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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

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Item 7 of the provisional agenda

Cooperation with the International Atomic Energy Agency

Updates to the IAEA transport regulations

Transmitted by the International Atomic Energy Agency (IAEA)

Comments on TS-R-1 20xx Edition, DRAFT 1.1 for MS/IO 120 DAY Comments and recommendations from CS-143, TRANSSC 21,TSU, CS-29 and CS-05

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
IND/120D/01.	104 / last line	requiring administrative controls, including, where appropriate, <i>approval</i> by <i>competent authorities</i> .	Approval is used in the defined sense. It has to be italicized.	TSU: Editorial CS-143:Rejected: the rule which applied is to consider that the defined terms are “multilateral approval” and “unilateral approval”, not “approval”.
D/120D/04	105	“management systems” should be italicized	editorial	CS-143: accepted
IND/120D/02.	107 (c) bis	Transport of a person for medical treatment, where the person has been subject to accidental <u>or unauthorized</u> intake of or contamination from <i>radioactive material</i> .	For example, a deliberate intake may occur with the intention to hurt the subject or to hurt oneself.	CS -143: Accepted as modified: <u>“deliberate”</u> instead of unauthorized TSU: delete “or live animal” You couldn’t risk work’s life to save the animal.
WNTI/120D/01	107 (c) bis	Transport of a person or animal for medical treatment, where the person or animal has been subject to accidental intake of or contamination from radioactive material.	Similarly to para. 107(c) this new para. should consider animals.	CS-143: See F/120D/01
F/120D/01	107 (c)bis	Transport of a person for medical treatment, where the person has been subject to accidental intake of or contamination from radioactive material. A person who has been subject to accidental intake of or contamination from radioactive material and is to be transported for medical treatment.	Editorial: all the subparas of the para. 107 deal with transported material not transport this is why the wording of (c)bis should be changed.	CS-143: A person <u>or live animal</u> which has been subject to accidental intake of or contamination from radioactive material and is to be transported for medical treatment. TSU: delete “or live animal” You couldn’t risk work’s life to save the animal.
PK/120D/01	107 (c)bis	Transport of a person <u>or live animal</u> for medical treatment <u>and</u> where the person has been subject to accidental intake of or contamination from radioactive material.	More appropriate and covering the requirement of para 107(c).	CS-143: See F/120D/01
D/120D/05	107 (e)	none	The reason for deletion of the “not intended use aspect” in para. 107 (e) must be explained and justified in TS-G-1.1 based on CRP-NORM results.	CS-143: CRP-NORM report in final process of publication. Germany should propose a text for TS-G-1.1.
F/120D/02	107 (e)	Keep text of Edition 2009. (e) Natural material and ores containing naturally occurring radionuclides	France draws again attention that French studies presented to CRP NORM have shown that doses associated to nuclear fuel cycle activities are higher than	CS-143: Reject: This is the only comment contradictory to the consensus of the CRP report. TRANSSC 21: Support the change

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		which may have been processed are either in their natural state, or have only been processed for purposes other than for extraction of the radionuclides, and which are not intended to be processed for use of these radionuclides, provided the activity concentration of the material does not exceed 10 times the values specified in Table 2, or calculated in accordance with paras 403–407;	for non nuclear activities. Furthermore the transport of ore residues (a material which has been processed for extraction of radionuclides) presents the greatest hazard since it contains the radionuclide (Ra-226) that generates the highest doses; this material has not been analyzed by the CRP and no information about actual doses associated to this kind of transport has been made available.	of deletion of “intend use” CS-29: New phrase was added to explain the NORM not in secular equilibrium situation.
CAN/120D/01	107 (e)	Natural material and ores containing naturally occurring radionuclides which <u>are either in their natural state, or have only been processed for purposes other than for extraction of the radionuclides, and which are not intended to be processed for use of these radionuclides</u> , provided the activity concentration of the material does not exceed 10 times the values specified in Table 2, or calculated in accordance with paras 403-407.	This para as proposed in DS437 provides a general exception for ore and natural material (up to 10 times the exempt concentration values specified in Table 2). This is in contradiction to the original intent of this paragraph and the philosophy behind the Regulations, including the BSS.	<u>TSU: Proposal is needed to send to TRANSSC to harmonize with BSS.</u> TRANSSC 21: Support the change of deletion of “intend use”
J/120D/01	107 (e)	Reserve	Japanese opinion can provide after the completion of the NORM CRP and submission of its final report.	See D/120D/05 TRANSSC 21: Support the change of deletion of “intend use”
ZA/120D/01	107 (e)	It is good to see that there will no longer be a distinction between natural material which has been processed for the extraction of its radioactive elements and natural material which has not been processed for the exaction of its radioactive elements. Both will now be eligible for the x 10 concession in activity limit;		See D/120D/05

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		However there still needs to be a safety-based justification for this concession in respect of natural material and in particular why a factor of 10.		
S/120D/04.	204	Change the paragraph 204 to read: <i>Multilateral approval</i> shall mean approval by the relevant <i>competent authority</i> of the country of origin of the <i>design, shipment or of unlisted basic radionuclides</i> , as applicable, and also, where the <i>consignment</i> is to be transported...	The inclusion of such unlisted basic radio nuclides is subject to <i>multilateral approval</i> (See 403)	CS-143: Reject as existing wording is adequate for a definition (Alternative: accept but include full list of things requiring multilateral approval eg RPPs Fissile Exceptions etc) TSU:
CAN/120D/02	221	Exclusive use shall mean the sole use, by a single consignor, of a conveyance or of a large freight container, in respect of which all initial, intermediate and final loading and unloading and shipment is carried out in accordance with the directions of the consignor or consignee, where so required by these Regulations.	Revert to the original text from 2009 Edition (with the addition of “and shipment” as recommended by CS- 19) as it is now unclear as to whether or not exclusive use can be used even if it is not required by the regulations.	Not discussed by CS, but See TS-G-1.1.
IND/120D/03.	221	<i>Exclusive use</i> shall meanof which all initial, intermediate and final loading and unloading and <i>shipment are.....</i>	Editorial: ‘is’ to be replaced by ‘are’ ‘Shipment’ has to be italicized as it is in defined sense.	CS-143: Accepted
RUS/120D/01	221	Exclusive use shall mean the sole use, by a single consignor, of a conveyance or of a large freight container, in respect of which all initial, intermediate and final loading and unloading and shipment is carried out in accordance with the directions of the consignor or consignee.	In the proposed new text the last part of paragraph is excluded (the words “where so required by these Regulations”) because it is not clear what (where) is required. It seems that there are not any text relating to “directions” of consignor or consignee in the Regulations or provisions requiring any directions from consignor of consignee. It would be more reasonable to	CS-143: Reject - add guidance in TS-G- CS-143: 1.1 to explain what words “where so required by these Regulations” means

