SPESS F
Document Preparation Profile (DPP)
Version 5 dated 13 May 2024

1. IDENTIFICATION

Document Category: **Safety Guide**

Working ID: **DS554**

Proposed Title: **Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (20XX Edition) SSG-26 (Rev. 2)**

Proposed Action: **Revision of: Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition) SSG-26 (Rev. 1)**

Review Committee(s) or Group: **TRANSSC, RASSC, WASSC, NUSSC, EPReSC, NSGC**

Technical Officer(s): **Eric Reber**

2. BACKGROUND

IAEA Safety Standards Series No. SSG-26 (Rev. 1), Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material, 2018 Edition, is a legacy safety guide that supplements IAEA Safety Standards Series No. SSR-6 (Rev. 1), Regulations for the Safe Transport of Radioactive Material, 2018 Edition, by providing information on individual provisions as to their purpose, their safety basis and how to apply them in practice. As such, certain content in SSG-26 (Rev. 1), i.e. historical information and safety basis information, does not fall in line with the usual content of safety guides, which principally provide recommendations and guidance for complying with safety requirements. The Technical Basis Document Working Group (TBD-WG), a working group organized under the auspices of TRANSSC, assessed the situation concerning future revisions of SSG-26 and the possible development of other documents that would contain historical information and information about the safety basis for the requirements in SSR-6. In the Annex of the DPP, please see the meeting report from the October 2022 meeting of the TBD-WG. As reported at the meeting of TRANSSC in June 2023, the TBD-WG recommended that SSG-26 (Rev. 1) should be revised to address changes to SSR-6 (Rev. 1) that will result from the ongoing revision process, and to remove historical information and safety basis information, which would be placed in a “Safety Basis Document”. For several years, the members of TRANSSC have debated the path forward concerning this issue. During the meeting of TRANSSC in June 2023, an informal poll was taken and the votes were evenly split between maintaining the status quo and removing the historical information and safety basis information from SSG-26 (Rev. 1). Because a consensus on further action was not achieved, the decision was ultimately made to proceed with a revision of SSG-26 (Rev. 1) that will remove the historical information and safety basis information, thereby bringing the content of SSG-26 (Rev. 2) in line with that of other safety guides in the IAEA Safety Standards Series. As agreed by TRANSSC, the information that will be removed from SSG-26 (Rev. 1) will be placed in a Safety Basis Document or, in some other appropriate Agency publication.

3. JUSTIFICATION FOR THE PRODUCTION OF THE PUBLICATION

As described in BACKGROUND, SSG-26 (Rev. 1) should be revised to take account of the decision by TRANSSC at its June 2023 meeting regarding the removal of historical and safety basis information from the publication. Also, the revision will ensure the consistency with the strategies and processes for the establishment of IAEA Safety Standards (SPESS A).

Furthermore, a new review cycle for SSR-6 (Rev. 1) began in 2021. At the meeting of TRANSSC in November 2022, it was decided that the issues identified met the decision criteria to start a new revision cycle for SSR-6. New and revised recommendations in SSG-26 (Rev. 1) should be developed to address the changes to the provisions of SSR-6 that result from the ongoing revision cycle. Resolution tables that document the development of the proposed revisions to SSR-6 (Rev. 1) can be viewed in this folder: Revision Cycle of SSR-6 (Rev. 1). Also, because of the detailed consideration of the provisions of SSR-6 (Rev. 1) and the text of SSG-26 (Rev. 1) that took place within the context of the review cycle and revision cycle, various text in SSG-26 (Rev. 1) has been identified that should be revised to ensure the recommendations are clear and reflect an international consensus. Since the guidance of SSG-26 (Rev. 2) is important for the application of SSR-6 (Rev. 2), it is desirable to publish SSG-26 (Rev. 2) as soon as possible after the publication of SSR-6 (Rev. 2) on whose final text it depends.

The revision of SSG-26 (Rev. 1) is included in the Medium-Term Plan for the Safety Standards.

4. OBJECTIVE

This safety guide will provide recommendations and guidance on how to comply with the requirements of SSR-6 (Rev. 2) that are based on an international consensus on recommended measures (or equivalent alternative measures) that should be applied. It is intended that the application of the content of this safety guide will result in the harmonized application of the requirements of SSR-6 (Rev.2).

This safety guide is intended to be used by competent authorities and users of SSR-6 (Rev. 2).

5. SCOPE

Like SSR-6 (Rev. 2), SSG-26 (Rev. 2) will apply to the transport of radioactive material by all modes on land, water, or in the air. Transport comprises all operations and conditions associated with, and involved in, the movement of radioactive material; these include the design, manufacture, maintenance and repair of packaging, and the preparation, consigning, loading, carriage including in-transit storage, shipment after storage, unloading and receipt at the final destination of loads of radioactive material and packages.

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

The proposed publication will be a specific safety guide in the group of safety guides that principally address the safe transport of radioactive material.

