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**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

**(Twenty-first session, 1-10 July 2002,
agenda item 3 (d))**

EXPLOSIVES, SELF-REACTIVE SUBSTANCES AND ORGANIC PEROXIDES

Miscellaneous proposals

Proposal for the transportation of 1.5D Explosives in portable tanks

Transmitted by the Dangerous Goods Advisory Council (DGAC)

1. Introduction

The ad hoc working group on ammonium nitrate emulsions last met during the 19th Session of the TDG Sub-committee. At that meeting, the possibility of transporting 1.5D explosives in portable tanks was raised by the expert from Sweden (ST/SG/AC.10/C.3/2001/23). The working group was of the opinion that transport in tanks for these substances should be explored (ST/SG/AC.10/C.3/38, para. 83) and DGAC (formerly HMAC) agreed to develop a proposal for the Sub-Committee's consideration.

Transport of 1.5D explosives in tanks has been safely conducted under various approvals for many years in North America, Europe, and other countries around the world. Experts in the properties and transport of these substances agreed at the last ad hoc ANE working group meeting that such transport has had an excellent safety record.

2. Proposal

The following provisions are proposed for the transport of 1.5D explosives in portable tanks:

- 2.1 Amend entries UN0331, UN0332, and UN0482 by adding "T1" in column (10) and TP17 and TPXXX in column (11).

Since assigning T1 authorizes shippers to use portable tanks with a minimum test pressure up to 10 bar there is a need to add a special tank provision to address concerns of over confinement if the portable tank is engulfed in a fire. To address this issue it is proposed to set the pressure relief device to function at a lower pressure than the test pressure for portable tanks with a test pressure greater than 4 bar by adding a new special tank provision (TPXXX). This new tank provision is proposed to address the set pressure, relief capacity and the types of pressure relief devices that can be used. Additionally, TP17 is proposed to indicate that only inorganic non-combustible material may be used for the thermal insulation.

2.2 In paragraph 4.2.5.3, add a new portable tank special provision TPXXX, to read as follows:

TPXXX – For UN0331, UN0332, and UN0482, portable tanks may be used subject to the following conditions:

- 1. To avoid unnecessary confinement, each portable tank constructed of metal shall be fitted with a pressure-relief device that may be of the reclosing spring loaded type, a frangible disc or a fusible element. The set to discharge or burst pressure, as applicable, shall not be greater than 2.65 bar for portable tanks with minimum test pressures greater than 4 bar. The pressure-relief devices shall have sufficient relief capacity to prevent rupture of the shell due to over pressurization or vacuum resulting from filling, discharging or from heating of the contents including fire engulfment.*
- 2. Material shall not be allowed to remain in the portable tank for any period that could result in caking. The tank shall be inspected and cleaned frequently enough to minimize the accumulation and packing of material.*

2.3 If this proposal is agreed, consequential amendments would be needed in paragraphs 1.2.1 (Definitions), 4.2.1 & 4.2.1.1 (General Provisions for Portable Tanks), 4.2.5.2, 4.2.5.2.1, & 4.2.5.2.2 (Portable Tank Instructions), 6.7.1.1 (Application and General Requirements), and 6.7.2 & 6.7.2.1 (Requirements and Definitions) in order to clarify that certain Division 1.5D materials are permitted to be transported in portable tanks.
