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

26 May 2015

Sub-Committee of Experts on the Transport of Dangerous Goods

Forty-seventh session

Geneva, 22 – 26 June 2015
Item 6 (a) of the provisional agenda
Miscellaneous proposals for amendments to the Model Regulations
on the Transport of Dangerous Goods: dangerous goods in machinery, apparatus or articles, N.O.S.

Dangerous Goods in Machinery, Apparatus or Articles, N.O.S.

Transmitted by the expert from the United Kingdom

Introduction

- 1. At the forty-sixth session, the United Kingdom submitted the document ST/SG/AC.10/C.3/2014/102 which presented proposals to address the issue of the classification and transport of various dangerous goods contained within machinery, apparatus or articles which are not already included within the Dangerous Goods List of Chapter 3.2. This was a development of the proposals contained in previous papers ST/SG/AC.10/C.3/2014/44 submitted to the forty-fifth session and informal document INF.36 submitted to the forty-fourth session.
- 2. The proposals were discussed in plenary and in a working group which met twice in the margins of plenary. As the proposals required further development, the United Kingdom expert undertook to take on board the comments and suggestions made by delegations during the discussions, in order to prepare a follow-up proposal for the forty-seventh session.

Outcome of discussions during the forty-sixth session

- 3. During discussion of paper 2014/102, the United Kingdom noted the following comments from delegations:
 - (a) Divisions of dangerous goods should also be listed as entries in the Dangerous Goods List;
 - (b) The existing UN entry UN 3363 should have its proper shipping name amended to clearly indicate that the entry is to be used specifically for machinery which contains dangerous goods in limited quantities only by including 'in limited quantities' at the end of the proper shipping name. This is to distinguish its use from the use of the other entries for dangerous goods in machinery;

Please recycle

- (c) Sub-risks should not be limited in number but represent the primary risk posed by all the other dangerous goods present;
- (d) The favoured approach for the packing instruction is the one presented in the United Kingdom's informal document INF.49 from the forty-sixth session but that this required some development, including exploring the possibility of only requiring competent authority approval for unpackaged machinery, apparatus or articles when the quantity of dangerous goods exceeds 60 litres/60 kg;
- (e) Changes to the existing text of Special Provision 301 should be kept to a minimum. The text relating to the competent authority's ability to exempt machinery, apparatus or articles should be retained as a possibility if it is felt that no suitable UN entry exists;
- (f) It is not necessary to reference ISO 780:1997 in relation to the orientation requirements as by referencing 5.2.1.7.1 this option is already covered.
- (g) The text in Special Provision XXX paragraph c) presented below could be deleted as it could be regarded as not necessary given that there is no proposed new UN entry for machinery, apparatus or articles in Class 1 or Class 7. However, some delegations felt that it could be retained for the avoidance of doubt;
- (h) Due to the exemption provided for in SP 375 for environmentally hazardous substances in quantities of 5 1 or 5 kg or less it was felt that it was necessary to allow the optional use of SP301 for machinery, apparatus or articles containing only UN 3077 and/or UN 3082 in limited quantities;
- 4. Since the forty-sixth session the United Kingdom expert prepared a modified proposal taking these comments into account and circulated them to delegations for their further comments/suggestions. Additional written comments were received from Germany, the Netherlands and Sweden. The United Kingdom expert is grateful to those States who provided comments. Some of these are detailed comments and have been incorporated into the proposal below where possible however, the main issues covered by these comments can be summarised, together with the UK response to them, as follows:
 - (a) Netherlands: The existing framework for the classification of substances and other dangerous goods can be used, with some modification to classify articles, machinery and equipment in 2.0.2.

United Kingdom – Although not opposed to this idea, it would require complete restructuring of the proposal to remove parts of SP XXX into 2.0.1 and 2.0.2. The United Kingdom welcomes the Netherlands to propose such an alternative.

(b) Netherlands: An upper limit for the quantities of dangerous goods to be permitted under the new UN entries should be established.

United Kingdom – This has been considered in previous discussions by the Sub-Committee and it was favourable to limit the applicability of the new provisions to machinery, apparatus or articles which could be packaged according to the packing instruction. If they are unable to be packaged, transport shall only be permitted with the approval of the competent authority.

