

**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

Thirty-second session
Geneva, 3-7 December 2007

Item 7 of the provisional agenda

**HARMONIZATION WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)
REGULATIONS FOR THE SAFE TRANSPORT OF RADIOACTIVE MATERIALS**

Report of the IAEA Consultant Service (CS-72) on Harmonization Between UN and IAEA
Transport Regulations (IAEA, Vienna, 26-28 September 2007)

Note by the secretariat

1. Reference is made to the report on the last Sub-Committee's session, ST/SG/AC.10/C.3/62, paras 75-81.
2. The secretariat reproduces hereafter the report of the IAEA Consultant Service (CS-72) as prepared by the IAEA secretariat, which contains proposals for amendments to the UN Model Regulations.



CS-72
Consultant Service on Harmonization Between
UN and IAEA Transport Regulations

IAEA Headquarters, Vienna
26 – 28 September 2007

MEETING REPORT

Background

1. The Resolution GC(50)/RES/10 passed at the 50th Session of the IAEA General Conference requested the Secretariat to establish a process by which the language differences between the IAEA and the UN Model Regulations can be reconciled.
2. The first meeting on harmonization UN-IAEA Transport Regulations, 13th to 17th February 2006, provided inputs for changes in both documents. The 15th revised edition (2007) of the UN Model Regulations includes the so called “harmonization changes” while the draft 2009 Edition of the IAEA Regulations for the Safe Transport of Radioactive Material (TS-R-1), which is ready to be submitted to the 120-day comments by Members States and International Organizations, contains related changes.
3. The second meeting on harmonization was held from 26 to 28 September 2007.

Objective of the Meeting

4. According to the Terms of Reference, the objective of this meeting was to:
 - (a) Address proposals for changes submitted to the UN Sub-Committee and IAEA which relate to harmonization;
 - (b) Address newly identified issues;
 - (c) Evaluate if there are any other areas where there is a need for harmonization between IAEA/UN Regulations; and
 - (d) Identify further steps by which IAEA and UN Regulations could progressively move to a full harmonized structure.

Participants and List of Papers

5. Attachments 1 and 2 provide, respectively, the list of participants and the list of papers to this Consultant Service.

Working Method and Procedures

6. The meeting was opened by Mr. Michael Wangler, Head of Safety of Transport of Radioactive Material Unit. Mr. Wangler highlighted the importance of this meeting and recalled the results of the first meeting, which are now part of the 15th edition of UN Model Regulations and included in the draft 2009 Edition of the IAEA transport Regulations. Ms. Christel Fasten serving as the Chairperson welcomed participants and emphasized the need for completing the agenda in the given time so as to enable TRANSSEC 15th to take an informed decision in light of the recommendations provided by the group. The provisional agenda (WP01) was adopted and the Terms of Reference (WP02) were considered.

7. Working Papers 07 and 08 were introduced by Mr. Bruno. Mr. Kirchnawy introduced Working Paper 03 and Mr. Kervella introduced Working Papers 04 to 06.

8. The participants discussed each document and prepared recommendations for TRANSSC 15th on those proposals they found relevant for harmonization purposes. The set of proposals for the 2011 edition of the IAEA Transport Regulations was considered. In the following paragraphs the summaries of discussions are presented with reference to the respective recommendations.

Issues addressed

Working Paper No. 03 – Marking for carriage of radioactive material under "exclusive use"

9. This paper was submitted by Austria to the 30th Session of the UN Sub-committee of Expert on Transport of Dangerous Goods/UN-SCETDG in December 2006 and addresses the provision in 5.3.2.1.1 (e) of the UN Model Regulations and paras 548 and 550 of the IAEA Transport Regulations concerning the display of UN numbers for carriage of radioactive material under exclusive use.

10. After discussions on practical application of the requirements and comparison of the text as presented in UN and IAEA Regulations, it was agreed that the UN number on an orange plate/placard should be required only when the consignment is required to be shipped under exclusive use, i.e. when corresponding statement "EXCLUSIVE USE SHIPMENT" is included in the transport document. (See recommendation 2)

Working Paper 04 - Radioactive substances in excepted packages with subsidiary risk

11. This paper was submitted by IATA for the 31st Session of UN-SCETDG July 2007 and addresses the Special Provision 290 of the UN Model Regulations which applies to RADIOACTIVE MATERIAL, EXCEPTED PACKAGE, UN 2908, UN 2909, UN 2910 and UN 2911.