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			put some explanations, if necessary, in TS-G-1.1	
WNTI/120D/02	221	<i>Exclusive use</i> shall mean the sole use, by a single <i>consignor</i> , of a <i>conveyance</i> or of a large <i>freight container</i> , in respect of which all initial, intermediate and final loading and unloading and shipment is are carried out in accordance with the directions of the <i>consignor</i> or <i>consignee</i> , where so required by these Regulations or by the consignor.	1) Editorial. 2) Flexibility should be given to the consignor to implement “exclusive use” if he decides so.	CS-143: 1) accept 2) reject: add guidance as suggested for RUS/120D/01 S: check editorial “is” or “are” accepted
RA/120D/02	221, 3rd line.	The word “shipment” should be in italics.	Reason: shipment is included in TS-R-1 as a definition.	CS-143: Editorial - accept
CAN/120D/03	222	222. <i>Fissile nuclides</i> shall mean uranium-233, uranium-235, plutonium-239 and plutonium-241. <i>Fissile material</i> shall mean a material containing any of the <i>fissile nuclides</i> . Excluded from the definition of <i>fissile material</i> are any of the following: (a) Material containing only <i>natural uranium or depleted uranium</i> which is unirradiated; if packaged, there shall be no other material with fissile nuclides in the package. (b) Material in <i>packages</i> containing <i>natural uranium or depleted uranium</i> which has been irradiated in thermal reactors only, and there shall be no other fissile nuclides in the package. (c) Material in <i>packages</i> each containing up to 0.25 g of <i>fissile nuclides</i> in any form.	If the words in “(a)” are not struck out as indicated, they would prohibit the use of depleted uranium as shielding for a material in “(b)” or “(c)”, as the exclusion would be nullified. With respect to “(b)”, it is unclear what is meant by “other <i>fissile nuclides</i> ”. Irradiated material will almost always contain <i>fissile nuclides</i> other than those of uranium. Changing the words to “... other material with <i>fissile nuclides</i> ...”, may help, but also still has the same problem as identified for “(a)”. i.e. Unirradiated <i>depleted uranium</i> may not be used for shielding without causing the exclusion to be nullified. Defining what is meant by (<i>irradiated</i>) <i>natural uranium</i> or (<i>irradiated</i>) <i>depleted uranium</i> could help, if it were possible, but the use of <i>depleted uranium</i> shielding would still be negated. For (c) it should be clarified whether the 0.25 g includes the mass of the <i>fissile nuclides</i> in	CS-05: Decided that additional material should be placed in TS-G-1.1 to address some specific countries concerns.

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			material used as shielding or as part of the packaging. [Note: 0.25 g of fissile nuclides are in 125 g of 0.2w% DU or approx. 35 g of natural uranium.]	
D/120D/06	222 (b)	“be” after “shall” should be added as well as “material with” after “other”	editorial and consistency with para. 222 (a)	CS-143: accept see see N/120D/01
GB/120D/01	222 (b)	Sentence to end: “ ..., and there shall be no other fissile nuclides in the package.	Correction of a typographical error.	CS-143: accept see N/120D/01
IND/120D/04.	222 (b)	Material in <i>packages</i> and there shall be no	Editorial: ‘be’ to be added after ‘shall’.	CS-143: Rejected see N/120D/01
N/120D/01	222 a & b	Revert to the old text by deleting the conditional requirements.	There should not be requirements in definitions. The need for the mentioned provisions has not been demonstrated.	Accept: the intentions of the draft in TS-R-1 should be explained in TS-G-1.1 TRANSSC 21: to be revisited by secretariat. CS-05: new text was proposed.
S/120D/05.	222(a) and 222(b)	We regard the formulation... no other material... in both these paragraphs to be unscientific and not possible to determine. It should be replaced by a limit. In 222(b) the word “be” is missing in...and there shall be no other fissile nuclides in the package.	Strictly speaking, the requirements cannot be fulfilled, nor controlled and should be replaced by a limit.	Reject: see N/120D/01 CS-05: new text was proposed.
F/120D/03	222(a)-(b)	... (b) Material in packages containing natural uranium or depleted uranium which has been irradiated in thermal reactors only, and there shall be no other material with fissile nuclides in the package. ...	Harmonization of subpara. (b) with subpara. (a).	Reject: see N/120D/01 CS-05: new text was proposed.
RA/120D/03	222(c)	Delete	It seems to be a particular solution for a particular case. It should be moved to fissile exceptions cases (para 417).	Reject: this is a de minimis value, not the same as exception in para 417. CS-05: new text was proposed.
USA/120D/01	222(c)	Delete 222(c) Material in packages each	TRANSSC must clearly state the need for this provision and the regulatory intent of this	Reject: this is a de minimis value, not the same as exception in para 417.

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		<p>containing up to 0.25 g of fissile nuclides in any form.</p> <p>** This comment was discussed at TRANSSC 20 and the resolution was to resubmit in 120 day comment period.</p>	<p>provision.</p> <p>NEED:</p> <p>When will this provision be used? What safety concern is addressed? Why are fissile exceptions in para. 417 inappropriate? Is it reasonable to analyze and identify 0.25 g of fissile nuclides?</p> <p>INTENT:</p> <p>If TRANSSC believes fissile material is defined as the presence of fissile nuclides, they must state whether the provision serves as an exclusion (something outside the scope and intent of the regulations) or an exception (something within the scope of the regulations but of trivial safety consequence).</p> <p>Once TRANSSC determines the provision is an exclusion or an exception, TRANSSC must identify why the provision is not included with other exclusion is para. 107 or with other fissile exceptions in para. 417.</p> <p>This rationale and decision should be included in TS-G-1.1.</p>	<p>TRANSSC 21: Refer to next fissile CS to provide technical basis.</p> <p>CS-05: new text was proposed.</p>
F/120D/04	223	<p>... A small freight container is that which has an internal volume of no less than 1 m³ and an internal volume of not more than 3 m³.</p>	<p>The new definition of small freight container is not consistent with the 16th Edition of the UN Model Regulations. It should be checked that the modification will be followed by UN.</p>	<p>CS-143: It will be followed by UN in the next revision of the UN Orange Book (i.e. 17th revision) (already accepted by UN). CS-29: Checked and new proposal was drafted.</p>
USA/120D/02	223	<p>...A small freight container is that which has either any overall outer dimension less than 1.5 m or an internal volume of not more than from 1 to 3 m³. Any other larger freight</p>	<p>Proposed definition is found in paragraph 1.2.1 of the UN Orange book, 16th revised edition.</p>	<p>CS-143: Rejected. Deletion of 1.5 m dimension was accepted during the 2007 review cycle.</p> <p>TRANSSC 21: Definition: we need to ensure the consistency with 17th edition of</p>

