, and seeking to assure that other governments were aware of the potential safety risks raised by inconsistency between potential U.S. regulations and international requirements.

The coalition's effort also involved advancing specific proposals at the international level more targeted than DOT's to addressing the fundamental concern that the proposed rule's likely effect would have reduced transportation safety by multiplying inconsistent international standards. As DOT itself repeatedly has emphasized,

[h]armonization facilitates international trade by minimizing the costs and other burdens of complying with multiple or inconsistent safety requirements for transportation of hazardous materials to and from the United States. By facilitating compliance with international standards, harmonization also tends to enhance safety for international
movements . . . .[3]

The FAA Modernization and Reform Act Provision

The U.S. Congress responded to these concerns by including in this year's FAA Modernization and Reform Act a provision (Section 828) that expressly requires that U.S. air safety regulation of these products not be "more stringent" than international rules unless clear evidence exists of the inadequacy of those international rules. There was no doubt about Congress's intention; the Conference Report on the final legislation explained:

[I]n almost all circumstances, regulations governing the air transportation of lithium metal or lithium ion cells or batteries be consistent with the provisions of the International Civil Aviation Organization Technical Instructions for the Safe Transportation of Dangerous Goods by Air (commonly known as the ICAO Technical Instructions), as in effect at the time the regulations were adopted . . . [P]ermanent regulations [more stringent than international requirements] must be based on substantial credible evidence that the cells or batteries of the type at issue could be expected to substantially contribute or propagate an on-board fire even if they were shipped in accordance with applicable ICAO Technical Regulations; be narrowly tailored to avoid disruption of the shipping of other cells, batteries or products; and employ the least expensive approach while addressing the identified safety concern.[4]

ICAO Action

At about the same time Congress was giving final approval to this provision, agreement was reached on the international level about the appropriate, consistent level of regulatory controls that should be directed to shipments of these products. Again, the PRBA-led coalition played a major role in achieving the necessary consensus among the 17 national governments who are represented on the ICAO Dangerous Goods Panel.

The agreed upon scheme, which will now come into effect as of January 1, 2013, imposes significant new limits on air cargo shipments of lithium cells and batteries, but not on products containing batteries. The new requirements include an exception for very small cells (*e.g.*, coin cells) in packages not exceeding 2.5 kg, a "2 battery/8 cell" per package exception, and mandatory Class 9 shipping for cells and batteries that exceed the "2 battery/8 cell" exception limit.

Now What?

The publication of the proposed DOT rule in 2010 threatened major disruption of the electronic product supply chain, increases in costs to suppliers and consumers, and reduced safety. For example, several major companies had begun reconfiguration of their supply systems so that products from Asia could be air shipped on non-U.S. carriers to Canadian or Mexican locations–thus escaping whatever emerged from extraordinarily burdensome U.S. proposals–and then trucking the product across the border. Companies also had begun reevaluating their warranty return and recycling programs, many of which would have been made unworkable by the proposals.

With the ICAO and legislative actions described above, it now appears clear that most, if not all, of the burdensome elements of the 2010 proposal will be abandoned by DOT. The principal question left unresolved is how this will be done. DOT has several administrative options, but the simplest would be to withdraw the proposed rule and eventually replace it with U.S. regulations that conform with international requirements, as is routinely done with other ICAO-endorsed provisions. If that occurs, DOT and other regulatory agencies can turn their attention from this rulemaking morass to what is undoubtedly a more important strategy for assuring battery air transportation safety–enforcement of packaging rules already in place to avoid creation of short circuits and fire and minimize the effects of potential external heat sources on shipments of these products.

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1 Docket No. PHMSA-2009-0095 (HM-224F), 75 Fed. Reg. 1302 (Jan. 11, 2010)

2 Pub. L. No. 112-95 (112th Cong., 2d Sess.)

3 74 Fed. Reg. 53982, 53983 (Oct. 21, 2009).

4 H.R. Rep. No. 112-381, at 248 (2012) (Conf. Rep.).