The drafting process for this publication will be managed by RIT/NSRW. For issues concerning the interface between safety and security, the Nuclear Security of Materials and Facilities Section and in particular for computer security issues, the Information Management Section, will be consulted.

Historically, the IAEA Regulations for the Safe Transport of Radioactive Material, and the IAEA safety guides that support it have not been co-sponsored by other international organizations. Regarding interaction with international organizations, International Civil Aviation Organization, International Maritime Organization, United Nations Economic Commission for Europe and the Universal Postal

Union are observers of TRANSSC and as such are invited to participate in discussions and make comments on documents that are developed by the IAEA.

Other Safety Standards Series publications that have a direct interface with SSG-26 (Rev. 1) are:

- Regulations for the Safe Transport of Radioactive Material (20xx Edition), SSR-6 (Rev. 2)
- Schedules of Provisions of the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition), SSG-33 (Rev. 1)
- Preparedness and Response for a Nuclear or Radiological Emergency Involving the Transport of Radioactive Material, SSG-65
- Radiation Protection Programmes for the Safe Transport of Radioactive Material, TS-G-1.3 (under revision as SSG-86)
- The Management System for the Safe Transport of Radioactive Material, TS-G-1.4 (under revision as DS530)
- Compliance Assurance for the Safe Transport of Radioactive Material, SSG-78
- Format and Content of the Package Design Safety Report for the Transport of Radioactive Material, SSG-66
- Ageing Management and Maintenance of Packages for Transport of Radioactive Material, DS546 (publication is in preparation)
- Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, GSR Part 3

IAEA publications that are not in the Safety Standards Series that have a direct interface with SSG-26 (Rev. 1) are:

- Security of Radioactive Material in Transport, IAEA Nuclear Security Series No. 9-G (Rev. 1)
- Managing the Interface between Safety and Security for Normal Commercial Shipments of Radioactive Material, Technical Reports Series No. 1001

7. OVERVIEW

SSG-26 can only be used concurrently as a companion to SSR-6. As such, the structure of the body of the document will follow that of SSR-6 (Rev. 2). The numbering of paragraphs will correspond to the specific paragraphs in SSR-6 (Rev. 2). In addition, during the drafting of the document, consideration will be given to using hyperlinks to corresponding SSR-6 paras in order to facilitate the user's understanding.

The appendices will reflect those in SSG-26 (Rev. 1), except that one portion of an appendix and several entire appendices will be removed according to the recommendations of the TBD-WG.[1] Taking account of these changes, the development of the document will be according to the following outline.

---

[1] The TBD-WG recommended that the following portion of an appendix and several entire appendices of SSG-26 (Rev. 1) should be removed:

- Appendix I, The Q System for the Calculation and Application of A_1 and A_2 Values; It is planned that this appendix will be revised by the A1/A2 Working Group and published in a separate document.
- Table II.2, Dose and Dose Rate Coefficients of Radionuclides, of Appendix II; This portion of Appendix II should be removed as it is only relevant with regard to Appendix I.
- Appendix III, Example Calculations for Establishing Minimum Segregation Distance Requirements; Appendix III should be moved to the planned Safety Basis Document.

Certain paras in SSG-26 (Rev. 1) provide guidance on topics that are also addressed by entire safety guides, i.e.:

- paras 301.1 to 303.5 of SSG-26 (Rev. 1) and SSG-86, Radiation Protection Programmes for the Safe Transport of Radioactive Material, both address radiation protection and radiation protection programmes
- paras 304.1 to 305.3 of SSG-26 (Rev. 1) and SSG-65, Preparedness and Response for a Nuclear or Radiological Emergency Involving the Transport of Radioactive Material, both address emergency preparedness and response
- paras 306.1 to 306.5 of SSG-26 (Rev. 1) and TS-G-1.4, The Management System for the Safe Transport of Radioactive Material, both address the management system. As SSG-26 (Rev. 1), SSG-78, SSG-86 and TS-G-1.4 are all specific safety guides
- paras 307.1 to 307.9 of SSG-26 (Rev. 1) and SSG-78, Compliance Assurance for the Safe Transport of Radioactive Material, both address compliance assurance

SSG-26 (Rev. 1) and the other safety guides mentioned in the list above are all specific safety guides, i.e. they are all on the same level within the hierarchy of the IAEA Safety Standards Series and therefore, there is no reason for the same topic to be covered in detail in SSG-26 (Rev. 2) and in another specific

---

- Appendix V, Guidelines for Safe Design of Shipping Packages Against Brittle Fracture; Appendix V should be removed and included in another Agency publication, e.g. SSG-66, Format and Content of the Package Design Safety Report for the Transport of Radioactive Material or the planned Safety Basis Document.

safety guide. During the drafting of the revision of SSG-26 (Rev. 1), consideration will be given to deleting the text on the topics listed above and instead, simply referring to the other safety guides.