(c) Netherlands and Germany: Consideration should be given to how machinery, apparatus or articles containing dangerous goods which are not permitted to be transported in limited quantities are to be treated i.e. when the predominant hazard has '0' assigned in column 7a of the Dangerous Goods List.

United Kingdom – This suggestion has been included in the proposal below.

(d) Germany: In the last paragraph of SP 301 relating to the application of the provision to UN 3077 an UN 3082, a reference to the 51/5kg quantity should be added to make the text clearer.

United Kingdom – This suggestion has been included in the proposal below.

- (e) Germany: for the packing instruction:
 - i) Not all machines, apparatus or articles will have receptacles. Include a statement regarding the enclosure.
 - ii) The suggestion to only require competent authority approval for unpackaged machinery, apparatus or articles where the quantity of dangerous goods is in excess of 60 1/60 kg is not appropriate as it contradicts the existing text of 4.1.3.8.1. The Netherlands also raised this point.

United Kingdom – Both of these points have been incorporated into the proposal below.

(f) Sweden: The provisions proposed for machinery, apparatus and articles specifically containing class 3, 2.1 or 9 are strongly related to the provisions for the newly adopted UN numbers 3528, 3529 and 3530. The different hazard communication requirements between these UN entries (e.g. where labelling is only required in quantities above 60 litres for flammable liquids) and the proposed new UN entries (where labelling is required for quantities in excess of limited quantity amounts) is not justifiable.

United Kingdom – The Sub-Committee should come to a decision on what quantities would require labelling however, one of the requirements in SP 363 for UN numbers 3528, 3529 and 3530 is that, amongst other things, such engines/machines are required to be in compliance with the construction requirements specified by the competent authority. It is doubtful that for all of the possible machinery, apparatus, and articles which are intended to be covered by the new UN entries would have construction requirements specified by the competent authority and may not therefore be as robust. This may be justification to require labelling in smaller amounts as in the proposal below.

(g) Sweden: Machinery should be deleted from the scope of UN 3528, 3529 and 3590 and that these specific UN numbers only address engines. The new UN entries would then cover all types of machinery irrespective of whether the machinery is equipped with combustion systems or not.

United Kingdom – There are similarities between the UN entries however for UN numbers 3528, 3529 and 3530 it is clear that this entry is to be used for engines or machinery which are powered by internal combustion or fuel cells. As there are existing entries in the Dangerous Goods List covering these types of engines or machinery, the proposed new UN entries cannot be used for them instead.

(h) Sweden: Should the adopted Note 1 and Note 2 in SP363 (b) be incorporated for the proposed new UN entries? It would be appropriate to explain when machinery is considered empty for these UN entries as well.

United Kingdom – It would be inappropriate to include the Notes from P363 into the special provision for the new UN entries. The existing UN entry 3363 and the associated SP301, already covers machines, apparatus and

articles which contain dangerous goods "as a residue" and up to limited quantity amounts and should be used to cover minimal amounts.

(i) The Netherlands: A simplified approach to the proposed Proper Shipping Name is to state in section 2.0.1.1 'Definitions' that articles includes machinery, apparatus and equipment just like 'substances' is meant to include mixtures and solutions. Section 2.0.1.1 would then read: "Substances (including mixtures and solutions) and articles (including machinery and apparatus) subject to these Regulations are assigned to...". The proper shipping name would become 'DANGEROUS GOODS IN ARTICLES, N.O.S'. The same would be valid for all the other new UN numbers and the rest of the text of the Model Regulations.

United Kingdom – We are open to this approach and would like the opinion of the Sub-Committee. If agreed the necessary amendments can be made to a follow-up proposal for the December session.

(j) The Netherlands: In SP XXX the sentence 'it shall not be used for machinery....' is a general requirement and is not specific to articles, apparatus and machinery. In fact, this is already stated in section 2.0.1.5 and 2.0.2. It is not necessary to state this again here.

United Kingdom – Although the UK agrees with this comment, there are other examples where a special provision indicates when the special provision shall not be used e.g. it is existing text within SP301. The UK also believes that it should be retained for user friendliness purposes.