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		<p>container is considered to be a large freight container.</p> <p>** This comment was agreed at TRANSSC 20 but the 120 day edition of TS-R-1 does not appropriately include the change.</p>		<p>UNOB for small and large freight container.</p> <p>Ensure “permanent enclosed nature” is in appropriate paragraphs.</p> <p>Exclusive use: the footnote (d) in table 9 should be deleted. Para 569 should be amended if and as necessary.</p> <p>CS-29: Checked and new proposal was drafted.</p>
WNTI/120D/03	223	<p><i>Freight container</i></p> <p>223. <i>Freight container</i> shall mean an article of transport equipment that is designed to facilitate the transport of goods, either packaged or unpackaged, by one or more modes of transport without intermediate reloading which is of a permanent enclosed character, rigid and strong enough for repeated use, and must be fitted with devices facilitating its handling, particularly in transfer between <i>conveyances</i> and from one mode of transport to another. A small <i>freight container</i> is that which has either any overall outer dimension less than 1.5 m, or an internal volume of <u>no less than 1 m³ and an internal volume of</u> not more than 3 m³. Any larger <i>freight container</i> is considered to be a large <i>freight container</i>.</p>	<p>1) “Enclosed character” should be deleted to comply with UN definition (see UN model regulations - sixteen revised edition), as already proposed by a common CS meeting between IAEA and UN on harmonization.</p> <p>2) For the same reason, the definition of small container should be that of UN and modal regulations. There are no reasons to maintain differences in writing of these definitions, since when used as a package, para 627 contains the “enclosed character” requirement, and since the definition of exclusive use shipment does not require the “enclosed character” for other transport units under exclusive use.</p>	<p>CS-143:</p> <p>1) Proposed by CS-27, 13-17 Feb. 2006 (Meeting Report, P.4 of Attachment 2). This should be considered in TRANSSC 21 whether it is a new issue or not.</p> <p>2) Rejected. No need. See also F/120D/04</p> <p>CS-29: Checked and new proposal was drafted.</p>
RA/120D/04	223, 6th line.	A small freight container is that which has an internal volume of no less than 1 m ³ and of not more than 3 m ³ .	It seems better to delete the second time that “an internal volume” is used.	CS-143: Rejected. No need. See also F/120D/04. CS-29: Checked and new proposal was drafted.
PK/120D/02	223/last line	Any larger freight container <u>of volume greater than 3m³</u> is considered to be a large freight container.	More clear and unambiguous.	CS-143: Rejected. No need. See also F/120D/04. CS-29: Checked and new proposal was drafted.
RA/120D/05	227 bis	Delete “(system)”	It is part of the wording that it is being defined	CS-143: Reject: see the glossary from the Agency

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USA/120D/03	232	NONE ** This comment was agreed at TRANSSC 20 but the 120 day edition of TS-R-1 does not include the change	Paragraph 232 (Quality Assurance) was replaced by Paragraph 227bis (Management System). "232" is now unused. Paragraphs need to be renumbered and checked for cross referencing.	CS-143: Accept: renumber all paras
WNTI/120D/04	233	<i>Radiation level</i> shall mean the corresponding dose rate expressed in millisieverts per hour.	Radiation levels are sometimes expressed in microsievert/hour in the regulations. There is no need to give the unit in that definition	CS-143: Accept: the Glossary should be revised according to the definition. TRANSSC 21: new issue? TSU: <u>This proposal is accepted because $\mu\text{Sv/h}$ also used in the Regulation see para 515.</u>
ZA/120D/07	247	The term U(nat) should be' used along with the definition;	Clarity	<u>Editorial:</u>
D/120D/07	306 (b)	"tese" should be replaced by "these"	editorial	CS-143: Editorial - accept
F/120D/05	306 (b)	Replace "tese" by " these "	Typo	CS-143: Editorial - accept
ZA/120D/02	306(b)	To derrioristrate compliance with <u>these</u> Regulations to the competent authority	Correct spelling	accepted
RA/120D/06	306.	Management systems based on international, national or other standards acceptable to the competent authority shall be established and implemented for all activities in the scope of the Regulations, as identified in para. 106, <u>as well as for all special form radioactive material, low dispersible radioactive material, packages and material approved under para. 417(f).</u>	Reason: para. 106 should include also explicitly activities related to special form RAM, low dispersible RAM and material approved under para. 417(f). In addition, para. 306 should be consistent with para. 307.	CS-143: Reject: Para 106 applies to all RM including special form.
S/120D/06	306.	Sweden does not approve of the new formulation of paragraph 306. The change from Quality Assurance to <i>Management systems</i> is acceptable (and now IAEA standard)	Sweden find the old formulation of 306 (2009 Edition) to be better and clearer and wish to keep it (with the minimal modifications of replacing QA with <i>management systems</i>)	CS-143: Reject: the draft text resulted from TRANSSC consensus. Sweden could make a proposal for TS-G-1.1.

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F/120D/06	307	Delete “ <i>and</i> ” between: “ <i>special form radioactive material</i> ” and “ <i>low dispersible radioactive material</i> ”	Typo	CS-143: Reject : see USA/120D/04
IND/120D/05.	307	The <i>competent authority</i>and <i>fissile material</i> approved as fissile excepted under para. 417 (f)	For consistency with para 417.	CS-143: rejected see US/120D/04
USA/120D/04	307	The competent authority shall assure compliance with these Regulations. Means to discharge this responsibility include the establishment and execution of a programme for monitoring the design, manufacture, testing, inspection and maintenance of packaging, special form radioactive material and low dispersible radioactive material and material approved under para. 417(f), and the preparation, documentation, handling and stowage of packages by consignors and carriers, to provide evidence that the provisions of these Regulations are being met in practice.	List is appropriate for inclusion in guidance material but inappropriate for regulation. List of compliance assurance items is incomplete (and includes activities that are rarely if ever performed). Listing is inconsistent with guidance provided in TS-G-1.5. Chapter 2 states that compliance assurance programs vary based on the needs, capabilities, maturity of the member state. Regulatory provisions that are “too much” or “too little” depending on the member state should be avoided.	CS-143: Accept
WNTI/120D/05	307	307. The <i>competent authority</i> is responsible for shall assuring compliance with these Regulations. Means to discharge this responsibility include the establishment and execution of a programme for monitoring the <i>design</i> , manufacture, testing, inspection and maintenance of <i>packaging, special form radioactive material and low dispersible radioactive material</i> , and material approved under para. 417(f) , and the preparation, documentation, handling and stowage of <i>packages</i> by <i>consignors</i> and <i>carriers</i> , to provide evidence that the	Typo. Delete ‘and’.	CS-143: Reject : see USA/120D/04

