Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods **23 November 2012**

Forty-second session
Geneva, 3 – 11 December 2012
Item 5 of the provisional agenda
Global harmonization of transport of dangerous goods regulations with the Model Regulations

Scope of 5.5.3

Transmitted by the Global Express Association (GEA)

Summary

Executive summary: The GEA notes the proposal from the expert of Switzerland (ST/SG/AC.10/C.3/2012/59) to discuss provisions concerning the scope of section 5.5.3. The GEA has particular concerns over recent interpretations of the requirements shown in 5.5.3 given by some competent authorities. These concerns are detailed below.

Introduction

1. There are varied national and industry interpretations on a possible requirement to placard vehicles containing dry ice contained in packages. Discussions with several national delegations, including one of the originators of the proposal to the UN, have confirmed that the new ADR 5.5.3 texts were never intended to apply to packages containing dry ice used as a coolant. The original intention was that full freight containers containing asphyxiants be placarded, primarily caused by concerns over cooled or conditioned transport units which may have been in transit for long periods of time, allowing for a build up of an asphyxiant gas in a sealed container.

2. On the basis of the discussions mentioned above, and some confusion over the texts of 5.5.3, we believe it is important that 5.5.3 be amended to include a clear reference to say that dry ice contained in packages is not subject to the provisions of 5.5.3.

3. An Information Paper was also submitted to the Working Party on the Transport of Dangerous Goods (WP/15) by the Global Express Association – see: http://www.unece.org/fileadmin/DAM/trans/doc/2012/dgwp15/ECE-TRANS-WP15-93-inf17e.pdf

(also reproduced below).

The Working Party supported the intention that this matter be further reviewed by the UN Sub-Committee of Experts on the Transport of Dangerous Goods.

4. In order to clarify that packaged dry ice does not come under the scope of 5.5.3, the following proposal is made.

Proposal

5. New paragraph: 5.5.3.1.4.

5.5.3.1.4 This section is not applicable to consignments of UN1845 Carbon Dioxide, Solid (Dry Ice) in packages.

Economic Commission for Europe **WP15 INF.17**

Inland Transport Committee

Working Party on the Transport of Dangerous Goods

Ninety-third session
Geneva, 6-9 November 2012
Item 4 of the provisional agenda 1 November 2012
Proposals for amendments to Annexes A and B of ADR:
Interpretation of ADR

Sub section 5.5.3

Transmitted by the Global Express Association (GEA)

Summary

Executive summary: The GEA welcomes the proposal in ECE/TRANS/WP.15/2012/16 to discuss new provisions concerning the scope of 5.5.3. The GEA has particular concerns over the 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 ADR "Table A – Dangerous Goods List" as "Not Subject to ADR" for over 20 years.

2. There are varied national and industry interpretations on a possible requirement to placard vehicles containing dry ice contained in packages. Discussions with several national delegations, including the originator of the proposal to the UN, have confirmed that the new ADR 5.5.3. texts were never intended to apply to small quantities of packages containing dry ice as coolant, the intention was deal with full container loads of goods whether the dry ice was within the packages or loose in the transport unit. The original intention was that full freight containers containing dry ice or other asphyxiants be placarded, primarily caused by concerns over fumigated transport units which may have been in transit for long periods of time, allowing for a build up of an asphyxiant gas in a sealed container.

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

4. Containers under fumigation or those 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 materials. Indeed 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 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]

5. Requiring the placarding of vehicles containing packages with dry ice will be a very significant burden on industry. 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. Such delay is unjustified by the substantially lower rate of carbon dioxide sublimation from dry ice contained in packages. In addition, shippers who have previously had no experience of ADR will find that they are required to develop procedures and train people to mark packages and raise documentation. This will have a very high impact on the medical profession, hospitals, testing laboratories etc.

6. The unjustified requirement to affix placards on vehicle 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 hospitals, doctor's surgeries and patients. Clinical trials programmes would also be severely affected. In addition to the lack of technical justification, the Working Party should appreciate that carriers may seek to assess the cost and operational impact of such a requirement in light of their business environment. 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 cooled by dry ice.

Proposal

7. We urge WP/15 to include a clear statement in the report of this meeting stating that dry ice contained in packages continues in road transport to be "Not subject to ADR".

8. Should the meeting wish to consider this matter further and wish to impose limits on the transport of dry ice by road in packages, it is suggested that the matter be further considered at the next meeting of WP/15 in May 2013.

9. Possible solutions which may be considered at that time include:

- Exceptions for dangerous goods packed with dry ice in accordance with:
  - The limited quantity provisions of 3.4
  - The excepted quantity provisions 3.5
  - The packing instructions in 4.1.4.1,
- Exceptions for Dry Ice packed with non-dangerous goods for coolant purposes.

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[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.