- (k) The Netherlands: Throughout SP XXX change "risk" to "hazard".
 - United Kingdom -2.0.3.1 of the Model Regulations speaks of the 'risk' of a substance, not the 'hazard'. The UK therefore proposes to keep 'risk' in the text of the special provision.
- (1) The Netherlands: Has the scenario of 'cumulative amounts' been discussed in relation to amounts which are within the limited quantity threshold? E.g. there are two or more different flammable liquids in an article, each under the limited quantity threshold but the total article content for that Class is greater than the limited quantity threshold. The cumulative amount is relevant for hazard communication.

United Kingdom – This hasn't been considered before. An amendment to SP XXX has been proposed below to try to address this however the Sub-Committee may decide that this is not necessary as there is no limit for Classes of dangerous goods only limits per substance. The limits for limited quantities are for the inner packaging or article with the total gross mass of the package limited to 30kg. Therefore it could be argued that the cumulative total of limited quantity dangerous goods within in the machinery, apparatus or article could be set at 30 kg.

Proposal

- 5. The amended proposal takes into account comments made by delegations during the working group held outside of plenary at the last session, those made during plenary, together with those made by Germany, The Netherlands and Sweden in their written comments. The United Kingdom expert welcomes discussion of this proposal during the session so that a final formal proposal can be developed for the forty-eighth session.
- 6. Add the following new UN entries to Chapter 3.2 Dangerous Goods List and amend existing UN entries as follows (<u>new text underlined</u>):

								Packagings	and IBCs	Portable tand containers	cs and bulk
UN No.	Name and description	Class or division	Subsidiary risk	UN packing group	Special provisions	Limit and excep quan	oted	Packing instruction	Special packing provisions	Instructions	Special provisions
(1)	(2)	(3)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)
-	3.1.2	2.0	2.0	2.0.1.3	3.3	3.4	3.5	4.1.4	4.1.4	4.2.5 / 4.3.2	4.2.5
35AA	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	2.1	See SP XXX		XXX	<u>0</u>	<u>E0</u>	<u>P00X</u>			
35BB	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	<u>2.2</u>	See SP XXX		XXX	<u>0</u>	<u>E0</u>	<u>P00X</u>			
35CC	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	<u>2.3</u>	See SP XXX		XXX	<u>0</u>	<u>E0</u>	<u>P00X</u>			
35DD	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	<u>3</u>	See SP XXX		XXX	<u>0</u>	<u>E0</u>	<u>P00X</u>			

35EE	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	4.1	See SP XXX	XXX	<u>0</u>	<u>E0</u>	P00X
35FF	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	4.2	See SP XXX	XXX	<u>0</u>	<u>E0</u>	P00X
35GG	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	4.3	See SP XXX	XXX	<u>0</u>	<u>E0</u>	<u>P00X</u>
35НН	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	<u>5.1</u>	See SP XXX	XXX	<u>0</u>	<u>E0</u>	P00X

<u>35II</u>	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	<u>5.2</u>	See SP XXX	XXX	<u>0</u>	<u>E0</u>	<u>P00X</u>
<u>35JJ</u>	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	<u>6.1</u>	See SP XXX	XXX	<u>0</u>	<u>E0</u>	<u>P00X</u>
<u>35KK</u>	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	6.2	See SP XXX	XXX	<u>0</u>	<u>E0</u>	<u>P00X</u>
<u>35LL</u>	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	<u>8</u>	See SP XXX	XXX	<u>0</u>	<u>E0</u>	<u>P00X</u>

35MM	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S.	9	See SP XXX	XXX	<u>0</u>	<u>E0</u>	P00X
3363	DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S. in limited quantities	9		301	0	E0	P907

7. Add a new Special Provision XXX into Chapter 3.3 as follows:

"XXX This entry applies to machinery, apparatus or articles containing dangerous goods as an integral element necessary for the functioning of the machinery, apparatus or article in quantities in excess of those permitted in Column 7a of the Dangerous Goods List of Chapter 3.2. for the dangerous goods contained within the machinery, apparatus or article, or if the transport of the dangerous goods in accordance with the provisions of Chapter 3.4 is not authorized for the dangerous goods contained. It shall not be used for machinery, apparatus or articles for which a proper shipping name already exists in the Dangerous Goods List. Machinery, apparatus or articles containing dangerous goods where all the dangerous goods contained are within the permitted limited quantity amounts, shall be assigned to UN 3363.