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		provisions of these Regulations are being met in practice.		
PK/120D/10	307 Section III	The competent authority shall assure compliance with these regulations. Means to discharge this responsibility include the establishment and execution of a programme for monitoring the design, manufacture including Shielding requirements/ types of shielding material , testing, inspection, , and maintenance of	For different kind of packages shielding requirement including types of shielding material may also be included in the text.	CS-143: Reject : see USA/120D/04
RA/120D/07	307, 5th line	Delete “and” and replace by comma (,)	Editorial.	CS-143: Reject : see USA/120D/04
ZA/120D/03	308	The relevant competent authority shall arrange for appropriate Radiation Protection Programme for the periodic assessment of occupational radiation doses due to the transport of radioactive material	Better semantic	TSU:Reject:
B/120D/01	309	309. In the event of non-compliance with any limit in these Regulations applicable to <i>radiation level</i> or <i>contamination</i> : (a) The <i>consignor, consignee, carrier and any organisation involved during transport, as appropriate, and who may be affected</i> shall be informed of the non-compliance by: (i) The <i>carrier</i> if the non-compliance is identified during transport; or (ii) The <i>consignee</i> if the non-compliance is identified at receipt.	To clarify who shall be informed. The information to the public that could be affected too is the responsibility of the Competent authorities and neither of the carrier nor the consignee.	Accept: but move it to sub-para (b). Consider restructure of the para 309 in order to clarify the immediacy and order of actions. Consider the development of guidance in TG-G-1.1 about “as appropriate”. TRANSSC 21: (a) The <i>consignor, consignee, carrier</i> and any organisation involved during transport, <i>who may be affected</i> , as appropriate, shall be informed of the non-compliance by: (i)The <i>carrier</i> if the non-compliance is identified during transport; or (ii)The <i>consignee</i> if the non-compliance is identified at receipt.
D/120D/08	309 (a)	“who may be affected” should be deleted	It is not clear, who exactly is affected. If the proposal will be rejected, the affected persons/ organizations should be	CS-143: Reject: see B/120D/01

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			defined.	
GB/120D/02	309 (a)	First line to begin: “The consignor and any person who may be....”	Correction of a typographical error.	CS-143: Reject: see B/120D/01
RA/120D/08	309 (a)	Delete “and who may be affected”	It is almost impossible to detect all who may be affected. It could be used by people who may consider themselves as affected to initiate legal demands because communication is mandatory by TS-R-1.	CS-143: Reject: see B/120D/01
ZA/120D/04	309 (a)	(a) The consignor and any party which may be affected shall informed of the non-compliance by:	Reads better	
ZA/120D/05	309 (b) (i)	Investigate	Spelling	
D/120D/09	309 (b) (ii)	“Investigate” should be replaced by “Investigate”	editorial	CS-143: Editorial - accept
F/120D/07	309 (b) (ii)	Replace “ <i>Investigate</i> ” by “ <i>Investigate</i> ”	Typo	CS-143: Editorial - accept
GB/120D/03	309 (b)(ii)	Delete the duplicated first letter of the sentence.	Correction of a typographical error.	Editorial - accept
IND/120D/06.	309(a)	The consignor and whoever may be affected	Editorial : ‘who’ should be ‘whoever’.	CS-143: Rejected: see B/120D/01
ZA/120D/06	313 ©	Regulations for the safe transport of radioactive material	Add As (V) each person should be familiar with these regulations	TSU: rejected Para.313 (a) includes this
D/120D/10	401	“408-433” at the end of the sentence should be replaced by “408-435”	“special arrangement” and “Type C package” are also valid for the assignment to UN numbers	CS-143: Editorial - accept
IND/120D/07.	401 table 1	Low specific activity radioactive material	Editorial : ‘radioactive’ to be deleted for consistency with definition (para. 226)	CS-143: Accepted
RA/120D/09	401, 2nd line.	Radioactive material shall be assigned to one of the UN numbers specified in Table 1 in accordance with paras 408– 435 .	Reason: to be consistent with Table 1, it should be included paras 434 and 435. These paras refer to Type C packages and transport under special arrangement.	CS-143: Editorial - accept
F/120D/08	403	¹ During the Member State comment period there will be additional work to resolve concerns over the potential for disharmony	The reference to the time period of 120 days to Member states for comments may be specified.	CS-143: Reject: only footnote in the draft.
GB/120D/04	403	Replace the sentence “Activity concentration for exempt material and activity limits for exempt consignments shall be calculated in accordance	It is not clear if the second sentence “Activity concentration for exempt material and activity limits for exempt consignments shall be calculated in accordance with	CS-143: Accept TRANSSC 21: Red text should be accepted. CS-29: This comment was examined and rejected by the criticality working group therefore

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		<p>with the principles set out in the BSS” with <u>“For these radionuclides activity concentrations for exempt material and activity limits for exempt consignments shall be calculated in accordance with the principles set out in the BSS”</u></p>	<p>the principles set out in the BSS” refers to all radionuclides or only those not in Table 2. An additional comment on exemption is that the principles of exemption in the latest version of the IAEA BSS have changed and are not the same as those in the transport advisory material. For example there is a paragraph on exemption of radionuclides of natural origin which uses a dose criterion of 1 mSv. If we allow different exemption limits for all the radionuclides, even those already in Table 2 it means that exemption values for some radionuclides will be based on different dose criterion to those used for the radionuclides in Table 2. There is a paragraph in the IAEA BSS version 4 on exemption from transport regulations. This paragraph (paragraph I-5) states that: “The Regulations for the Safe Transport of Radioactive Material [12] (the Transport Regulations) do not apply to exempt material or exempt consignments — that is, material in transport for which either the activity concentration of the material or the total activity of radionuclides in the consignment, does not exceed the relevant ‘basic radionuclide value’ for exemption given in the Transport Regulations. In general, such basic radionuclide values are numerically equal to the corresponding exempt activity concentrations or exempt activities given in Table I-1 of Schedule I.” This paragraph does not say anything about radionuclides which are not in Table 2 and does not specifically say that for transport different values to those in Table 2 of TS-R-1 can be used. I don’t know if it is</p>	<p>the CS recommends this comment be rejected</p>

