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**COMMITTEE OF EXPERTS ON THE
TRANSPORT OF DANGEROUS GOODS**

**Sub-Committee of Experts on the
Transport of Dangerous Goods**

**(Twenty-first session,
Geneva, 4-13 December 2000,
agenda item)**

TRANSPORT OF DANGEROUS GOODS DOCUMENTATION

Sequence of information on transport document

Transmitted by the expert from the United States of America

1. The expert from the United States supports the recommendations by the observer from IATA in ST/SG/AC.10/2000/36 to reverse the Sub-Committee's decision and to maintain the currently required sequence of information specified in 5.4.1.2.2.
2. The sequence is internationally harmonized through the UN Recommendations, IMDG Code, the ICAO Technical Instructions, many national regulations, harmonized regulations agreed by the NAFTA countries and the MERCOSUL regulations in South America (*Signed by Argentina, Brazil, Paraguay, and Uruguay with a market of about 200 million people*). Emergency response guidebooks including those published by Pro-Quimica Abiquim in Brazil, by Ciquime in Argentina, and the Emergency Reponse Guidebook used throughout North and South America by emergency responders also indicate that the proper shipping name will appear first in the basic description. The ERG is being used in Russia, The Netherlands, Germany, Japan, South Africa and numerous other countries throughout the world. The exception to this harmony are the ECE road, rail and inland water regulations which adopted a contrary sequence many years after the UN sequence was agreed. This was adopted in the ADR/RID even though a majority of European countries had supported the UN decision taken earlier. It is the view of the expert from the United States that the dangerous goods transport document requirements should not be changed simply to accommodate regional regulatory variations without taking into account implications to safety and the cost imposed on those affected by the changes to the regulations.

3. The decision taken at the eighteenth session did not fully take these implications into account and numerous affected parties were not afforded an opportunity to communicate their views. It is important to note that while IATA and ICAO have had the opportunity to express their concerns with the Sub-Committee's decision, the IMO Dangerous Goods Solid Cargoes and Containers Sub-Committee (DSC) has not had the opportunity to consider this matter and to provide the Committee its position. The expert from the United States is aware of vessel operators who are concerned about the potential change in the sequence of information. The Vessel Operators Hazardous Materials Association (VOHMA) which represents more than 85% of the world's ocean carrier tonnage (over 30 carriers) does not support the change to the sequence of information. The DSC may have views similar to those of ICAO, IATA, and VOHMA to not adopt this change.

Responsibility of the Committee to Adopt Amendments that are Justified on the Basis of Safety and Cost

4. The experts from Germany and Italy have previously submitted papers urging the Committee to use tools such as risk analysis, cost benefit studies and other analytical methods to evaluate the safety benefits of proposed amendments to the Model Regulations. Changes to the Model Regulations should be based on scientific and economic evidence that show that the changes will enhance safety while avoiding unnecessary costs to the regulated public. Unnecessary cost burdens limit the availability of funds for such things as safety training and training enhancement programs within regulated companies. In ST/SG/AC.10/2000/21 submitted for this session of the Committee, Germany indicated that:

“With its new structure, the UN Model Regulations have made a big step forward to universally applicable regulations for the transport of dangerous goods by all modes of transport with an effectively increased legal status, which may even be strengthened after its implementation by the modal, regional and national rule setting bodies. With this achievement, the responsibility of the Committee has been significantly increased. Any new amendment has now become a direct impact on modal, regional and national legislation. Regulators will rely more on the Committee than in the past to consider all implications of new amendments in order to restrict the differences between UN Model Regulations and the modal, regional and national regulations to a minimum...”

In view of the far reaching impact of the decision by the Sub-Committee to change the sequence of information, the fact that the Committee needs to consider all implications of new amendments is particularly relevant as there are significant costs associated with this proposal and questionable safety benefits. It is the responsibility of the Committee to ensure that changes to the Model Regulations enhance safety while not imposing unjustified cost impacts and frivolous changes that impede the training of the people responsible for ensuring compliance with the regulations. Furthermore, the possibility exists that this change may not be adopted universally in international and national regulations due to the fact that all of the implications have not been adequately addressed to date and the technical justifications do not support such a change. Regulators will find it difficult to justify such a change in countries where the UN number is not required to appear first in the sequence and this may lead to disharmony.

