

**SPESS F**  
**Document Preparation Profile (DPP)**  
**Version 1.8 dated 2 November 2016**

**1. IDENTIFICATION**

**Document Category**    **Specific Safety Guide**

**Working ID:**            **DS469**

**Proposed Title:**        **Preparedness and Response for an Emergency during the Transport of Radioactive Material**

**Proposed Action:**      **Revision of a Publication**

**Safety Guide TS-G-1.2, Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material, 2002**

**Review Committee(s) or Group:** **EPRSC, TRANSSC, RASSC, NSGC**

**Technical Officer(s):** **Breitinger, Mark, Bajwa, Chris**

**2. BACKGROUND**

Radioactive material is routinely and regularly transported around the world, in all regions, using multiple modes of transport, totalling approximately twenty million shipments per year. To protect people, property and the environment, national and international transport regulations have been developed that apply to all modes of transport, including air, maritime, road, rail, and inland waterways. Stringent measures are required in these regulations to ensure adequate safety, containment, shielding and the prevention of criticality in the event of a transport accident. Despite the extensive application of safety controls, emergencies have occurred during the transport of radioactive material. Emergencies during transport are included in Emergency Preparedness Category IV, the baseline level of preparedness applicable to all Member States.

The response to an emergency during the transport of radioactive material involves unique hazards, considerations and response actions. The only existing safety standard that provides guidance for such emergencies is Safety Guide TS-G-1.2, Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material, 2002.

**3. JUSTIFICATION FOR THE PRODUCTION OF THE DOCUMENT**

TS-G-1.2 has been in use by Member States for 14 years and is due for revision based on experience in applying it. TS-G-1.2 is not consistent with the latest safety standards for emergency preparedness and response, including General Safety Requirements (GSR) No. GSR Part 7, Preparedness and Response for a Nuclear or Radiological Emergency, published in 2015, and thus does not provide guidance on all the required functions and infrastructure for emergency preparedness and response. Since the publication of TS-G-1.2 in 2002, there have been many publications in the Nuclear Security Series, requiring analysis and updating to ensure consistency. The initial DPP for revision of TS-G-1.2 was approved in 2012, but action was postponed. This DPP is a revision of the initial DPP, reflecting the need for a comprehensive revision in light of the updated GSR Part 7.

The IAEA has been requested to develop and publish revised guidance on emergencies during transport, including by GC(58) Res. 10, paragraph 72, which “Requests the Secretariat... to emphasize the specific challenges and requirements for efficient international cooperation in response to nuclear and radiological incidents and emergencies relating to the transport of radioactive material” and “requests the Secretariat to

continue its efforts to develop... guidance for States on how to respond to a maritime emergency involving radioactive material.”

The Commission on Safety Standards (CSS) Report of the Fifth Term 2012-2015 included a recommendation for “consolidating safety standards and security recommendations for transportation of radiation sources and nuclear materials consistent with U.N. standards.”

#### **4. OBJECTIVE**

The objective is to provide guidance and recommendations on the implementation of the requirements established primarily in GSR Part 7 and Specific Safety Requirements (SSR) No. SSR 6, Regulations for the Safe Transport of Radioactive Material, 2012 Edition, in order to prepare for and respond to emergencies during the transport of radioactive material.

The target audience is emergency planners and response organizations in the Member States, including regulatory bodies, national competent authorities, civil defence/civil protection/emergency management agencies, emergency responders, consignors, carriers, consignees, and others who are responsible for developing and implementing emergency preparedness and response arrangements.

#### **5. SCOPE**

The scope of the publication will cover preparedness and response for a nuclear or radiological emergency during transport. The Safety Guide will provide guidance from the forwarding of the package to delivery at the consignee (including storage in transit). The publication will address the interfaces with nuclear security in emergency preparedness and response. The publication will exclude events without any safety significance (e.g. a disabled conveyance in a stable condition, such as a broken down motor vehicle or a vehicle involved in a minor traffic accident), while acknowledging that such events could trigger follow-on actions. The publication will also exclude movement of radioactive material within the site boundaries of authorized facilities.

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

The publication will be an updated Safety Guide consistent with the requirements established in GSR Part 7 and SSR 6. The publication will interface with the Safety Standards Series, the Nuclear Security Series, and relevant international conventions, including:

- Arrangements for Preparedness for a Nuclear or Radiological Emergency, Safety Standards Series No. GS-G-2.1
- Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency, Safety Standards Series No. GSG-2
- Draft Safety Guide DS474 Arrangements for the Termination of a Nuclear or Radiological Emergency
- Draft Safety Guide DS475 Arrangements for Public Communications in Preparedness and Response for a Nuclear or Radiological Emergency
- Nuclear Security Series Implementing Guide No. 9, Security in the Transport of Radioactive Material
- Nuclear Security Series Implementing Guide No. 26-G, Security of Nuclear Material in Transport
- Nuclear Security Series Recommendations No. 14, Nuclear Security Recommendations on Radioactive Material and Associated Facilities
- Convention on Early Notification of a Nuclear Accident and Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency

The publication will be developed in collaboration with international organizations in the framework of the Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE) to ensure consistent guidance from all relevant international organizations. IACRNE members, including the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO), as well as the United Nations Economic Commission for Europe (UNECE), will be invited to co-sponsor the document.

