

Document Preparation Profile (DPP)

1. IDENTIFICATION

Document Category **Safety Requirements**

Working ID: **DS 437**

Proposed Title: **Regulations for the Safe Transport of Radioactive Material, 20XX Edition**

Proposed Action: **revision of a document**

Regulations for the Safe Transport of Radioactive Material. 2009 Edition. TS-R-1

Review Committee(s) or Group: **TRANSSC (lead), RASSC, NUSSC and WASSC**

Technical Officer(s): **Jim Stewart, Y.K. Zhao, NSRW**

2. BACKGROUND/RATIONALE

In 1961 the International Atomic Energy Agency, within the framework of its statutory functions and in accordance with recommendations made by its Preparatory Commission and by the Economic and Social Council of the United Nations, published safety regulations that could be applied to the national and international transport of radioactive material by all means of transport. These requirements were published as “Regulations for the Safe Transport of Radioactive Material”, Safety Series No. 6, 1961 edition. At the same time, the Director General of the Agency indicated that these regulations would be revised at appropriate intervals in consultation with Member States and the organizations concerned and invited suggestions for their improvement in the light of experience and increased knowledge. This has been an on-going task in the Agency’s budget since that time.

The Secretariat has been encouraged by recent General Conferences to provide a continuous review process for the TS-R-1. In May 2005 the Board of Governors approved the new policy for reviewing and revising the Agency's Regulations for the Transport of Radioactive Material. According to this policy the Secretariat will continue to review the Transport Regulations at intervals consistent with the schedules of the United Nations Subcommittee of Experts on the Transport of Dangerous Goods and of the relevant international modal organizations in order to remain in step with the review cycles of the other relevant international bodies. Subsequently, it will submit its findings to TRANSSC for review. Should TRANSSC consider that a proposal for change stemming from a review cycle is sufficiently important for safety to necessitate publication as soon as possible, the Secretariat will initiate the revision process for the Transport Regulations and will submit all of the changes approved by TRANSSC to the CSS for endorsement.

3. OBJECTIVE

The primary objective of the revision of TS-R-1 is to take into account the TRANSSC 19 decisions on the issues requiring regulatory change (a summary of the key issues agreed are in the Annex) and to update TS-R-1 accordingly. One of the key issues leading TRANSSC to decide a revision of TS-R-1 was the need to revise the fissile exception requirements. This action was also recommended in the September 2009 General Conference safety resolution

TS-R-1 has been developed in part paragraphs for around 10 years. There is substantial cross referencing. It is becoming harder to translate and identify the applicable paragraphs. In the last consultant meeting in July 2009 addressing the comments from Member States and International Organizations, experts found that many issues identified by MS as editorial errors are in nature the wording problem which are likely to lead to ambiguity. These wording issues need to make clear in the next revision of TS-R-1. At present we CANNOT have the same document in all languages because of the poor English in some places. We are getting an increasing number of editorial issues raised as the document is reviewed each time. . In the last review cycle, although no safety significant issues were found, around 30 paragraphs changes have been suggested and two new approaches were introduced for the purpose of optimization and efficiency of the Regulations.

The proposal is to make the Regulation readily comprehended or more intelligible by re-writing the **paragraphs requiring revision** in clear English (English which has a very obvious and unambiguous meaning - but not "plain" English). The experts who are not only familiar with regulations on transport of dangerous goods, but also experienced in clear English will be invited to work on it. We would also look to the UN Orange book for concepts we can borrow to gain more harmony. We would identify the parts of TS-R-1 that are IAEA competence and the parts that are UN competence. We would insert an Annex that sets out key concepts (umbrella paragraphs) that should be used as guides for future development of the document.

4. JUSTIFICATION

To remain consistent with the review cycles of the UN Committee of Experts (which produces “model regulations” for the transport of all dangerous goods) and the various international modal organizations (which produce mode-specific dangerous goods regulations), a new review cycle began in 2009, with a view to publishing TS-R-1 in 20XX.

To align with the new policy for publishing of Transport Regulations, TRANSSC developed and approved decision criteria to determine if proposals for changes are sufficiently important to recommend the publication of a new edition of Transport Regulations. Six principles were identified to be used in evaluating proposed changes to the regulations stemming from the review cycle: Optimization, Efficiency, Practicality, Regulatory Stability, Compliance with Dose Limits, Socio-Economic Considerations, Harmonization with Regulations from Other International Organizations, and Clarification.

5. PLACE IN THE OVERALL STRUCTURE OF THE RELEVANT SERIES AND INTERFACES WITH EXISTING AND/OR PLANNED PUBLICATIONS

TRANSSC will co-ordinate the revision process and any resulting document preparation, including approving the draft of the revised document and the progress made will be reported to the other Safety Committees. Other Safety Series and Safety Standards Series documents that have a direct interface with TS-R-1 are:

- TS-G-1.1 “Advisory Material for the Regulations for the Safe Transport of Radioactive Material”
- TS-G-1.2 “Emergency Response Planning and Preparedness for Transport Accidents Involving Radioactive Material”
- TS-G-1.3 “Radiation Protection Programmes for the Safe Transport of Radioactive Material”
- TS-G-1.4 “Management Systems for the Safe Transport of Radioactive Material”
- TS-G-1.5 “Compliance Assurance for the Safe Transport of Radioactive Material”

- TS-G-1.6 “Schedules of Provisions of the IAEA Regulations for the Safe Transport of Radioactive Material” – currently DS 387
- Safety Series No. 115, “International Basic Safety Standards for Protection against Ionising Radiation and for the Safety of Radiation Sources” (1996)

Interfaces also exist with all Member States and with involved international organizations.