12. The special provision 290 states that if the material meets the classification criteria of another class or division, then the other class or division becomes the predominant risk and the material shall be declared under the applicable proper shipping name for that class or division.

13. The issue has also been raised by the UNECE Secretariat in document UNECE/07/01 submitted to TRANSSC 15 where the problem is explained in detail.

14. The main question was how to interpret UN special provision 290 and IAEA Regulations paras 109, 507 and 616 for the purposes of transport documentation and package marking. Another question raised by certain delegates of the UN SCETDG was whether it was necessary, for safety reasons, to communicate the class 7 hazard in such a case, or even in the case of excepted packages in general.

15. The participants of this meeting were of the view that because of the potential radiation exposure (e.g. accident or incident situation), it is necessary to communicate the information about the radiation hazard one way or another. If there is only radioactive hazard, the Class 7UN No. should be indicated on the package and in the transport document. If there is an

additional hazard, the radioactive hazard should be communicated only in the transport document (and no radioactive UN No. on the package) through the indication of the Class 7 proper shipping name in addition to the non-radioactive proper shipping name.

16. The participants considered that, when the excepted packages contain radioactive material with other hazards, they may be also carried under the UN provisions for limited quantities if the conditions of Chapter 3.4 of the UN Model Regulations are met. This does not cause a problem for communicating the information in accordance with special provision 290 in the UN Model Regulations, IMDG Code and ICAO Technical Instructions because a transport document is required, but the case should be addressed by the UNECE for ADR, RID and ADN because no transport document is required for limited quantities.

17. The participants were of the view that the provisions of Chapter 3.5 of the UN Model Regulations for excepted quantities should not be applied to excepted packages containing radioactive material with an additional hazard.

18. In addressing this issue, consultants recalled the discussion and decisions taken at the meeting of the International Steering Committee on Denials of Shipments, held in July 2007, whereby it was agreed that provisions governing the safe carriage of radioactive material in excepted packages could benefit from clarification and harmonization. (See recommendation 4)

Working Paper 05 – Implementation of the 15th revised edition of UN Recommendations on the Transport of Dangerous Goods

19. The consultants agreed that was a problem with the definition of small freight containers as explained also in the document UNECE/07/02. The consultants were of the view that the solution should be discussed by TRANSSC 15th to be incorporated to the 2009 Edition of TS-R-1.

20. As regards provisions which apply/do not apply to excepted packages of radioactive material the consultants recommend to amend 1.5.1.5 of the UN and equivalent paras in IMDG Code and ICAO Technical Instructions. Some of the changes have been placed between square brackets, pending decision by TRANSSC 15th on the proposal submitted by Germany/07/02 for para. 515. (See recommendations 5, 6 and 7)

Working Paper 06 – References to ISO Standards in the UN Model Regulations

21. The consultants noted that the updating of references to ISO Standards was also on the agenda of TRANSSC 15th. Consultants felt that it is up to TRANSSC 15th to check whether or not the references to ISO 7195:1993 should be replaced by reference to ISO 7195:2005 and whether transitional provisions are necessary.

Working Paper 07 – Harmonization issues

22. The consultants expressed their support to the ongoing IAEA and IMO cooperation in the context of developing Class 7 e-learning package and were of the view that the package would contribute to a better understanding of the provisions of TS-R-1.

23. For the issue related to tank requirements the consultants noted that a proposal had been submitted by the UNECE Secretariat to TRANSSC 15th (UNECE/07/04).

24. For the issue related to the sequence of information in the transport document the consultants noted that a proposal had been submitted by the UNECE Secretariat to TRANSSC 15th (UNECE/07/03).

Working Paper 08 – Proposal from IAEA/Incident and Emergency Center concerning para. 304, 305 and 313 of the IAEA Transport Regulations

25. The consultants felt that the changes proposed to the paras 304 and 305 should be discussed by TRANSSC 15th and if approved, could be also included in the UN Model Regulations because they affect Class 7 only.

26. The changes proposed to paras 313 (a) ii and (c) ii would concern all classes of dangerous goods, and as they are of substantial nature would have to be discussed also by the UN Sub-Committee but they should be substantiated by appropriate justification.

