Economic Commission for Europe

Inland Transport Committee

Working Party on the Transport of Dangerous Goods

Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods **13 March 2013**
Bern, 18–22 March 2013
Item 5(b) of the provisional agenda
Proposals for amendments to RID/ADR/ADN: new proposals

Sub section 5.5.3

Transmitted by the Global Express Association (GEA)

Summary

Executive summary: The GEA welcomes the proposal in ECE/TRANS/WP.15/AC.1/2013/25 from Switzerland to discuss new provisions concerning the scope of RID/ADR 5.5.3. The GEA has particular concerns over the new requirements which are scheduled to come into force from 1 July 2013. These concerns are detailed below.

Introduction

1. Dry ice (carbon dioxide, solid), UN1845 has been shown in RID/ADR "Table A – Dangerous Goods List" as "Not Subject to RID/ADR" for over 20 years, and has never been previously subject to the provisions of RID/ADR.

2. There are varied national and industry interpretations on a possible requirement to placard in particular vehicles containing dry ice contained in packages used to keep contents cool. Discussions with several national delegations, including one of the joint originators of the proposal to the UN, have confirmed that the new RID/ADR 5.5.3. texts were never intended to apply to small packages small quantities of dry ice used as coolant.

3. On the basis of the discussions mentioned above, we believe the inclusion of the new text for 2013 (underlined) "Not subject to RID/ADR - <u>when used as a coolant, see 5.5.3</u>" is intended to refer to loose or bulk dry ice carried as a refrigerant in transport units. However it was never intended to address the small numbers of packages containing dry ice which are picked up, transported and delivered on an occasional basis.

4. Cooled or conditioned containers filled with large quantities of loose dry ice for temperature control could each pose risk to personnel who unwittingly enter the concentrated asphyxiant atmosphere developed by those conditions. However, we believe there is no evidence that there have been problems with vehicles containing dry ice contained in packages, which release small amounts of carbon dioxide at low rates due to the thermal protection afforded by the external packaging and internal insulating packaging materials.

5. The GEA explained the issues in INF. 17, (supporting ECE/TRANS/WP.15/2012/16 from Switzerland) submitted to the November 2012 meeting of WP/15, and this INF paper seeks to make the meeting aware of these issues and concerns. The WP/15 meeting in November 2012 acknowledged these concerns and the report of the meeting states:

> 12. The Working Party considered that section 5.5.3 applied only when there was a demonstrable confirmed risk of asphyxiation in the transport unit and that it was for the parties concerned (in particular the consignor) to assess this risk, taking into consideration the hazards presented by the substances used for refrigeration or conditioning, and also the quantities concerned and types of containment used (in bulk or in packages).

6. In addition, a GEA paper (INF 32) was submitted to the 42nd session of the UN Sub Committee of Experts (UNSCOE) on the Transport of Dangerous Goods (also supporting ST/SG/AC.10/C.3/2012/59 from Switzerland). The UNSCOE discussion was similar to that held at WP/15, and difficulties were acknowledged, but there was no agreement amongst delegates to amend the Model Regulations. The UNSCOE report states:

> 69. The Sub-Committee noted the view of the UNECE Working Party on the Transport of Dangerous Goods (WP.15) that section 5.5.3 should apply only when there is demonstrable confirmed risk of asphyxiation in the transport unit and that it should be for the parties concerned, notably the consignor, to assess this risk. Some experts supported this approach. However several experts were not convinced that the changes proposed by the expert from Switzerland would solve the problem raised and the expert from Switzerland will submit a new proposal at the next session.
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> 70. Similarly several experts shared GEA's view that section 5.5.3 should not apply to road vehicles transporting packages containing dry ice as a coolant, notably because dry ice itself is not subject to ADR. However, others noted that it was not likely that dry ice would evaporate in the vehicle when carried as cargo, while this was likely to happen when used as a coolant. Furthermore the GEA proposal was intended to exempt also such packages when carried in freight containers as full load, and some experts felt that this issue could preferably be addressed at modal level. Since the GEA proposal was submitted late in an informal document, the Sub-Committee invited GEA to reconsider the issue in the light of the comments made.

7. As mentioned in both the GEA INF papers above, a recent technical study just released in the U.S. found that the rate of sublimation from small, insulated packages such as are traditionally used for containing medical samples, biological samples or foodstuffs cooled by dry ice is substantially lower than the sublimation rate from unpackaged (loose) dry ice as a result of the insulating properties of the packaging materials, which slow the heat transfer from the atmosphere to the dry ice. This finding supports the need for applying a different placarding requirement to unpackaged dry ice when loaded into vehicles, as compared to dry ice shipped as a coolant within packages. [1]

8. Requiring the placarding of vehicles on all access points containing packages with dry ice will be a very significant burden on the transport industry, including postal services. Placards will need to be affixed and removed as loads change, particularly on "milk-round" type deliveries with great potential to delay these very time sensitive operations. In addition, consignors who have previously had no experience of RID/ADR, will find that

[1] *U.S. Transportation Research Board Report HM-09, "Dry Ice Limits on Aircraft." See the following link for additional information: http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=2661 See especially Chapters 7 and 8.*

they are required to develop procedures and train people to mark packages and raise documentation, in some cases in multiple languages. This will have a very high impact on the medical profession, hospitals, testing laboratories, clinical trials etc. The unjustified requirement to affix placards on all entry points transporting dry ice contained in packages would have a very significant impact on the fast and reliable transport of essential medical supplies and drugs to and from core suppliers, hospitals, doctor's surgeries and patients. Clinical trials programmes would also be severely affected.

9. The meeting must appreciate that carriers and postal services may seek to assess the high costs of developing procedures, training staff and the operational impact of such a requirement in light of their business environment. Operators will need to be able to possibly placard many thousands of vehicles should a consignor offer a single small package containing dry ice. GEA is concerned that the imposition of this requirement on the operation of vehicles transporting dry ice contained in packages could lead to changes in the services available to shippers with urgent need to send clinical and medical samples or other urgent consignments in packages containing by dry ice.

Proposal

10. We strongly urge RID/ADR to include a clear statement in the report of this meeting stating that dry ice contained in packages continues under RID/ADR transport to be "Not subject to ADR".

11. Such text would serve to help with the drafting and adoption by States of suitable Multi-Lateral Agreement (MLA) text during the interim period from 1 July 2013 to 31 December 2014 stating that dry ice in packages is not subject to the provisions of RID/ADR.