Machinery, apparatus or articles containing dangerous goods shall be:

(a) Assigned to the appropriate Class or Division of the dangerous goods it contains and labelled according to 5.2.2.1.2 accordingly.

If the machinery, apparatus or article contains more than one Class or Division of dangerous goods then the Class or Division to which it shall be assigned is to be determined by the primary risk present.

The primary risk shall be determined by the Precedence of Hazards section in 2.0.3 of these Regulations for each of the dangerous goods contained.

If any of the dangerous goods present in the machinery, apparatus or article are within the permitted limited quantity amounts indicated in Column 7a of the Dangerous Goods List of Chapter 3.2. for those dangerous goods, these dangerous goods shall not be considered when determining the primary risk.[as long as the cumulative total of the dangerous goods in limited quantities does not exceed 30 kg per machinery, apparatus or article.]

When there are two or more dangerous goods present which have the same risks, the dangerous goods which are in the largest quantity shall be determined to be the primary risk and will therefore determine the appropriate name and description to be inserted in parenthesis after the Proper Shipping Name of the machinery, apparatus or article as required in 5.4.1.5.11.

Subsidiary risks shall be indicated as necessary. These subsidiary risks shall be representative of the primary risk posed by the other dangerous goods contained within the machinery, apparatus or article or they shall be the subsidiary risk(s) identified in column 4 of the Dangerous Goods List when only one dangerous good is present in the machinery, apparatus or article.

- (b) When it is required to ensure liquid dangerous goods remain in their intended orientation, orientation labels meeting 5.2.1.7.1 shall be affixed and visible on at least two opposite vertical sides where possible, with the arrows pointing in the correct upright direction.
- (c) [This entry shall not be used for the transport of machinery, apparatus or articles containing dangerous goods of Class 1, Class 7 or Radioactive substances. Where there is no existing entry in the Dangerous Goods List in Chapter 3.2 for machinery, apparatus or articles containing Class 1, Class 7 or Radioactive substances, transport provisions shall be determined by the competent authority.]

This entry shall not apply to batteries not listed in the Dangerous Goods List."

8. Amend Special Provision 301 in Chapter 3.3 as follows (new text underlined, deleted text strikethough):

"301 This entry only applies to machinery, <u>articles</u> or apparatus containing dangerous substances as a residue or an integral element of the machinery, <u>article</u> or apparatus. It shall not be used for machinery, <u>articles</u> or apparatus for which a proper shipping name already exists in the Dangerous Goods List of Chapter 3.2. Machinery, <u>articles</u> and apparatus transported under this entry shall only contain dangerous goods which are authorized to be transported in accordance with the provisions of Chapter 3.4 (Limited quantities). The quantity of dangerous goods in machinery, <u>articles</u> or apparatus shall not exceed the quantity specified in Column 7a of the Dangerous Goods List of Chapter 3.2 for each item of dangerous goods contained. If the machinery, <u>article</u> or apparatus contains more than one item of dangerous goods, the individual substances shall not be capable of reacting dangerously with one another (see 4.1.1.6). When it is required to ensure liquid dangerous goods remain in their intended orientation, package orientation labels meeting 5.2.1.7.1 shall be affixed and visible on at least two opposite vertical sides where possible, with the arrows pointing in the correct upright direction.

If there is no suitable UN entry to use in the Dangerous Goods List of Chapter 3.2, the competent authority may exempt from regulation machinery, <u>articles</u> or apparatus which would otherwise be transported under this entry. The transport of dangerous goods in machinery or apparatus where the quantity of dangerous goods exceeds the quantity specified in Column 7a of the Dangerous Goods List of Chapter 3.2 is authorized when approved by the competent authority, except where special provision 363 applies.

This entry may not apply to machinery, apparatus or articles containing only UN 3077 and/or UN 3082 in quantities not exceeding 5 l or 5kg [see special provision 375].

It shall not apply to batteries not listed in the Dangerous Goods List."

9. Insert the following new packing instruction into 4.1.4.1 as follows:

P00X PACKING INSTRUCTION P00X

This instruction applies to UN Nos.: 35AA, 35BB, 35CC, 35DD, 35EE, 35FF, 35GG, 35HH, 35II, 35JJ, 35KK, 35LL and 35MM

Packaged machinery, apparatus or articles

Machinery, apparatus or articles containing dangerous goods shall be packaged as follows:

The machinery, apparatus or article shall fully enclose the dangerous goods and prevent their release under normal conditions of transport.