Product of the Meeting

27. As defined in the Terms of References, the product of this meeting is a number of recommendations for changes in the IAEA Transport Regulations and the UN Model Regulations. Changes in the IMDG Code and ICAO Technical Instructions are also recommended. It is important that the Transport Safety Standards Committee in its 15th meeting address those changes proposed for the TS-R-1.

Conclusion

28. The agenda for the meeting was completed. All working and information papers were addressed.

29. Consultants agreed that further steps on harmonization include a continuous monitoring of amendments resulting from the review-revision process of UN and IAEA Regulations.

30. Consultants also identified a need for actions other than merely alignment of terminology.

31. It was noted that differences between definitions were addressed in the first meeting on harmonization. Nevertheless, new developments may affect and create inconsistencies between regulations. This needs to be continuously monitored. (See recommendation 3).

Recommendations

Recommendation 1. The participants of the second meeting on harmonization recommend TRANSSC 15th to review the proposed changes to the IAEA Transport Regulations. It is understood that UN and IMO Secretaries will submit the applicable proposals to the UN Sub-Committee of Expert on the Transport of Dangerous Goods.

Recommendation 2. The consultants recommend amending para. 548 of the IAEA Transport Regulations to read as follow.

“Where the *consignment* in the *freight container* or *tank* is unpackaged *LSA-I* or *SCO-I* or where **a consignment in a freight container is required** to be shipped under exclusive use and is packaged *radioactive material* with a single United Nations number, the appropriate United Nations number for the *consignment* (see Table 8) shall also be displayed, in black digits not less than 65 mm high, either:

Recommendation 3. The consultants recommend the IAEA Secretariat to prepare a paper comparing definitions from the TS-R-1, UN and modal regulations to identify any remaining differences. The paper would be addressed in the next meeting on harmonization.

Recommendation 4. The consultants recommend:

- (a) Add a sentence at the end of para. 2.0.3.2 of the UN Model Regulations as follows:

“For radioactive material in excepted packages, special provision 290 of Chapter 3.3 applies”.

- (b) Replace the text of the special provision 290 by the following:

“290 When this **radioactive** material meets the definitions and criteria of other classes or divisions as defined in Part 2, it shall be classified in accordance with the predominant subsidiary risk. Such material shall be declared under the proper shipping name and UN number appropriate for the material in that predominant Class or Division, with the addition of the name applicable to this **radioactive** material according to column 2 in the dangerous goods list, and shall be transported in accordance with the provisions applicable to that UN number. In addition, all other requirements specified in 1.5.1.5.1 shall apply, except 5.2.1.5.2.

Example of information to be entered in the transport document:

UN 1993, Flammable liquid, n.o.s. (ethanol and toluene mixture), Radioactive material, excepted package – limited quantity of material, Class 3, PG II.

For the purposes of package marking in accordance with 5.2.1.1, only the UN Number and proper shipping name corresponding to the non-radioactive hazard(s) need to be marked on the package in addition to the marks that may be required under 2.7.2.4.1.3 or 2.7.2.4.1.4.”

- (c) Para. 3.5.1.1 of the UN Regulations should be amended to read as follows:

“Excepted quantities of dangerous goods of certain classes, other than articles **and other than substances which are classified in accordance with special provisions 290 of chapter 3.3**, meeting the provisions of this Chapter are not subject to any other provisions of these Regulations”.

(a)..... (unchanged)

(b).... (unchanged)

(c).... (unchanged)

Note:. (unchanged)

Recommendation 5. Section 1.5.1.5 of the UN Model Regulations/IMDG Code should be amended to read as follows.

1.5.1.5 Specific provisions for the transport of excepted packages

1.5.1.5.1 Excepted packages which contain radioactive material in limited quantities, instruments, manufactured articles and empty packagings as specified 2.7.2.4.1 shall be subject only to the following provisions of Parts 5 to 7:

- .1 **The applicable provisions specified in 5.1.2, 5.1.3.2, 5.1.4, 5.2.1.1, 5.2.1.2, 5.2.1.5.1 to 5.2.1.5.3, 5.2.1.7, UN 5.4.1.4.1(a)/IMDG 5.4.1.4.1.1, [UN 7.1.8.5.3 to 7.1.8.6.1/IMDG 7.1.14.11 to 7.1.14.14, UN 7.1.8.5.1/IMDG 7.3.4.1] and UN 7.1.8.5.2/IMDG 7.3.4.2;**
- .2 The provisions for excepted packages specified in 6.4.4; and
- .3 If the excepted package contains fissile material, one of the fissile exceptions provided by 2.7.2.3.5 shall apply and the provision of 6.4.7.2 shall be met.