Cost Impact

5. The current requirements for the sequence of information were first included in the UN Recommendations in December 1980 in recognition of the need to standardize the provision of information on the transport document to facilitate international harmonization. This initiative was made in response to recommendations made by the UN ECE Working Party on Facilitation of International Trade Procedures in February 1978. The Working Party recognized that by harmonizing documentation requirements “all parties would benefit from the consequent decrease in complexity and increase in accuracy and efficiency.” The recognized benefits were:

- “- increased safety for those handling the goods;
- less risk of damage to goods and equipment;
- fewer delays in the movement of goods and in the preparation and receipt of documents;
- reduced costs for paper work and administration.”

The Working Party’s Recommendation 11 (Documentary Aspects of the International Transport of Dangerous) recognizing the sequence of information currently provided in the Model Regulation (see Recommendation No.11, adopted by the Working Party on Facilitation of International Trade Procedures, Geneva, January 1996, ECE/TRADE/204 [Edition 96.1]).

6. Since the adoption of this requirement, many standardized forms by international organizations (e.g., IATA) and by individual companies have been developed and are now in use. While the UN Model Rule does not include a standard transport document form, the example Multimodal Dangerous Goods Form (derived from ECE/Trade/204, edition 96.1) presented in the Model Rule also acknowledges the currently required sequence of information as does the example form in the IMDG Code. As a result, while the current situation is that the European regulations require the UN number to appear first, the regulations used throughout the rest of the world including the ICAO TI and the IMDG Code require the proper shipping name first. In the US alone there are more than 800,000 transport documents produced every day. In North America more than one million emergency responders will be affected by the change in sequence.

7. The information required on the transport document according to ADR, RID and ADN will change as of July 1, 2001. The reformatted regulations will amend the sequence of information since the marginal number will no longer be required and the packing group, where assigned, will be required. With this in mind it would appear to be more cost effective to harmonize European requirements with those of the Model Regulations. The cost to European shippers would be less burdensome since changes are already required and because most European shippers are capable of producing transport documents in accordance with the ICAO TI, IMDG Code, and national regulations such as the US HMR, Canadian TDGR or the Brazilian/Mercosul Regulations. On the other hand there will be significant cost implications to those who do not use the ADR, RID and ADN regulations if the sequence were changed.

8. Amending the order in which information is provided would have serious consequences:

Training - many persons worldwide have been trained to recognize the information on the transport document in the current sequence. These persons include consigner personnel, carrier acceptance personnel (particularly air carrier personnel), enforcement and emergency response personnel. These

would all require retraining in the event the requirements were changed. In addition, procedural manuals, training publications and training course materials will need to be changed at significant expense. During an interim time period as persons are scheduled for retraining there could be significant disharmony.

Standardized Forms - Many companies maintain large inventories of standardized forms which prescribe the present sequence of information. These would have to be replaced.

Computer equipment - Computer software for generating transport documents and for verifying compliance with the regulations are programmed consistent with the current information sequence. These would all require modification and reprogramming. The cost of implementing these changes is significant. One global chemical company with 7600 shipping points worldwide utilizes at least 32 data systems and interfaces to generate dangerous goods transport documents and electronically communicate dangerous goods information worldwide. The cost of re-engineering this company's document generating system is estimated to be at least \$2.75 million (USD). Additional costs would be incurred in adapting data interface systems. The company additionally anticipates major difficulties in coordinating changes among shipping points, carriers and freight forwarders.

Furthermore, if the sequence were amended there would be an interim period where the smooth flow of dangerous goods could be disrupted as a result of countries or organizations not amending requirements on the same date, companies not modifying their systems in keeping with regulatory amendments and dangerous goods personnel not all being trained in time. Changing the sequence of information could also lead to disharmony in the event that some transport modal bodies or national regulatory authorities choose not to or are prevented by national legislation from adopting the revised sequence.