8. PRODUCTION SCHEDULE:

Provisional schedule for preparation of the publication, outlining realistic expected dates for each step:

STEP 1: Preparing a DPP	DONE
STEP 2: Internal review of the DPP (Approval by the Coordination Committee)	August 2023
STEP 3: Review of the DPP by the review Committee(s) (Approval by review Committee(s))	October to December 2023
STEP 4: Review of the DPP by the CSS (approval by CSS) or information of the CSS on the DPP	April 2024
STEP 5: Preparing the draft publication	November 2023 to July 2024
STEP 6: First internal review of the draft publication (Approval by the Coordination Committee)	August 2024
STEP 7: First review of the draft publication by the review Committee(s) (Approval for submission to Member States for comments)	November 2024
STEP 8: Soliciting comments by Member States	January 2025 to April 2025
STEP 9: Addressing comments by Member States	May 2025 to July 2025
STEP 10: Second internal review of the draft publication (Approval by the Coordination Committee)	August 2025
STEP 11: Second review of the draft publication by the review Committee(s) (Approval of the draft)	November 2025
STEP 12: (For Safety Standards) Editing of the draft publication in MTCD and endorsement of the draft publication by the CSS (For nuclear security guidance) DDG's decision on whether additional consultation is needed, establishment by the Publications Committee and editing	December 2025 to April 2026
STEP 13: Approval by the Board of Governors (for SF and SR only)	N/A
STEP 14: Target publication date	September 2026

9. RESOURCES

Estimated resources involved by the Secretariat (person-weeks) and the Member States (number and type of meetings)

- IAEA Staff: 52 staff weeks
- STEP 5: Preparing the draft publication
    - Consultancy Services Meetings: 3 (12 non-staff weeks)
    - Home Based Assignment Contract: 30 days (non-staff)
- STEP 9: Addressing comments by Member States
    - Consultancy Services Meetings: 1 (4 non-staff weeks)
    - Home Based Assignment Contract: 15 days (non-staff)

ANNEX of the DPP

Consultancy Meeting on the Technical Basis Document for the IAEA Transport Regulations

1. TITLE

Consultancy Meeting on the Technical Basis Document for the IAEA Transport Regulations

2. REFERENCE NUMBER

EVT2204977

3. VENUE

IAEA Headquarters – Vienna – Austria

4. DATE

17 to 21 October 2022

5. PARTICIPANTS

Akiko KONNAI – Chair of the meeting
Pierre MALESYS – Secretary of the meeting
Makoto HIROSE
Dennis MENNERDAHL
Nancy CAPADONA – IAEA – Scientific Secretary

6. BACKGROUND

A detailed technical review of historical documents supporting the development and maintenance of the IAEA Regulations for the Safe Transport of Radioactive Material (SSR-6) has been made available as a draft in electronic format in 2017 on TRANSSC Members Area (IAEA web site).

However, Member States have always requested that specific changes should be more directly addressed to reflect the explanation for the inclusion of such

requirements and their technical justification. Consequently, a working group on the technical basis document (WG TBD) was established in 2020 and has been working since that time. The following tasks have been achieved and were made available and presented during TRANSSC 44 meeting:

a. Assess the contents of the Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material, SSG-26 (Rev. 1), to identify paragraphs related to advice (how), explanation (why) and other information (e.g. historical and educational information). Keeping in mind the idea that an IAEA Safety Guide should contain only advisory material, the explanatory material and the other information would be appropriate to be transposed to informative publication(s).

b. Draft a publication containing the explanatory material (why the requirement was introduced/accepted based on needs and safety justifications) and all the other information that should not be retained in a simplified version of SSG-26.

c. Draft another publication reflecting the evolution of the Transport Regulations through years and editions.

7. TERMS OF REFERENCE

The terms of reference for the meeting were discussed and amended. The final version is available at the end of the report, in Annex I.

It was agreed that the work to be done was as follows:

a. To discuss/agree the titles of both documents.
b. To review/revise the current structure and content of the proposed text for “the second step of the Technical Basis Document” (TBD part II).
c. To add the technical basis of the changes in the 2018 Edition of SSR-6 to TBD part II.
d. To draft the Document Preparation Profile (DPP) for TBD part II.
e. To review/revise the current structure and content of the proposed text for the “Evolution Document”.
f. To draft the DPP for the “Evolution Document”.

Drafting the simplified “Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material” (SSG-26) was not within the scope of the Consultancy Meeting.

8. TITLES OF THE DOCUMENTS / TYPE OF PUBLICATIONS

8.1 Second step of the Technical Basis Document” (TBD part II)

As regards the main document “the second step of the Technical Basis Document” (TBD part II), the consultancy meeting took advantage of the advice from Katherine ASFAW, from the Safety Standards Section.