- Member States: Requests for proposals for change, and a summary of proposed changes are sent to all Member States. The Member States then have the opportunity to participate in the revision process through TRANSSC and provide further support through related Technical Meetings, Co-ordinated Research Projects and Consultant Services Meetings.
- International Organizations: Liaison with other organizations for the development of TS-R-1 include:
 - United Nations Economic and Social Council (UN/ECOSOC)
 - International Civil Aviation Organization (ICAO)
 - International Maritime Organization (IMO)
 - UN/ECE/Inland Transport Committee’s International Regulations Concerning the Carriage of Dangerous Goods by Rail (RID), European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR), and the Regulations for Carriage of Dangerous Goods on the Rhine (ADNR)
 - MERCOSUR/MERCOSUL Agreement of Partial Reach to Facilitate the Transport of Dangerous Goods - Signed by the Governments of Argentina, Brazil, Paraguay and Uruguay.
 - International Federation of Airline Pilots Associations (IFALPA)
 - International Air Transport Association (IATA)
 - International Standards Organization (ISO)
 - European Commission (EC)
 - Universal Postal Union (UPU)
 - World Nuclear Transport Institute (WNTI)
 - International Source Suppliers and Producers Association (ISSPA)
 - Tantalum-Niobium International Study Center (TIC)

6. OVERVIEW

Transport of radioactive material (routine, normal and accidents conditions) embraces the carriage of radioisotopes for industrial, medical, and research uses, as well as the shipment of radioactive waste, and consignments of nuclear fuel cycle material. The purpose of TS-R-1 is to establish standards of safety that provide an acceptable level of control of the radiation hazards to persons, property and the environment that are associated with the transport of radioactive material. These Regulations apply to the transport of radioactive material by all modes of transport, including transport that is incidental to the use of the radioactive material. Transport is deemed to comprise all operations and conditions

associated with and involved in the movement of radioactive material; these include the design, fabrication and maintenance of packaging, and the preparation, consigning, handling, carrying, storing in transit and receiving at the final destination of packages, as well as source strength and contamination limits in the context of transport safety. These items are reviewed in each review cycle for their necessity, and radiological adequacy.

The proposed scope of the 20XX edition of TS-R-1, if determined to be needed, would be the same as the scope of the 2009 editions of TS-R-1. The Table of Contents of the 2009 Edition of TS-R-1 will serve as the basis for the 20XX edition should its development be determined necessary according to the criteria outlined above. The current Table of Contents is as follows:

- I. Introduction
- II. Definitions
- III. General Provisions
- IV. Activity Limits and Classification
- V. Requirements and Controls for Transport
- VI. Requirements for Radioactive Materials and for Packagings and Packages
- VII. Test Procedures
- VIII. Approval and Administrative Requirements

References

Annex I: Summary of Approval and Prior Notification Requirements

Annex II: Conversion Factors and Prefixes

Annex III: Guiding Principles Underlying the IAEA Transport Regulations

Contributors to Drafting and Review

Bodies for the Endorsement of Safety Standards

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7. PRODUCTION SCHEDULE: Provisional schedule for preparation of the document, outlining realistic expected dates for:

Approval of DPP by the Coordination Committee	August 2009
DPP approved by TRANSSC	October 2009
DPP approved by NUSSC, WASSC and RASSC to be submitted to CSS	November 2009
Approval of the DPP by the CSS	March 2010
1st Draft TS-R-1 prepared by Secretariat	By April 2010
Approval of draft by the Coordination Committee	April 2010
TRANSSC/NUSSC/RASSC/WASSC review of the 1st Draft TS-R-1	June 2010

and approval for submission to 120 day Member State comment	
TRANSSC 20 review of the 1st Draft TS-R-1. and approval for 120 day Member State comment, if appropriate.	14-18 June 2010
2nd Draft TS-R-1 prepared by incorporating comments by Secretariat	12 Nov 2010
Approval of the revised draft by the Coordination Committee	March 2011
Send draft to UNECE	March 2011
Review in NS-SSCS	March 2011
NUSSC, RASSC and WASSC review of the 2nd Draft TS-R-1 and approval for submission to CSS, if appropriate	June 2011
TRANSSC 22 review of the 2nd Draft TS-R-1 and approval for submission to CSS, if appropriate.	June 2011
CSS endorsement for publication of the new edition of TS-R-1, if appropriate	Oct. 2011
Send CSS approved draft to UNECE	Oct 2011
Approval by the Publications Committee	December 2011
Board of Governors approval of the new edition of TS-R-1, if appropriate	March 2012
Send final version to UNECE	March 2012
Target publication date, if appropriate	Late 2012

- **8. RESOURCES**

- Staff: 52 staff weeks

- Member States: 10 Member States weeks **for each Member State**

Consultant: 16 consultants weeks