Safety Considerations

9. The expert from the United States does not believe that the providing the UN number as the first item of information will enhance safety. This view is also shared by emergency response personnel from around the world (including Europe). Understanding the information on a transport document is only achieved through training. To the untrained person, a basic description with the UN number first has no more meaning than the current description. Considering that personnel have been trained worldwide on the existing sequence, a change in the sequence will only serve to confuse personnel who have been trained regarding the present sequence. A change may result in a reduction in transport safety.

a. While others have argued that the presentation of information on the transport document should be tied to the sequence of information on the Dangerous Goods List (DGL) and suggests that all regulations will now use the order of information in the UN Model Regulation. The expert from the United States sees no relevance to this argument. Emergency responders do not typically use the DGL to locate information on specific dangerous goods. This information is provided in emergency response guide books, International Chemical Safety Cards or other sources. Furthermore, ICAO TI will continue to use an alphabetical list as will the regulations of other countries. One could also argue that the present sequence of information on the transport document is more consistent with present marking requirements. Although a sequence of marking is not prescribed in 5.2.1.1, the order of information required in the marking and the example that is provided has led to the common practice of placing the proper shipping name first (followed by the UN number) on package markings.

b. Placing the UN number first could also lead to confusion in the case of some proper shipping names, particularly those which include numbers. For example if the UN number came first the basic description

for UN 1211 would read as:

UN1211, 1,1-Dinitroethane, Class 3, PG II

This is in contrast to the current description:

1,1-Dinitroethane, Class 3, UN 1211, PG II (In accordance with current requirements)

In the revised form, it is obvious that the UN number could easily be confused with part of the proper shipping name. This could have detrimental effects, particularly in the event of an incident with emergency responders working under stressful conditions.

c. Human factors issues also need to be considered in determining the order of elements in the basic description. While the UN number is the primary link to appropriate emergency response procedures, the expert from the United States believes that when it appears first in the sequence there is greater tendency for the responder to act only on the basis of the number without taking the other information into account. There is an equal probability that a UN number could be typed incorrectly on a shipping document. In the case that the UN number is incorrectly provided on the transport document, the responder could take inappropriate emergency actions which could lead to serious consequences. The proper shipping name is less likely to be incorrectly indicated and minor misspellings are less likely in most instances to result in the wrong emergency procedures being taken. The current sequence of information causes emergency personnel to look at all of the information in the basic description before considering the appropriate actions to be taken. In addition, in the case of the more commonly transported dangerous goods (e.g., PETROL) and also the most likely substances to be involved in an incident, the proper shipping name itself is sufficient for triggering appropriate emergency response procedures.

d. While some contend that the UN number is the most essential item of information in the basic description. The expert from the United States on the other hand believes that the entire basic description is essential and that all of the information is necessary for establishing the proper emergency response actions. For instance, the PSN in many cases provides information which is not readily available from the UN number including such information as:

- the technical name and concentration of constituents for generic entries which most contribute to the hazards or hazards;
- whether the material is liquid, solid or molten for some shipping descriptions (e.g. sulphur) as well as other supplementary information such as "mixture" or "solution";
- whether an explosive (e.g. UN 0391) is wetted or desensitized;
- important information when alternative proper shipping names are provided for the same UN number even though it may be transported in different physical states (e.g. Phosphorous white or Yellow, Dry or Under Water or In Solution).

Indicating the PSN as the first component of the sequence enhances the likelihood that the emergency responder will take the full description into account.

Recommendation

10. In view of the considerable costs, the unnecessary disruption of current regulatory requirements throughout the world and the transport safety implications of revising the current sequence of information on

ST/SG/AC.10/INF.

page 6

transport documents, the expert from the United States recommends that the change to the sequence of information as agreed at the eighteenth session of the Sub-Committee not be accepted by the Committee.