As presented during earlier meetings, the document could be published in the same series as the TranSAS missions' reports, "IAEA Safety Standards Applications - Provision for the Application of the IAEA Safety Standards". It was agreed that this would be a good solution as this would allow the document to be revised as frequently as needed.

Several proposals regarding the title of the document were discussed: Technical Basis Document, Explanatory Document, Historical Information, Supporting Document, Justification Document, etc. It was agreed that the wording "Technical Basis Document" should be excluded to avoid any confusion with the current Technical Basis Document made available as a draft in electronic format in 2017 on TRANSSC Members Area (IAEA web site).

Consultancy Meeting agreed that the most appropriate title, for the time being, would be "**Safety Basis for the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition)**", and the document is designated as such in the following (or as "Safety Basis Document" in a short form).

It was pointed out that the title of the document could be finalized or reconsidered later on during the drafting and publication process, with the DPP (Document Preparation Profile) being based on a provisional working title.

8.2 Evolution Document

The title that is proposed for this document is "**Evolution of the IAEA Regulations for the Safe Transport of Radioactive Material (from the origin until the 2018 Edition)**".

This document might not need to be formally published. Availability on the TRANSSC Members Area (IAEA web site) in electronic format could be enough.

Even if the "Evolution Document" is not formally published, a Document Preparation Profile might be useful in formally defining the process for developing the document.

9. STRUCTURE AND CONTENT FOR THE "SAFETY BASIS DOCUMENT"

9.1 Structure

The discussions during the meeting generated the following conclusions.

- The screening of SSG-26 has led to identify different types of information in SSG-26, e.g. advisory material, information about the history of the Regulations, identification of the needs for some requirements, safety basis for the Regulations, and also general information. Streamlining SSG-26 would lead to keep in SSG-26 only the advisory material. It was agreed during TRANSSC meetings that all the other information should be preserved, in one or more documents. For that purpose, and for the sake of simplification, the Consultancy Meeting agreed that **all** the other information (i.e. the

information that is not retained in SSG-26) should be included in a **single** document (either in the main part of the document, or in an appendix or annex), designated (provisionally) as the "Safety Basis Document", as long as another appropriate destination is not identified.

- As the user will consult the Safety Basis Document following a need for information for further understanding the Regulations, the "natural" entry in the document will be from a given paragraph in the Regulations. Consequently, the Safety Basis Document should be organized according to the structure of the Regulations, with the information related to a given para. NNN provided in paras NNN.xy in the Safety Basis Document, as in the current Advisory Material SSG-26. The thematic or topical approach that is used in the draft Technical Basis Document is appropriate for readers who are looking for more general and/or historical information. However, this approach is not considered as appropriate for the users of the future Safety Basis Document who are expected looking for information on a specific provision, and for supporting the future review and revision of the Regulations.

- The numbering of the paragraphs in the Safety Basis Document related to a given para. NNN in the Regulations should be sequential: NNN.1, NNN.2, …, NNN.xy, NNN.xy+1, NNN.xy+2, etc. This would apply even if the information comes from paragraphs in the current SSG-26 that are not sequential (i.e. the numbering of the paragraphs in SSG-26 might not be maintained when those paragraphs are moved to the Safety Basis Document).

- If needed, the paragraphs in the current SSG-26 should be reordered when moved to the Safety Basis Document, to present the information in a more logical order.

- The number NNN.nn should be preceded by a letter: G, H, T in accordance with the following codification:
    - G for general information,
    - H for historical information,
    - T for technical information.

  It is recognized that (i) all the information may not fit exactly with this classification, and the information will have to be classified to the most appropriate type, and (ii) this classification might be removed in the future if it is not valuable.

- Intermediate titles or sub-titles might be added to make the Safety Basis Document more user-friendly.

- For each paragraph from SSR-6, the following information should be included in the Safety Basis Document:
    - Sub-title / Topic (as necessary),
    - General purpose(s) of the provision,
    - Need / Benefit (as necessary),
    - Justification / Safety basis.

9.2 Content of the Safety Basis Document

- The Safety Basis Document will include the purpose, need/benefit and justification/safety basis for each provision. It is recognized that some paragraphs in SSR-6 might need more information in the Safety Basis Document than what is currently available in the Advisory Material SSG-26 or in the Draft Technical Basis Document. This additional information should be drafted in the course of the development of the Safety Basis Document, based for instance on the information provided for the publication of the first edition (e.g. “Notes on certain aspects of the Regulations”) and for each revision process (but that is not always easily available).

- As the Draft Technical Basis Document is not a formal publication, it is not possible to reference the Draft (as a whole or partly) in the Safety Basis Document. Consequently, information currently included in the Technical Basis Document and that would deserve to be included in the Safety Basis Document will have to be copied comprehensively.

