



Office for
Nuclear Regulation

International Update

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- What ONR Transport are involved in:
 - IAEA (and other regs)
 - EACA
 - ISO
 - Patram
- IAEA
 - Process
 - Current state of play
- Horizon scanning
- ONR website

- **IAEA (and other regs)**

- IAEA review/revision process 2015+ cycle – actively involved 2/3 staff at each TRANSSC
- RID/ADR – consulted by DfT who represent the UK at ECE-TRANS-WP15 (RID/ADR/AND)
 - French proposal to mark all orange plates with the UN number when only one DG is transported – UK possibly opposing?

- **EACA** (European Association of Competent Authorities)

- Objectives:
 - Develop networking between Competent Authorities for transport safety
 - Share knowledge and relevant good practices and, potentially, resources
 - Identify need and participate in joint working groups with defined outputs
 - Develop common understanding and promote more effective interaction between competent authorities at a working level.

- Meets 1/y + margins of TRANSSC
- Topics for May meeting:
 - Technical Guide - Compliance Inspection Programmes
 - Status of Implementation of the Council Directive 2013/59/Euratom
 - Status and further development of the PDSR-Guide
 - Transport Networks – Europe, Mediterranean and beyond – Update
 - Lighting Europe – Application for higher limit values for the transport of lamps
 - IAEA TRANSSC Meeting No 32 Agenda Items
 - ADR Update on paragraph (6.4.22.8 in the 2015 version
 - **Any burning issues?**
 - Approval by country of origin of design...

Proposed at EACA...

Any package design that requires unilateral approval originating in a country Contracting Party to ADR shall be approved by the competent authority of this country; if the country where the package has been designed is not a Contracting Party to ADR, carriage is possible on condition that:

- (a) A certificate has been supplied by this country, proving that the package design satisfies the technical requirements of ADR, and that this certificate is countersigned by the competent authority of the first intended country Contracting Party to ADR reached by the first consignment of that package design approval;
- (b) If no certificate and no existing package design approval by a country Contracting Party to ADR has been supplied, the package design is approved by the competent authority of the first intended country Contracting Party to ADR reached by the first consignment of that package design approval.

Agreed Text?

Proposal

Amend RID/ADR/ADN as follows: (The base text shown below is from ADR 2015, 6.4.22.8, with underlined text in bold italics for additions. This amendment should be replicated in paragraph 6.4.22.8 of RID.

6.4.22.8 Any package design that requires unilateral approval originating in a country Contracting Party to ADR shall be approved by the competent authority of this country; if the country where the package has been designed is not a Contracting Party to ADR, carriage is possible on condition that:

- (a) A certificate has been supplied by this country, proving that the package design satisfies the technical requirements of ADR, and that this certificate is ~~countersigned-validated~~ by a competent authority of an ~~intended~~-ADR Contracting Party ~~approval~~;
- (b) If no certificate and no existing package design approval by a country Contracting Party to ADR has been supplied, the package design is approved by the competent authority an ADR ~~intended~~-Contracting Party ~~approval~~.

1.2.1 Definition of « Unilateral approval »

Replace « ...by the competent authority of the first Contracting Party to ADR reached by the consignment (6.4.22.8) »

Par « ... by the competent authority of a Contracting Party to ADR (6.4.22.8) »

– ISO

- ISO_TC85_SC5 WG4 – 29 to 31 March 2016, Paris. Mr Sen to attend.
 - ISO 7195 Packagings for the transport of uranium hexafluoride (UF₆)
 - ISO 12807 Leakage testing on packages
 - ISO 10276 Trunnions for packages used to transport radioactive material

– PATRAM

- Plan to send 2/3 Inspectors who might deliver 6 papers:
 - ...

- 1. Effective regulation in the Nuclear Fuel Cycle Community (this is relative to compliance Inspections by Competent Authorities)
- 2. Meeting the needs of Industry: Effective Resourcing and Training of Transport Specialists in the Regulator (ONR) (direct entry, growing our own talent and Technical Support Contracts).
- 3. The Regulator's (ONR) Expectations of credible emergency response arrangements
- 4. The Regulator's (ONR) Compliance Assurance of a Special arrangement
- 5. The Regulator's (ONR) view on UO₂ powder agglomeration plus the Impact of Low Temperatures on Criticality Safety
- 6. The Regulator's (ONR) view of SSR-6 regulatory changes to shielding assessment e.g. U232 in UF₆

IAEA Review/Revision Process

- 2 year cycle + 18 months to publish?
- 120 day review periods
 - UK stakeholder meeting 29th April 2015 .
 - Changes sent to IAEA by 10th May 2015.
 - T30 (15-19 June 2015) – considered proposals.
 - T31 (Nov 2015) – decided whether sufficient for revision.
 - TCM (8 to 12 Feb 2016) to draft regs
 - T32/T33 June/Nov 2016 to finalise/agree
 - publish in 2018.
 - 2017 Start of next cycle...

IAEA R/R: Description of Main Changes to SSR-6 as at February 2016

- TRANSSC 31 (November 2015) made the decision that there were enough changes to warrant a new edition of the Regulations in (probably) 2018.
- The changes presented here have been agreed by Member States (MS), however there will be two further TRANSSC meetings either side of a 120 day consultation with all MS before the text is finalised, *i.e.* there is time to comment on changes where there is a genuine issue. Any further changes may or may not be agreed by TRANSSC.

- The changes in full can be found on the IAEA website in the [TRANSSC members area](#), which is open to the public.
- Changes to SSG-26, the associated guidance to the IAEA Transport Regulations is also undergoing changes, which will support the changes to SSR-6 and provide further clarification. The development of SSG-26 text is less mature than that for SSR-6. Details of the changes can also be found in the TRANSSC members area of the IAEA website.