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
			implicit. There may therefore be an inconsistency between TS-R-1 and the IAEA BSS if we assume that the second sentence of paragraph 403 applies to all radionuclides.	
GB/120D/19	403	Delete the sentence which reads "It is permissible to use an A2 value calculated using a dose coefficient for the appropriate lung absorption type, as recommended by the International Commission on Radiological Protection, if the chemical forms of each radionuclide under both normal and accident conditions of transport are taken into consideration."	It is not necessarily the case that a change to the dose coefficient for inhalation will lead to a change to the A2 value. In addition the transport regulations or the advisory material does not specify which lung absorption types were used in the calculation of A2 values. As shown by our work is not easy to calculate these values. Also the paragraph does not say whether these new values will require unilateral or multilateral approval (or approval at all).	CS-143: Reject: it is a new issue.
ZA/120D/08	407	For individual radionuclides or for mixtures of radionuclides ¹ for which relevant data is not available, the values shown in Table 3 shall be used	Better English	TSU: editorial, rejected
ZA/120D/09	409 (ä) (i)	(ä) LSA-I Either: <u>(i) Uranium and thorium ores and concentrates of such ores, and other ores containing naturally occurring radionuclides which do not meet the applicable provisions of para. 107(e) and where the activity is distributed throughout and the estimated average specific activity does not exceed 30 times the values for activity concentration specified in paras 402-407;</u>		TSU: rejected, new proposal without justification
B/120D/02	409 (a) (iii) and (iv)	(iii) <i>Radioactive material</i> for which the A ₂ value is unlimited. <i>Fissile</i>	Keep the text as decided during TRANSSCC20 (without this addition LSA-I fissile is not needed anymore)	CS-143: Accept as J/120D/03 and J/120D/04 TRANSSEC 21: to address in Feb. CSMS if LSA-I include fissile.

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		<p><i>material</i> with unlimited A_2 value may be included only if at least one of the applicable paras 417(a)–(f) or 672 (a)–(c) is met;</p> <p>or</p> <p>(iv) Other <i>radioactive material</i> in which the activity is distributed throughout and the estimated average <i>specific activity</i> does not exceed 30 times the values for activity concentration specified in paras 402–407. <i>Fissile material</i> with unlimited A_2 value may be included only if at least one of the applicable paras 417(a)–(f) or 672 (a)–(c) is met.</p>		<p><u>Reject the proposal. Do not recover the reference to para 672</u></p> <p><u>CS-29: remove reference to para 627.</u></p>
GB/120D/05	409 (a) (iii), 409 (a) (iv) and 417	See comments 15 and 16 below.	409 (a)(iii) and 409 (a)(iv) say that “at least” one of the applicable paragraphs 417 (a)-(f) must be met but 417 states that “Only one” is allowed . This apparent contradiction is confusing.	CS-143: Accept: delete “at least” in 409 (a) (iii) and 409 (a) (iv) <u>CS-29: remove reference to para 627.</u>
D/120D/13	409 (a)(iv) (second sentence)	“with unlimited A_2 value” should be deleted	editorial	CS-143: Accept
IND/120D/08.	409 (b) i	(i)	Editorial. ‘i’ should be within bracket.	accepted
WNTI/120D/07	409(a)	<p>409. <i>LSA material</i> shall be in one of three groups:</p> <p>(a) <i>LSA-I</i> Either: (i) Uranium and thorium ores and concentrates of such ores, and other ores containing naturally occurring radionuclides</p>	<p>1) Referencing exemptions in para 409(a)(i) means it should be done everywhere in the regulations and not only for this para. 409 (a) (i). It is suggested to remove this unnecessary reference to para. 107(e).</p> <p>2) As written, the criteria for LSA-I does not cover the new UN number and proper shipping name listed in table 1</p>	<p>CS-143: (a) (i) accepted (a) (iii) accepted as J/120D/03 (a) (iv) accepted as D/120D/13 and J/120D/04</p> <p>CS-29: Accepted</p>

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		<p>which do not meet the applicable provisions of para. 107(e);</p> <p>(ii) <i>Natural uranium, depleted uranium, natural thorium or their compounds or mixtures, that are unirradiated and in solid or liquid form;</i></p> <p>(iii) <i>Radioactive material for which the A₂ value is unlimited. Fissile material with unlimited A₂ value may be included only if at least one of the applicable paras 417(a)–(f) or 672(a) is met; or</i></p> <p>(iv) <i>Other radioactive material in which the activity is distributed throughout and the estimated average specific activity does not exceed 30 times the values for activity concentration specified in paras 402–407. Fissile material with unlimited A₂ value may be included only if at least one of the applicable paras 417(a)–(f) or 672(a) is met.</i></p>	<p>(LSA-I – FISSILE). For (iii) and (iv), the possibility to have material meeting the requirement of para. 672(a) should be added.</p> <p>3) 409(a)(iv) deals, at the beginning, with material with a “specific activity which does not exceed 30 times the value ...”. Then, in the second part of 409(a)(iv), it is not relevant to specify “unlimited A₂”.</p>	
J/120D/05	409(a)(i)	(a)(i) Uranium and thorium ores and concentrates of such ores, and other ores containing naturally occurring radionuclides which do not meet the applicable provisions of para. 107(e);	Para. 107(e) consists of single provision.	CS-143: Reject: see WNTI/120D/07 CS-29: deleted the phrase
GB/120D/15	409(a)(iii)	The sentence “Fissile	A new UN number (3322bis)	CS-143: Accept as J/120D/03