- It is anticipated that most of the users will consult first the Regulations SSR-6, and – if they need further information on the “how” – they will go to the Advisory Material SSG-26 and then – if they need further information on the “why” – they will go to the Safety Basis Document. A text in the current edition in SSG-26 that includes both advisory and explanatory material should be included in both SSG-26 and the Safety Basis Document (only a very limited quantity of such cases is expected).

- During the meeting, the draft of the Safety Basis Document that was prepared during an earlier phase of the tasks of the working group on the technical basis document (WG TBD) (see above Section 6 – Background) was reviewed. All the modifications between the 2012 Edition and the 2018 Edition of the Regulations SSR-6 were considered in order to identify the need for further information to be provided in the Safety Basis Document. Whereas all the modifications were duly considered, special attention was given to the most significant evolution from the 2012 Edition to the 2018 Edition.

    - Seven radionuclides included in Table 2 of the Regulations – The general safety basis for the calculation of the basic radionuclides values that is currently available in SSG-26 remains valid for these seven radionuclides.
    - SCO-III – The information that is available in the draft Safety Basis Document is sufficient at this stage.
    - Ageing mechanisms – Information has been added to the draft Safety Basis Document.
    - Packages intended to be used for shipment after storage – Information has been added to the draft Safety Basis Document.
    - Protection of the plug on uranium hexafluoride (UF_6) cylinders – The information that is available in the draft Safety Basis Document is sufficient at this stage.
    - Deletion of the leaching test from the requirements for LSA-III material - Information has been added to the draft Safety Basis Document.

- A new paragraph H.402.1 has to be created based on the information in Appendix 3, Section A.3.1, of the Technical Basis Document. Many other paragraphs need further development, including paras 106, 110, 220A/233 and 304.

- For the sake of traceability, the origin of the information provided in the draft Safety Basis Document is mentioned in blue, after the text. In the final draft, this should be removed.

- Due to lack of time, the draft Safety Basis Document was not comprehensively reviewed. That means that it has to be completed, in order that each paragraph from the Regulations SSR-6 be provided with adequate safety basis information.

- The revised draft, as prepared during the meeting, is available as "SafetyBasis-21Oct2022.docx".

10. DOCUMENT PREPARATION PROFILE (DPP) FOR THE "SAFETY BASIS DOCUMENT"

- The DPP for the "Safety Basis for the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition)" has been developed. It is available at the end of the report, in Annex II.

- The DPP for the "Safety Basis Document" should move forward simultaneously with the DPP for the next revision of SSG-26.

11. STRUCTURE AND CONTENT FOR THE "EVOLUTION DOCUMENT"

The evolution document is structured as the current edition of SSR-6, paragraph by paragraph.

There may be multiple topics in an SSR-6 paragraph that justify separate tracing. The original text to cover a topic is included, followed by changes related to later editions of the Regulations. The proposal(s) leading to the revision of the Regulations is referenced by its code (country, sequential number and sometimes year; if not included in the original code, the year of the proposal is added).

12. DOCUMENT PREPARATION PROFILE (DPP) FOR THE "EVOLUTION DOCUMENT"

The document is not intended to be published, but to be available in an electronic format in TRANSSC Members Area (IAEA web site). Consequently, a DPP is not required. However, a DPP for the "Evolution of the IAEA Regulations for the Safe Transport of Radioactive Material (from the origin until the 2018 Edition)" has been prepared to describe the development process of the document, including TRANSSC approval. It is available at the end of the report, in Annex III.

13. CONCLUSIONS

The tasks assigned to the Consultancy Meeting, as described in the Terms of Reference (see Annex I), have been completed.

- Titles for both documents have been agreed
    - Safety Basis for the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition)
    - Evolution of the IAEA Regulations for the Safe Transport of Radioactive Material (from the origin until the 2018 Edition)

- The structure of the “Safety Basis for the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition)” has been established and is described in Section 9.1 of this report.

- The content of the “Safety Basis for the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition)” has ben discussed, as described in Section 9.2 of this report. A revised draft of the document is available in the file “SafetyBasis-21Oct2022.docx”, and include the safety basis of the changes in the 2018 Edition of SSR-6.

- A Document Preparation Profile (DPP) for the “Safety Basis for the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition)” has been developed and is available in Annex II of this report.

- The structure and content of the “Evolution of the IAEA Regulations for the Safe Transport of Radioactive Material (from the origin until the 2018 Edition)” have been established and is described in Section 11 of this report. A revised draft of the document is available in the file “Evolution-21Oct2022.docx”.

- A Document Preparation Profile (DPP) for the “Evolution of the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition)” has been developed and is available in Annex III of this report.

According to the discussions during TRANSSC 44 meeting (agenda item 3.2, action 4), the Consultancy Meeting recommends that a presentation be made during TRANSSC 45 meeting, to assist the decisions to be taken regarding the revision of SSG-26 (Rev. 1).