Receptacles within machinery, apparatus or articles:

containing liquids or solids:

- a) shall be constructed of suitable materials; and
- b) shall be secured in the machinery, apparatus or article in such a way that, under normal conditions of transport, they cannot break, be punctured or leak their contents into the machinery, apparatus or article itself or the outer packaging.

Receptacles containing liquids with closures shall be packed with their closures correctly oriented. If the receptacle isn't leak-tight in all orientations, all openings/closures/valves have to be sealed.

Receptacles that are liable to break or be punctured easily, such as those made of glass, porcelain or stoneware or of certain plastics materials, etc., shall be properly secured. Any leakage of the contents shall not substantially impair the protective properties of the machinery, apparatus, or article or of the outer packaging.

containing receptacles for gases:

[Shall be capable of meeting the requirements of P200?]

Unless otherwise indicated, only cylinders and pressure drums conforming to the applicable requirements of Chapter 6.2 are authorized.

- (1) The general packing requirements of **4.1.6.1** shall be met.
- (2) The maximum test period for periodic inspection shall be 5 years.
- (3) Cylinders and pressure drums shall be so filled that at 50 °C the non-gaseous phase does not exceed 95% of their water capacity and they are not completely filled at 60 °C. When filled, the internal pressure at 65 °C shall not exceed the test pressure of the cylinders and pressure drums. The vapour pressures and volumetric expansion of all substances in the cylinders and pressure drums shall be taken into account.
- (4) The minimum test pressure shall be in accordance with P200 for the propellant but shall not be less than 20 bar.

Outer packagings:

Packagings shall meet the provisions of **4.1.1.1, 4.1.1.8** and **4.1.3** and be so designed that they meet the construction requirements of **6.1.4.** The net mass shall be the net of the dangerous goods mass not the net mass of the machinery, apparatus or article. Outer packagings constructed of suitable material and of adequate strength and design in relation to the packaging capacity and its intended use shall be used. Outer packagings shall be designed and constructed to prevent inadvertent discharge of articles during normal conditions of transport.

Unpackaged machinery, apparatus or articles

Machinery, apparatus or articles which cannot be packaged according to this packing instruction are subject to competent authority approval as specified in 4.1.3.8.1 and 4.1.3.8.2.

Consequential Amendments

10. Add a new paragraph to Chapter 1.1 as follows:

"1.1.1.10 Dangerous Goods in machinery, apparatus or articles

Machinery, apparatus or articles containing dangerous goods shall not be subject to these regulations where the quantity of dangerous goods contained within machinery, apparatus or article is below the quantity permitted in Excepted Quantities as indicated in Column 7b of the Dangerous Goods List in Chapter 3.2 for all the dangerous goods contained."

11. Amend the proper shipping name for UN3363 in the Dangerous Goods List of Chapter 3.2 as follows (new text underlined):

"3363 DANGEROUS GOODS IN MACHINERY, N.O.S. or DANGEROUS GOODS IN APPARATUS, N.O.S. or DANGEROUS GOODS IN ARTICLES, N.O.S. in limited quantities"

(Amendment would also need to be made to the alphabetical index, to Appendix A, List of Generic and N.O.S. Proper Shipping Names and to Chapter 2.9)

12. Amend 4.1.3.8.1 as follows (new text underlined):

"4.1.3.8.1 Where large and robust <u>machinery</u>, <u>apparatus or</u> articles cannot be packaged in accordance with the requirements of Chapters 6.1 or 6.6 and they have to be carried empty, uncleaned and unpackaged <u>or are being transported in accordance with special provision XXX</u>, the competent authority of the country of origin may approve such carriage. In doing so the competent authority shall take into account that:" [the remainder of text is to remain the same]

13. Amend Packing Instruction P907 in 4.1.4.1 as follows (new text underlined):

"P907 If the machinery, article or apparatus is constructed and designed so that the receptacles containing the dangerous goods are afforded adequate protection, an outer packaging is not required. Dangerous goods in machinery, articles or apparatus shall otherwise be packed in outer packagings constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use, and meeting the applicable requirements of **4.1.1.1**.