Changes to SSR-6: SCO-III

- Introduction of new package type: SCO-III

This provision will allow large objects to be transported that cannot easily be packaged without dismantling them. [413, 520, 522, 825, 827] (CDN/2015/03)

- to assist in decommissioning and reduce the number of special arrangements required.
- not intended for highly activated objects *e.g.* reactor vessels
- SCO-III packages will require multilateral approval.

Changes to SSR-6: SCO-III *cont.*

- Limits for fixed and non-fixed contamination, or demonstration of activity intake is below $10^{-6}A_2$ (corresponding to mSv inhalation dose).
- Justification required to use SCO-III as only viable option existing packaging, feasibility to segment, safety and security
- More details than normally required for a package in the transport plan to identify transport operational responsibilities and demonstrate dose control.

Changes to SSR-6: Shipment After Storage

- New provisions that will allow packages that are stored prior to shipment to be ‘transport ready’ at any time *e.g.* for unplanned movements. [503e] (J/2015/02). For these packages:
 - Components and contents must be maintained and inspected during storage to demonstrate compliance with relevant provisions of the Transport Regulations.

Changes to SSR-6: Shipment After Storage *cont.*

- The design of packages intended for shipment after storage must take into account ageing mechanisms.
- a gap analysis programme must be carried out for each package that considers any future changes to regulations, changes in technical knowledge and changes to the state of the package design during the storage period.

Changes to SSR-6: leaching test for LSA-III

- The leach test will be no longer required for for LSA-III.
- TRANSSC agreed that the leach test provided no additional demonstration of safety, i.e. no demonstration of risk from an inhalation hazard. The other requirements were considered to be adequate to ensure safety. The German CA carried out some tests to demonstrate releases from aggregate material under various accident conditions to demonstrate this. [409c, 701a] (D/2015/03).

Changes to SSR-6: determination of TI

- The carrier will no longer be able to determine the TI for an overpack, freight container or conveyance by measurement, and they must use the summation of TI. (USA/2015/15).
- The consignor can continue to use a measurement to determine the TI.

Changes to SSR-6: dose equivalent rate

- *Dose level* will be referred to as *dose equivalent rate* and a definition added [233] (*CDN/2015/20*).

Changes to SSR-6: removing or covering unrelated markings

- New provision requiring: *Any marking on the package that does not relate to the shipment shall be removed or covered* [536bis] (relating to proposals B/2015/01, USA/2015/07 and D/2015/07)
- similar to requirement for labels [538]

Changes to SSR-6:

- Introduction of a lower threshold of 10 $\mu\text{Sv/h}$, below which the allowable increase to external surface dose rate of packages, tanks, freight containers or IBCs under NCT could be up to 2 $\mu\text{Sv/h}$. [various paras. within 624 to 648].

Changes to SSR-6: transitional arrangements to -73 and -85 Regulations

- Arrangements for -73 packages and Special Form Radioactive Material to be removed from the Regulations. [820, 823]
- Arrangements for -85 packages and -85 special form are unchanged, although for -85 packages, it will be necessary to state which areas do not comply with the current regulations in the certificate.[828]

Changes to SSR-6: transitional arrangements (-96 Regulations)

- Arrangements for -96 non-CA approved and CA approved packages will be similar to those for -85 packages. [819, 820]
- non-CA packages certified to -96 Regulations:
 - may continue in transport if prepared for transport before 31 December 2025.
 - May not be manufactured or modified after 31 December 2025.
 - Must be compliant with current regulations wrt (i) management system, (ii) activity limits and classification in Section IV, and (iii) requirements and controls for transport in Section V.

Changes to SSR-6: transitional arrangements (-96 regs *cont.*)

- For packages certified to -96 requiring CA approval:
 - Will be subject to multilateral approval after 31 December 2025
 - Must be compliant with current regulations wrt
 - (i) management system,
 - (ii) activity limits and classification in Section IV, and
 - (iii) requirements and controls for transport in Section V.
 - May continue in transport provided they are prepared before 31 December 2025

Changes to SSR-6: transitional arrangements (-18 Regulations)

- New package designs that are certified under the 2018 regulations will not? require -18 to be marked on the package or certificate [838(o)bis].

UK Proposals...

- UK/01 para [410] – UK industry request for a new type of LSA material – need to develop reg text and submit in the next cycle.
- UK/02 para [676] – reduction of pessimisms when doing criticality analysis – wording for the advisory material to be agreed going forward.
- UK03 para [639] – no consensus on temperature range necessary for Routine and Normal conditions of transport – continue as an identified problem.
- UK04 para [238] – the proposed change to a positive emphasis was rejected as most countries were content with the current wording.
- UK05 para [583] – more responsibility to be placed on the consignee to be able to adequately receive – rejected as many countries relied on postal services, which could not be controlled.

Horizon Scanning

- What new regs do we need to start thinking about now to enable industry in the future?
 - SCO III helps but what else is needed for decommissioning?
 - DPC/Ageing helps but what else for GDF?
 - Complex waste streams/poor records?
 - How to permission the transport of SMRs?
 - Need closer liaison between TRANSSC/WASSC/etc
- Special Arrangements and CDG Reg 12 Authorisations should be a last resort...

Websites

TRANSSC:

<http://www-ns.iaea.org/committees/transsc/>

EACA:

<http://euraca.eu/>

ONR Transport:

<http://www.onr.org.uk/transport/guidance.htm>