ANNEX I of the Report of the Consultancy Meeting on the Technical Basis Document for the IAEA Transport Regulations

Terms of Reference
Consultancy Meeting on the Technical Basis Document for the IAEA Transport Regulations

IAEA
International Atomic Energy Agency

Terms of Reference

Consultancy Meeting on the Technical Basis Document for the IAEA Transport Regulations

IAEA Headquarters
Vienna, Austria

17 to 21 October 2022

Ref. No.: EVT2204977

A.1. A. Background

The following paragraphs are excerpts of the terms of reference of the technical meeting that initiated the process of developing the Technical Basis for the IAEA Regulations for the Safe Transport of Radioactive Material (the Technical Basis Document - TBD), held in 2010:

> After 50 years, over 10 revisions of the Regulations have been published. These revisions have been considering the experiences, new issues, new technologies and demand for safer transport of radioactive material and harmonization. Problems, challenges, and demand for improvements drive the transport community continuously to periodically review, and, if justified, revise the Regulations.
>
> The scientific and technical heritage of several decades of development in transport safety needs to be collated, assessed, and this valuable knowledge needs to be preserved for future use.
>
> In general, each requirement was developed based on the technical basis. It exists in a decentralized form in many Member States with mature nuclear programmes. Access to the existing technical base could lead to a better understanding of the Regulations and sharing and pooling this knowledge can contribute to better development and innovation in the future review and revision of transport safety regulations.

A detailed technical review of historical documents supporting the development and maintenance of the international transport safety regulations has been published in electronic format in 2017. However, Member States have always requested that specific changes should be more directly addressed to reflect the explanation for the inclusion of such requirements and their technical justification.

A working group on the technical basis document (WG TBD) was established and has been working for several years performing:

a. An assessment of the contents of the Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material, SSG-26 – Rev.1, to identify paragraphs related to advice (how), explanation (why) and other information (e.g. historical and educational information). Keeping in mind the idea that an IAEA Safety Guide should contain only advisory material, the

explanatory material and the other information would be appropriate to be transposed to informative publications.

b. A draft of a publication containing the explanatory material(why the requirement was introduced/accepted based on needs and safety justifications) .
c. A draft of another publication reflecting the evolution of the Transport Regulations through years and editions.

A.2. B. Objective

The purpose of this meeting is to progress on the discussion and drafting of relevant documents that will enhance the publication of the informative material described in item A above.

A.3. C. Scope

Technical Basis Document part II and Evolution Document.

A.4. D. Work to be done

a. To discuss/agree the titles of both documents.
b. To review/revise the current structure and content of the proposed text for “the second step of the Technical Basis Document” (TBD part II).
c. To add the technical basis of the changes in the 2018 Edition of SSR-6 to TBD part II.
d. To draft the Document Preparation Profile (DPP) for TBD part II.
e. To review/revise the current structure and content of the proposed text for the “Evolution Document”.
f. To draft the DPP for “Evolution Document”.

Authorities of the meeting:
Chair - Ms Akiko Konnai
Secretary – Mr Pierre Malesys

A.5. E. Outputs

The outputs of the meeting will be:

a. Revised draft of the TBD part II.
b. Revised draft of the “Evolution Document”
c. Agreed title of both publications.

Draft DPP for both publications.

ANNEX II of the Report of the Consultancy Meeting on the Technical Basis Document for the IAEA Transport Regulations

Document Preparation Profile (DPP)
Safety Basis for the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition)

Document Preparation Profile (DPP)
Version 0 dated 19 October 2022

1. IDENTIFICATION

Document Category: **TRANSAS Series**

Working ID:

Proposed Title: **Safety Basis for the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition)**

Proposed Action: **New document**

Review Committee(s) or Group: **TRANSSC – WG TBD**

Technical Officer(s):

2. BACKGROUND

The following paragraphs are excerpts of the terms of reference of the technical meeting that initiated the process of developing the Technical Basis for the IAEA Regulations for the Safe Transport of Radioactive Material (the Technical Basis Document - TBD), held in 2010:

> After 50 years, over 10 revisions of the Regulations have been published. These revisions have been considering the experiences, new issues, new technologies and demand for safer transport of radioactive material and harmonization. Problems, challenges, and demand for improvements drive the transport community continuously to periodically review, and, if justified, revise the Regulations.
>
> The scientific and technical heritage of several decades of development in transport safety needs to be collated, assessed, and this valuable knowledge needs to be preserved for future use.
>
> In general, each requirement was developed based on the technical basis. It exists in a decentralized form in many Member States with mature nuclear programmes. Access to the existing technical base could lead to a better understanding of the Regulations and sharing and pooling this knowledge can contribute to better development and innovation in the future review and revision of transport safety regulations.

A detailed technical review of historical documents supporting the development and maintenance of the international transport safety regulations has been made available as a draft in electronic format in 2017 on TRANSSC Members Area (IAEA web site).

However, Member States have always requested that specific changes should be more directly addressed to reflect the explanation for the inclusion of such requirements and their technical/safety justification.