Receptacles containing dangerous goods shall conform to the general provisions in 4.1.1, except that 4.1.1.3, 4.1.1.4, 4.1.1.12 and 4.1.1.14 do not apply. For Division 2.2 gases, the inner cylinder or receptacle, its contents and filling density shall be to the satisfaction of the competent authority of the country in which the cylinder or receptacle is filled.

In addition, the manner in which receptacles are contained within the machinery, article or apparatus, shall be such that under normal conditions of transport, damage to receptacles containing the dangerous goods is unlikely; and in the event of damage to receptacles containing solid or liquid dangerous goods, no leakage of the dangerous goods from the machinery, article or apparatus is possible (a leakproof liner may be used to satisfy this requirement). Receptacles containing dangerous goods shall be so installed, secured or cushioned as to prevent their breakage or leakage and so as to control their movement within the machinery, article or apparatus during normal conditions of transport. Cushioning material shall not react dangerously with the content of the receptacles. Any leakage of the contents shall not substantially impair the protective properties of the cushioning material."

14. Add a new paragraph to 5.4.1.5 as follows:

"5.4.1.5.13 Dangerous goods in machinery, apparatus or articles, N.O.S

For UN entries transported in accordance with special provision XXX in column 6 of the Dangerous Goods List of Chapter 3.2, in addition to the Proper Shipping Name, the transport document shall additionally bear in parenthesis the name and description of the dangerous goods presenting the primary hazard (as indicated in column 2 of the Dangerous Goods List) contained in the machinery, apparatus or article as determined by the precedence of hazards section in 2.0.3 of these regulations, for example:

UN35DD, DANGEROUS GOODS IN MACHINERY, N.O.S, (Pyrrolidine), 3, (8)"

15. Amend the first sentence of 2.0.3.1 to read:

"2.0.3.1 Precedence of hazard characteristics

"The table below shall be used to determine the class of a substance, mixture or solution having more than one risk, when it is not named in the Dangerous Goods List in Chapter 3.2 or to determine the appropriate entry for dangerous goods in machinery, apparatus or articles N.O.S (UN 35AA to 35MM)". [The rest is to remain unchanged]

16. Amend 2.3.1.1 to read as follows:

"Class 3 includes the following substances <u>and articles, machinery and apparatus</u> <u>containing substances of this class:</u> [...]"

Amend 2.4.1.1 to read as follows:

"The substances of class 4 and articles, machinery and apparatus containing such substances are divided into three divisions as follows: [...]"

Amend 2.4.2.1 to read as follows:

"Division 4.1 includes the following types of substances <u>and articles, machinery and apparatus containing such substances</u>: [...]"

Amend 2.4.2.1.1 to read as follows:

"Division 4.2 includes the following types of substances and articles, machinery and apparatus containing such substances: [...]"

Insert the following new sentences in the beginning of 2.4.4.1:

"Division 4.3 includes the following types of substances and articles, machinery and apparatus containing such substances: [...]"

Amend 2.5.1 to read as follows:

"The substances of class 5 and articles, machinery and apparatus containing such substances are divided into two divisions as follows: [...]"

Amend 2.6.1 to read as follows:

"The substances of Class 6 and articles, machinery and apparatus containing such substances are divided into two divisions as follows:

(a) Division 6.1 Toxic substances

<u>Division 6.1 includes</u> substances liable either to cause death or serious injury or to harm human health swallowed or inhaled or by skin contact <u>and articles, machinery</u> and apparatus containing such substances;

(b) Division 6.2 Infectious substances

<u>Division 6.2 includes</u> substances known or reasonably expected to contain pathogens <u>and articles</u>, <u>machinery and apparatus contaminated with or containing such substances</u>. Pathogens are defined as microorganisms (including bacteria, viruses, rickettsiae, parasites, fungi) and other agents such as prions, which can cause disease in humans or animals."

Amend 2.8.1 as follows:

"Class 8 substances (corrosive substances) are <u>includes</u> substances which, by chemical action, will cause severe damage when in contact with living tissue, or, in the case of leakage, will materially damage, or even destroy, other goods or the means of transport <u>and articles, machinery and apparatus containing such substances"</u>.