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		<p>material with unlimited A2 value may be included only if at least one of the applicable paras 417(a)-(f) is met” should be modified to read:</p> <p>“Fissile material with unlimited A2 value may be included only if it meets the provisions of paras 417(a)-(f) or 672”</p> <p>Alternative proposal– remove it altogether</p>	<p>for fissile LSA-1 has been introduced to facilitate the use of para 672. This sentence conflicts with this intention and needs to be modified or removed.</p>	<p>Alternative proposal rejected: Because it would permit CA approved fissile IP-1 packages which is a new issue”</p> <p>CS-05: New text was proposed.</p>
J/120D/03	409(a)(iii)	<p>(a)(iii) <i>Radioactive material</i> for which the A_2 value is unlimited. <i>Fissile material</i> with unlimited A_2 value may be included only if one of the applicable paras 417(a)-(f) <u>or para. 672(a)-(c)</u> is met; or</p>	<p>Fissile material to meet one of paras 417(a)-(f) is classified as “non-fissile or fissile excepted”, then there would be no “fissile LSA-I”. As an intention of fissile experts was believed to add para. 672, it should be added. In this case UN3322bis in Table 1 should be maintained.</p> <p>Para. 417 is consisted only from subparas (a) to (f), then “(a)-(f)” can be deleted (so as (a)-(c) for para. 672).</p>	<p>CS-143: Accept</p> <p>TRANSSEC 21: Revisit by CSM about Inclusion of para 672, unlimited A2.</p> <p>CS-05: New text was proposed.</p>
RA/120D/10	409(a)(iii)	<p>Radioactive material for which A2 value is unlimited. Fissile material with unlimited A2 value may be included only if <u>any of</u> the applicable paras 417 (a)-(f) is met; or</p>	<p>Only one of the provisions of subparas (a)-(f) is allowed per consignment.</p>	<p>CS-143: Accept as GB/120D/05.</p> <p>CS-05: New text was proposed.</p>
S/120D/07	409(a)(iii-iv)	<p>It is unclear what is meant by “at least one” in these two paragraphs.</p>	<p>Further explanation and clarification is needed since the interpretation is unclear!</p>	<p>CS-143: Reject: see GB/120D/05</p> <p>CS-05: New text was proposed.</p>
GB/120D/16	409(a)(iv)	<p>The sentence “Fissile material with unlimited A2 value may be included only if at least one of the applicable paras 417(a)-(f) is met” should be modified to read:</p> <p>“Fissile material with unlimited A2 value may be included only if it meets the</p>	<p>A new UN number (3322bis) for fissile LSA-1 has been introduced to facilitate the use of para 672. This sentence conflicts with this intention and needs to be modified or removed.</p>	<p>CS-143: Accept as J/120D/04</p> <p>Alternative proposal rejected: Because it would permit could permit CA approved fissile IP-1 CS-143: packages which is a new issue”</p>

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		provisions of paras 417(a)-(f) or 672” Alternative proposal– remove it altogether.		
J/120D/04	409(a)(iv)	(a)(iv) Other <i>radioactive material</i> in which the activity is distributed throughout and the estimated average <i>specific activity</i> does not exceed 30 times the values for activity concentration specified in paras 402–407. <i>Fissile material</i> with unlimited A ₂ value may be included only if one of the applicable paras 417 (a)-(f) <u>or para. 672(a)-(c)</u> is met.	Same as 409(a)(iii).	CS-143: Accept TRANSSC 21: reject the proposal. Do not recover the reference to para 672 CS-05: New text was proposed.
RA/120D/11	409(a)(iv)	... Fissile material with unlimited A ₂ value may be included only if any of the applicable paras 417 (a)-(f) is met	Only one of the provisions of subparagraphs (a)-(f) is allowed per consignment.	Accept as GB/120D/05 CS-05: WNTI/120D/26New text was proposed.
CAN/120D/04	410	Move to Section V.	This is a requirement and control for transport. It does not affect classification as LSA material. If it is a classification, then a material could be LSA for land transport and not LSA for the segment by air.	<u>TSU: rejected</u>
CAN/120D/05	411 and 414	Delete para.	Could move to advisory material for 409 and 413 respectively. These are not material requirements, but operational ones already specified in the referenced paragraphs, 516 and 520. In addition, this is duplication as “516-520” are already mentioned in 408 and 412 respectively. Editorial changes to remove “411” and “414” from 408 and 412 are consequentially required.	<u>TSU: rejected: Delete this para doesn't change requirements.</u>
B/120D/03	417	417. <i>Fissile material and packages containing fissile material</i> shall be classified under the relevant entry as FISSILE according to Table	Editorial	Reject because GB/120D/20 is accepted. CS-05: rephrased the text.

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		<p>1 unless excepted by one of the provisions of subparas (a)–(f). Only one of the provisions of (a)-(f) is allowed per <i>consignment</i>. All provisions apply to only packaged material unless unpackaged material is specifically allowed in the provision.</p>		
E/120D/01	417	<p>Addition of a new paragraph as follows:</p> <p>(g) Uranium in packages, provided that:</p> <p>i) There are no more than 5 g of fissile nuclides in any 10 litre volume of material.</p> <p>ii) A limit per consignment such that:</p> <p>mass of uranium-235 (g) / X < 1</p> <p>Where X is 400 g for fissile nuclide mass (g) mixed with substances having an average hydrogen density less than or equal to water</p> <p>or 290 g for fissile nuclide mass (g) mixed with substances having an average hydrogen density greater than water</p> <p>iii) The smallest external dimension of each package is not less than 10 cm.</p> <p>iv) Uranium enriched in uranium-235 to a maximum of 5%</p>	<p>Draft 1.1 under revision has removed the para. 417 (a) iii from TS-R-1 2009 Edition. However there are not safety reasons to remove this limit always considered in the previous TS-R-1 Editions.</p> <p>Then, it is proposed to keep the present limit described in para. 417 (a) (iii) of 2009 Edition but including two new restrictions (no other fissile nuclides than uranium-235 and max enrichment of 5 %) which will increase significantly the safety margins of the criteria.</p> <p>It should be considered that the criteria of 5 g of fissile nuclides in any 10 litre of material has already been used to prepared many packages for radioactive wastes and the impact of the change may be enormous without enough safety justifications .</p> <p>In fact, this new restrictions for fissile exceptions, as expressed on Draft 1.1, will require the handling of the material already packed under previous TS-R-1 editions (2005 and 2009) by re-conditioning and re-packing material (inter alia ALARA criteria to be considered) as well as it will increase the number of transportations.</p> <p>In that line, in case those provisions of para. 417 in TS-R-1 Draft 11. are finally</p>	<p>CS-143: Reject: There are safety reasons for the removal of the 5g/10L exception. TRANSSC 21: Propose waiting till Feb consultancy.</p> <p>CS-05: The WG will endeavor to find a solution for this either in the guidance document, TS-G-1.1, possibly under the specifics of para. 417(f).</p>

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
			accepted, transitional arrangements should be define for all those packages already packed under fissile exceptions criteria of previous TS-R-1 Editions.	
GB/120D/17	417	The sentence “Only one of the provisions of (a)-(f) is allowed per consignment” should be removed.	<p>This restriction is in the existing fissile exceptions because the safety of packages transported using the 15g exception could be affected by large quantities of other fissile excepted material. For this reason it was thought prudent not to permit the mixing of packages excepted under different exceptions.</p> <p>The new exception in para 417 cover packages transporting materials having a subcritical kinf (or containing very low quantities indeed). It is not conceivable that mixing two or more materials each with kinf<1 could produce a material with kinf>1. This therefore represents a restriction with no safety basis</p>	CS-143: Reject: Because it needs more discussion among criticality experts. CS-05: Withdraw
GB/120D/20	417	All provisions apply only to packaged material unless unpackaged material is specifically allowed in the provision	‘Plain English’ change from ‘to only’ to ‘only to’.	Accept
WNTI/120D/09	417	(f) Other materials that meet the requirements of para 605bis subject to <i>multilateral approval</i> . Only one such material is allowed per <i>consignment</i> unless specifically subject to allowed by multilateral approval .	Typo	CS-143: Accept as D/120D/14
IND/120D/09.	417 (e)	..All provisions apply to only <i>packaged</i> material (e) Up to 45g <i>exclusive use</i> , either <i>packaged</i> or unpackaged.	‘Exclusive use and package’ are defined terms, so must be italicized.	Accepted “ <i>exclusive use</i> ” Reject “ <i>packaged</i> ” CC-29: rephrased the text.
B/120D/04	417 (c)	(c) Uranium in <i>packages</i> <u>with</u> the smallest overall external dimension of which is	Editorial	Editorial is accepted Reject: maximum should be single value.