In addition, during the development of the revision of the Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (SSG-26), the technical editorial review pointed out that the publication included more than advisory material and that part of the valuable information in SSG-26 was not relevant for an IAEA Safety Standard: historical information, educational information, explanatory information about the safety basis (needs and justifications) of the provisions.

Following discussions during TRANSSC meetings, a working group was established in 2020 and has been working since that time performing:

a. An assessment of the contents of the Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material, SSG-26 – Rev.1, to identify paragraphs related to advice (how), explanation (why) and other information (e.g. historical and educational information). Keeping in mind the idea that an IAEA Safety Guide should contain only advisory material, the explanatory material and the other information would be appropriate to be transposed to informative publication(s).

b. A draft of a publication containing the explanatory material (why the provision was introduced/accepted based on needs and safety justifications).

c. A draft of another document reflecting the evolution of the Transport Regulations through years and editions.

The intent of the "Safety Basis for the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition)" is to collect the information that supports the understanding of the provisions in the IAEA Regulations for the Safe Transport of Radioactive Material, and will facilitate the maintenance and development of future editions of the Regulations.

3. JUSTIFICATION FOR THE PRODUCTION OF THE DOCUMENT

- The safety basis should be available in a form that makes it easily and reliably accessible. In most instances, the safety basis already exists but in a scattered form (e.g. SSG-26, Technical Basis Document available on the TRANSSC Members Area, proposals for changes from Member States and International Organizations, meetings reports).

- The availability of the safety basis in a form easily and reliably accessible, and that can also be updated as needed, will facilitate the maintenance and development of future editions of the Regulations.

- Availability of the safety basis is important for proper understanding of the Regulations and its intents: it would provide material that supports communication with the public, and consequently contribute to reduce denial and delay of shipment, it would support emergency preparedness and response, and it would also facilitate preparation of application of special arrangement and assessment of such an application.

- After SSG-26 being streamlined, only the advisory information will remain in SSG-26. TRANSSC asked for the information that will be removed from the current edition of SSG-26 to be retained in the form of a publication.

4. OBJECTIVE AND SCOPE

The objective of the proposed publication is to make available the safety basis for the provisions of the Regulations for Safe Transport of Radioactive Material (SSR-6), in a form easily and reliably accessible, and that can also be updated as needed. For that purpose, the safety basis will be linked to the current Regulations on a paragraph by paragraph basis.

The publication will cover all the provisions in the Regulations.

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

This document will interface with the following IAEA publications (the list is not intended to be final or exhaustive):

- SSR-6 (Rev. 1), Regulations for the Safe Transport of Radioactive Material – 2018 Edition
- SSG-26 (Rev. 1), Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (2018 Edition)
- SF-1, Fundamental Safety Principles
- GSR Part 1 (Rev. 1), Governmental, Legal and Regulatory Framework for Safety
- GSR Part 2, Leadership and Management for Safety
- GSR Part 3, Radiation Protection and Safety of Radiation Sources: International Basic Safety

This publication does not replace the regulations or limit their application. If there are any discrepancies between this publication and the regulations, the requirements in the regulations apply.

6. OVERVIEW

CONTENTS

Appendices

7. PRODUCTION SCHEDULE

Provisional schedule for preparation of the document, outlining realistic expected dates for:

	C*
STEP 1: Preparing a DPP	DONE
STEP 2: Approval of DPP by the Coordination Committee	NOVEMBER 2022
STEP 3: Approval of DPP by the relevant review Committees (TRANSSC)	JUNE 2023
STEP 4: Approval of DPP by the CSS	
STEP 5: Preparing the draft (including soliciting and collecting material from TRANSSC members)	JULY TO DEC. 2023
STEP 6: Approval of draft by the Coordination Committee	
STEP 7: Approval by the relevant review Committees for submission to Member States for comments	
STEP 8: Soliciting comments by ~~Member States~~ TRANSSC	JAN. TO APRIL 2024
STEP 9: Addressing comments by ~~Member States~~ TRANSSC (Resolution table and final draft)	MAY 2024
STEP 10: Approval of the revised draft by the Coordination Committee Review in NS-SSCS	
STEP 11: Approval by the relevant review Committees (TRANSSC)	JUNE 2024
STEP 12: Endorsement by the CSS	
STEP 13: Establishment by the Publications Committee and/or Board of Governors (for SF and SR only)	N/A
STEP 14: Target publication date	NOVEMBER 2024

*

- *Column C for TECDOCs, safety reports and other publications*

8. RESOURCES

Estimated resources involved by the Secretariat (person-weeks) and the Member States (number and type of meetings)

Secretariat: ?
CSM: 1 CSM (5 days – 4 consultants) for Step 5
1 CSM (5 days – 4 consultants) for Step 9

ANNEX III of the Report of the Consultancy Meeting on the Technical Basis Document for the IAEA Transport Regulations