## **7. OVERVIEW**

The publication will include guidance for both preparedness and response to a nuclear or radiological emergency during transport. It will address all five modes of transport as described in SSR-6. The structure will build upon that of TS-G-1.2, reflecting the requirements for emergency preparedness and response established in GSR Part 7.

The publication is expected to cover the following contents:

1. INTRODUCTION
  - 1.1. Background
  - 1.2. Objective
  - 1.3. Scope
  - 1.4. Structure
2. FRAMEWORK FOR PREPAREDNESS AND RESPONSE TO AN EMERGENCY DURING THE TRANSPORT OF RADIOACTIVE MATERIAL
  - 2.1. Modes of Transport
    - 2.1.1 Road Transport
    - 2.1.2 Rail Transport
    - 2.1.3 Air Transport
    - 2.1.4 Maritime Transport
    - 2.1.5 Inland Waterway Transport
  - 2.2. International Framework for Emergency Preparedness and Response during the Transport of Radioactive Material
3. INTERFACES BETWEEN SAFETY AND SECURITY
  - 3.1. Safety Considerations for an Emergency during Transport
  - 3.2. Security Considerations for an Emergency during Transport
4. GENERAL ELEMENTS FOR EMERGENCY PREPAREDNESS AND RESPONSE DURING TRANSPORT
  - 4.1. Emergency Management System
  - 4.2. Roles and Responsibilities in Emergency Preparedness and Response
  - 4.3. Responsibilities of International Organizations in Emergency Preparedness and Response
  - 4.4. Hazard Assessment

- 4.5. Protection Strategy for a Nuclear or Radiological Emergency
- 5.0. GENERAL ELEMENTS FOR EMERGENCY PREPAREDNESS AND RESPONSE DURING TRANSPORT
- 5.1. Managing Operations in an Emergency Response
- 5.2. Identifying and Notifying a Nuclear or Radiological Emergency and Activating an Emergency Response
- 5.3. Taking Mitigatory Actions
- 5.4. Taking Urgent Protective Actions and Other Response Actions
- 5.5. Providing Instructions, Warnings and Relevant Information to the Public for Emergency Preparedness and Response
- 5.6. Protecting Emergency Workers and Helpers in an Emergency
- 5.7. Managing the Medical Response in a Nuclear or Radiological Emergency
- 5.8. Communicating with the Public throughout a Nuclear or Radiological Emergency
- 5.9. Taking Early Protective Actions and Other Response Actions
- 5.10. Managing Radioactive Waste in a Nuclear or Radiological Emergency
- 5.11. Mitigating Non-Radiological Consequences of a Nuclear or Radiological Emergency and of an Emergency Response
- 5.12. Requesting, Providing and Receiving International Assistance for Emergency Preparedness and Response
- 5.13. Terminating a Nuclear or Radiological Emergency
- 5.14. Analysing the Nuclear or Radiological Emergency and the Emergency Response
- 6. INFRASTRUCTURAL ELEMENTS FOR EMERGENCY PREPAREDNESS AND RESPONSE DURING TRANSPORT
- 6.1. Authorities for Emergency Preparedness and Response
- 6.2. Organization and Staffing for Emergency Preparedness and Response
- 6.3. Coordination of Emergency Preparedness and Response
- 6.4. Plans and Procedures for Emergency Response
- 6.5. Logistical Support and Facilities for Emergency Response
- 6.6. Training, Drills and Exercises for Emergency Preparedness and Response
- 6.7. Quality Management Programme for Emergency Preparedness and Response

REFERENCES

APPENDICES

ANNEXES

CONTRIBUTORS TO DRAFTING AND REVIEW

**8. PRODUCTION SCHEDULE:** Provisional schedule for preparation of the document, outlining realistic expected dates for each step (*fill the column corresponding to your proposed document and delete the other columns*):

	A*
STEP 1: Preparing a DPP	DONE
STEP 2: Approval of DPP by the Coordination Committee	1Q 2016
STEP 3: Approval of DPP by the relevant review Committees	2Q 2016 (June)
STEP 4: Approval of DPP by the CSS	4Q 2016 (Nov)
STEP 5: Preparing the draft Indicate as to whether a TM is expected to be organized for the preparation of the draft	2016-2017. TM Expected 2Q 2017
STEP 6: Approval of draft by the Coordination Committee	1Q 2018
STEP 7: Approval by the relevant review Committees for submission to Member States for comments	2Q 2018
STEP 8: Soliciting comments by Member States	3Q 2018
STEP 9: Addressing comments by Member States	4Q 2018
STEP 10: Approval of the revised draft by the Coordination Committee Review in NS-OSSC	1Q 2019
STEP 11: Approval by the relevant review Committees	2Q 2019
STEP 12: Endorsement by the CSS	3Q 2019
STEP 13: Establishment by the Board of Governors (for SF and SR only) and/or Publications Committee	4Q 2019
STEP 14: Target publication date	2020

## 9. RESOURCES

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

- Secretariat: 80 person-weeks (NS-IEC & NSRW primarily, NSNS and other Divisions/Offices for review & comment)
- For each participating Member State:
  - One 5-day Technical Meetings for wide audience,
  - Four 3-5 day consultancy meetings for drafting and updating (smaller group).