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		<p>not less than 10 cm, provided that the <i>consignment</i> is limited to 45 g of uranium-235 with a total plutonium and uranium-233 content not exceeding 1% of the mass of uranium-235 and one of the following conditions is met:</p> <p>(i) There is no more than 3.5 g of uranium-235 per <i>package</i> where the uranium is enriched in uranium-235 up to a maximum of $5 \pm 0,1$ % by mass, or</p> <p>(ii) There is no more than 2.0 g uranium-235 per <i>package</i> where the uranium is enriched in uranium-235 to a value greater than $5 \pm 0,1$ % by mass.</p>	<p>To take into account the fabrication tolerance for uranium with a nominal enrichment of 5%</p>	<p>CS-29: rejected</p>
WNTI/120D/08	417 (c) and 417 (e)	<p>(c) Uranium in <i>packages</i> the smallest overall external dimension of which is not less than 10 cm, provided that the <i>consignment is limited to contains not more than</i> 45 g of uranium-235 with a total plutonium and uranium-233 content not exceeding 1% of the mass of uranium-235 and one of the following conditions (...)</p> <p>(e) Up to Fissile nuclides with a total mass not greater than 45 g per conveyance of fissile nuclides under exclusive use, either packaged or unpackaged.</p>	<p>(c): to clarify that the material in the package is not limited to uranium-235 (other material which is non fissile is allowed, for instance).</p> <p>(e) Editorial (consistency with (d)).</p>	<p>Accepted</p>
F/120D/10	417 (c) (ii)	<p>Add the word "of" in "There is no more than 2.0 g <u>of</u> uranium-235"</p>	<p>Editorial</p>	<p>accept</p>

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
CH/120D/01 (Annex 2)	417 (d)	Fissile nuclides of plutonium and uranium i. with a total mass not greater than 0.5 g per package, if the smallest overall external packages dimension is not less than 10 cm, and 15 g per consignment. ii. with a total mass not greater than 5 g per package, if the smallest overall external packages dimension is not less than 25 cm, and 15 g per consignment. iii. with a total mass not greater than 15 g per package, if the smallest overall external packages dimension is not less than 40 cm, and 15 g per consignment.	There are routine international transports of irradiated fuel samples between hot cell facilities. Typical masses of fissile masses are <10 g. The current text of 417 d excludes those transports with more than 0.5 g from the exception. Generally a consignment consists of only one package which is not transported under exclusive use (i.e. by plane or eventually on a car ferry). The proposed text of 417 ii) and 417 iii) addresses this situation and includes an enlargement of the minimum package volume to control the absence/geometry of potentially moderating or reflecting materials. This proposal addresses transports which really take place. In a number of cases such transports are primarily not of commercial interest but of high regulatory interest (i.e. in cases where the causes for fuel element failure are to be analysed). For additional information please see attached paper	CS-143: Reject: Proposal (ii) and (iii) are not justified. No safety basis for package dimensions.
USA/120D/06	417 (d)	<i>Fissile nuclides of plutonium and uranium with a total mass not greater than 2.0 g per package and 15 g per consignment.</i>	Changing the limit from 0.5 g to 2.0 g provides for a uniform 2.0 g per package exception that is consistent with the U.S. regulations in 10 CFR 71. This increase should not increase the risk for a criticality beyond the criticality requirements already contained in para. 417 (c) (ii). Also note that any fissile mass above approximately 0.5 g will have to be shipped in a Type B package to satisfy radiation dose requirements.	CS-143: Reject: 0.5 g was agreed by international criticality experts in several IAEA meetings. TRANSSC 21: refer to fissile CS to address the value 2.0 g.
B/120D/05	417 (f)	(f) Other materials that meet the requirements of para 605bis subject to <i>multilateral approval</i> . Only one such material is allowed per	Which type of approval is meant here (shipment approval ...)? Is the meaning: "one such material is allowed per <i>consignment</i> unless specifically	Accepted ; proposed text "Other materials that meet the requirements of para 605bis subject to <i>multilateral approval</i> . Only one such material is allowed per <i>consignment</i> unless

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		<i>consignment</i> unless specifically subject to multilateral approval .	provided for in the <i>multilateral approval</i> ”? Adapt drafting consequently.	authorized in the certificate of approval.”
USA/120D/07	417 (f)	Reconsider adding a mass per mass approach for large quantity/low concentration fissile material to para 417(f). TS-G-1.1 presents the mass per mass approach as an acceptable method of implementing the requirements of TS-R-1 para 417 (f)	The U.S. plans to continue its current practice of handling large quantities of low concentration fissile material as excepted material under 10 CFR 71.15 (b) & (c) using the mass per mass basis that is specifically identified in TS-G-1.1 as an acceptable method of compliance with the provisions of para. 417(f), and believes that other member states will also avail themselves of this option. This method appears to be already approved by TRANSSEC as an acceptable method for meeting 417(f), and the US recommends that the requirements be explicitly included in TS-R-1 rather than placed in guidance material.	CS-143: Reject: During the review cycle it was not possible to reach a consensus on the mass per mass approach. This will be included in TS-G-1.1 as an example of 417(f). CS-29: This will be included in TS-G-1.1 CS-05: rephrased the text.
D/120D/14	417 (f) (second sentence)	“subject to” should be replaced by “authorized by”	for clarification	CS-143: Accept
F/120D/09	417(c)	Replace “ <i>unranium-233</i> ” by “ <i>uranium-233</i> ”	Typo	CS-143: Accept
RA/120D/12	417(d)	Fissile nuclides <u>with a total mass not greater than 0,5 g per package and 15 g per consignment</u> .	Only plutonium and uranium are fissile nuclides	CS-143: Accept
S/120D/08	417(d)	Delete “of plutonium and uranium” in the paragraph 417(d) and write, as in 417(e) only <i>fissile nuclides</i> with a total mass...	We do not see the reason for having such an additional qualifier in 417(d) and not in 417(e)	CS-143: Accept
CAN/120D/06	417(e)	Add “in accordance with paragraph 518” before the period. (e) Up to 45 g per conveyance of fissile nuclides under exclusive use, either packaged or unpackaged <u>in accordance with para 518</u> .	It is not clear if this is another case where material can go unpackaged or only to be used in conjunction with para. 518.	Submitted after deadline CS-05: rephrased the text
CAN/120D/07	417(f)	(f) Other materials that meet the requirements of para 605bis subject to multilateral approval. Only one such material is allowed	Contradicts second sentence in main part of paragraph.	CS-29: rejected, The main part of para 107 is subject to (a) – (f). Para 417(f) is subject only to approved fissile excepted material. Not contradict.