Document Preparation Profile (DPP)
Evolution of the IAEA Regulations
for the Safe Transport of Radioactive Material
(from the origin until the 2018 Edition)

Document Preparation Profile (DPP)
Version 0 dated 20 October 2022

1. IDENTIFICATION

Document Category: ***Non-published document***

Working ID:

Proposed Title: **Evolution of the IAEA Regulations for the Safe Transport of Radioactive Material (from the origin until the 2018 Edition)**

Proposed Action: **New document**

Review Committee(s) or Group: **TRANSSC – WG TBD**

Technical Officer(s):

2. BACKGROUND

After 60 years, over 10 revisions of the Regulations have been published. These revisions have been considering the experiences, new issues, new technologies and demand for safer transport of radioactive material and harmonization. Problems, challenges, and demand for improvements drive the transport community continuously to periodically review, and, if justified, revise the Regulations.
Following discussions during TRANSSC meetings, a working group was established in 2020 and has been working since that time performing:

a. An assessment of the contents of the Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material, SSG-26 – Rev.1, to identify paragraphs related to advice (how), explanation (why) and other information (e.g. historical and educational information). Keeping in mind the idea that an IAEA Safety Guide should contain only advisory material, the explanatory material and the other information would be appropriate to be transposed to informative publication(s).
b. A draft of a publication containing the explanatory material (why the provision was introduced/accepted based on needs and safety justifications).
c. A draft of another document reflecting the evolution of the Transport Regulations through years and editions.

The intent of the "Evolution of the IAEA Regulations for the Safe Transport of Radioactive Material (from the origin until the 2018 Edition)" is to collect information to be able to track the evolution of the Regulations in a form easily accessible in order to contribute to better understanding of the Regulations and its background:

- Past editions of the Regulations are important during discussions of interpretation of the current edition and to support development of the current edition.
- Past editions may be of direct importance for the interpretation of evaluations of older designs and demonstration tests.

- The current edition of SSR-6 contains transitional arrangements for material and package designs that were prepared for and often approved by reference to a specified past edition of the Regulations.

3. JUSTIFICATION FOR THE PRODUCTION OF THE DOCUMENT

The document “Evolution of the IAEA Regulations for the Safe Transport of Radioactive Material (from the origin until the 2018 Edition)” is important to track the evolution of the Regulations in a form easily accessible in order to contribute to better understanding of the Regulations and its background:

- Past editions of the Regulations are important during discussions of interpretation of the current edition and to support development of the current edition.
- Past editions may be of direct importance for the interpretation of evaluations of older designs and demonstration tests.
- The current edition of SSR-6 contains transitional arrangements for material and package designs that were prepared for and often approved by reference to a specified past edition of the Regulations.

It is also important to track the original proposal of each modification to be able to easily access the related document and discussions and to retrieve more detailed information if needed.

4. OBJECTIVE AND SCOPE

The objective of the proposed document is to provide a comprehensive overview of the evolution of the IAEA Transport Regulations, from the origin until now.

The publication will cover all the provisions in the current Regulations.

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

This document will interface with the following IAEA publications (the list is not intended to be final or exhaustive):

- SSR-6 (Rev. 1), Regulations for the Safe Transport of Radioactive Material – 2018 Edition, and the previous editions

This document does not replace the regulations or limit their application. If there are any discrepancies between this document and the regulations, the requirements in the regulations apply.

6. OVERVIEW

CONTENTS

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

	C*
STEP 1: Preparing a DPP	DONE
STEP 2: Approval of DPP by the Coordination Committee	NOVEMBER 2022
STEP 3: Approval of DPP by the relevant review Committees (TRANSSC)	JUNE 2023
STEP 4: Approval of DPP by the CSS	
STEP 5: Preparing the draft	JULY 2023 TO MARCH 2024
STEP 6: Approval of draft by the Coordination Committee	
STEP 7: Approval by the relevant review Committees for submission to Member States for comments	
STEP 8: Soliciting comments by Member States	
STEP 9: Addressing comments by Member States	
STEP 10: Approval of the revised draft by the Coordination Committee Review in NS-SSCS	
STEP 11: Approval by the relevant review Committees (TRANSSC)	JUNE 2024
STEP 12: Endorsement by the CSS	
STEP 13: Establishment by the Publications Committee and/or Board of Governors (for SF and SR only)	N/A
STEP 14: Target ~~publication~~ date for availability on the TRANSSC Members Area (IAEA web site)	JULY 2024

*

- *Column C for TECDOCs, safety reports and other publications*

8. RESOURCES

Estimated resources involved by the Secretariat: (person-weeks) and the Member States (number and type of meetings)

Secretariat: ?

HBA: Step 5 – Preparing the draft (3 experts / 5 days per expert)

CSM: Step 5 – Finalizing the draft – 1 CSM (4 consultants / 5 days)