1.5.1.5.2 Excepted packages shall be subject to the relevant provisions of all other parts of these Regulations/this Code.

Include in 1.5.1.5.2 of the IMDG Code following footnote.

“The following provisions do not apply to excepted packages and the control of excepted packages: 1.4.2, 1.4.3, 4.1.9.1.7.3 to 4.1.9.1.7.5, 4.1.9.1.7.7 and 4.1.9.1.7.8.”

Recommendation 6. The sentence in 4.1.9.1.3 of the UN Model Regulations/IMDG Code should be amended to read as follows.

“A package, other than an excepted package, shall not contain any items other than those that are necessary for the use of the radioactive material.”

Recommendation 7. The consultants recommend ICAO to consider adopting in its Technical Instructions the corresponding changes for the 2009-2010 Edition.

Recommendation 8. The consultants draw attention to the fact that:

- (a) To achieve harmonization of the IAEA Regulations and the UN Model Regulations/IMDG Code/ICAO TI/ADR/ADN/RID by 2011; and
- (b) To allow effective implementation of amendments developed by IAEA in the past six years through the modal international legal instruments also by 2011,

It would be necessary that the draft 2009 Edition of the IAEA Regulations be approved for publication by the Board of Governors before December 2008. This means that the updated timetable discussed at TRANSSEC 14 would have to be effectively followed. Otherwise, harmonization and effective implementation of the said amendments could be achieved, at the earliest, by 2013.

Recommendation 9. The Harmonization Group having discussed the issues surrounding further steps, by which IAEA and UN Recommendations could progressively move to a full harmonized structure, recommended that TRANSSEC when reviewing the regulations in the future, consider the need to harmonize the structure of the TS-R-1 with that of the UN Recommendations which are followed by the modal organizations. Such a move will further facilitate understanding and compliance with the regulations.



International Atomic Energy Agency

NOTIFICATION OF AN AGENCY MEETING

Department of: Nuclear Safety and Security **Issue No.** 3
Division / Section of: Division of Radiation, Transport and Waste Safety / Radiation and Transport Safety Section **Date:** 2007-09-21

07CT10194-CS-72

Title of meeting:	CS to review Class 7 requirements in the UN Orange Book to harmonize IAEA-UN Regulations								
Begin Date:	2007-09-26	End Date:	2007-09-28	Meeting Room:	C-0753	Ext.:	21368	Convening Time:	09:00
Scientific Secretary	Room No.	Ext.	Secretary	Room No.	Ext.	Conference Clerk			
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Paper Number	Title	Agenda Item	Available
<i>Working Papers</i>			
WP01, Rev 0	Provisional Agenda		Yes
WP02, Rev 0	Provisional Terms of References		Yes
WP03, Rev 0	Marking for Carriage of Radioactive Material Under Exclusive use		Yes
WP04, Rev 0	Radioactive Substances in Excepted Packages with Subsidiary Risks		Yes
WP05, Rev 0	Implementation of the 15th Revision of UN		Yes
WP06, Rev 0	References to ISO Standards in UN Model Regulations		Yes
WP07, Rev 0	Report of CS on Harmonization Issues 2001		Yes
WP08, Rev 0	Proposal for changes in paras 304, 305 and 313 of TS-R-1		Yes
<i>Information Papers</i>			
IP01, Rev 0	Excerpts from the Report of UN SETDG 31st Session		Yes
IP02, Rev 0	Annex IX of final report of TRANSSEC VII		Yes
IP03, Rev 0	Resolution 11 from 51st IAEA General Conference		Yes
IP04, Rev 0	Review Process: Recommended Schedule		Yes
IP05, Rev 0	Recommendations of TRANSSEC on Decision Criteria for revision of IAEA Regulations		Yes
IP06, Rev 0	Consolidated text on Specific Provision for the carriage of excepted packages		Yes