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		per consignment unless specifically subject to multilateral approval.		
GB/120D/18	417(f)	The sentence “Only one such material is allowed per consignment unless specifically subject to multilateral approval” should be removed.	Materials approved under 417(f) will have a subcritical k_{inf} . It is not conceivable that mixing two or more materials each with $k_{inf} < 1$ could produce a material with $k_{inf} > 1$. This therefore represents a restriction with no safety basis	CS-143: Accept Reject: Because it needs more discussion among criticality experts.
S/120D/09	417(f) 605bis	Sweden objects to 417(f) and requires its removal. It then also follows that 605bis is not needed.	Sweden does not find that anything more than what is already included in the paras 417(a)-417(e) is justified or needed.	CS-143: Reject: This further provision (f) is needed to except material that can not conceivably cause criticality. CD-29: rejected
B/120D/06	418	<p>418. Unless excepted by para 417, <i>packages</i> containing <i>fissile material</i> shall not contain:</p> <p>(a) A mass of <i>fissile material, fissile material</i> constituent or <i>fissile nuclide</i> (or mass of each <i>fissile nuclide</i> for mixtures when appropriate) different from that authorized allowed for the <i>package design</i>;</p> <p>(b) Any radionuclide or <i>fissile material</i> different from those authorized allowed for the <i>package design</i>; or nor</p> <p>(c) Contents in a form or physical or chemical state, or in a spatial arrangement, different from those authorized allowed for the <i>package design</i> as specified in their certificates of approval where appropriate.</p> <p>The allowed specifications are given either directly in these Regulations or in certificates of approval where appropriate.</p>	<p>Editorial</p> <p>Technical editor should review the drafting of this para to harmonize with for example para 420: “The contents of a <i>package</i> containing uranium hexafluoride shall comply with the following requirements: [...]”</p>	CS-143: Accept as J/120D/06

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
J/120D/06	418	<p>418. Unless excepted by para 417, packages containing <i>fissile material</i> shall not contain:</p> <p>(a) A mass of <i>fissile material</i>, <i>fissile material</i> constituent or <i>fissile nuclide</i> (or mass of each <i>fissile nuclide</i> for mixtures when appropriate) different from that authorized allowed for the <i>package design</i>;</p> <p>(b) Any radionuclide or <i>fissile material</i> different from those authorized allowed for the <i>package design</i>; or nor</p> <p>(c) Contents in a form or physical or chemical state, or in a spatial arrangement, different from those authorized allowed for the <i>package design</i> as specified in their certificates of approval where appropriate.</p> <p>The allowed specifications are given either directly in these Regulations or in certificates of approval where appropriate.</p>	<p>As the intention of the change proposal is to apply requirements including to fissile excepted material, the exception clause should be deleted.</p> <p>Rests are correction of editorial mistakes.</p>	<p>CS-143: Accept as modified:</p> <p>(c) Contents in a form or physical or chemical state, or in a spatial arrangement, different from those authorized allowed for the <i>package design</i> as specified in their certificates of approval where appropriate.</p>
E/120D/03	418 (a)	(a) A mass of fissile material or fissile nuclide (or mass of each fissile nuclide...)....	'Fissile material constituent' is unnecessary. That term is already included in the most general concept of 'fissile material'	CS-143: Reject: To explain it in TS-G-1.1 what is the difference between "Fissile material constituent" and "fissile nuclide (s)" and fissile material.
D/120D/16	418 (a) - (c)	"authorized" should be deleted	editorial	CS-143: Accept
D/120D/15	418 (a), first line	"fissile material constituent" should be deleted	inappropriate term	CS-143: Reject: To explain it in TS-G-1.1 what is the difference between "Fissile material constituent" and "fissile nuclide (s)" and fissile material.
D/120D/17	418 (b)	"or" should be deleted	editorial	CS-143: Accept
D/120D/18	418 (c)	"as specified in their certificates of approval where appropriate" should	unnecessary, due to the last sentence of para. 418	CS-143: Accept

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		be deleted		
PK/120D/03	418(a)	A mass of fissile material, fissile material constituent or fissile nuclide (or mass of each fissile nuclide for mixtures when appropriate) different from that authorized allowed for the package design;	For consistency of the document.	CS-143: Reject: “allowed” is more general.
RA/120D/13	418(a)	Delete “fissile material constituent”	The meaning is not clear, it is not defined in Regulations	CS-143: Reject: To explain it in TS-G-1.1 what is the difference between “Fissile material constituent” and “fissile nuclide (s)” and fissile material.
F/120D/11	418(a)(b)(c)	Keep one word only among “allowed” and “authorized”	Editorial	CS-143: Accepted as J/120D/06
F/120D/12	418(b)	Delete at the end “or” and “nor”	All the subparas of para. 418 are to be applied simultaneously	CS-143: Accepted as J/120D/06
PK/120D/04	418(b)	Any radionuclide or fissile material different from those authorized allowed for the package design; or nor	For consistency of the document.	CS-143: Reject: “allowed” is more general
S/120D/10.	418(b)	The end of the paragraph 418(b) should be amended, “or nor” should read “nor”.		CS-143: Accepted as J/120D/06
PK/120D/05	418(c)	Contents in a form or physical or chemical state, or in a spatial arrangement, different from those authorized allowed for the package design as specified in their certificates of approval where appropriate.	For consistency of the document.	CS-143: Reject: “allowed” is more general
RA/120D/14	418(c)	Contents in a form or physical or chemical state, or in a spatial arrangement, different from those allowed for the package design.	The mention to specifications on approval certificates is maintained in the final sentence.	CS-143: Accept
USA/120D/08	419	Uranium hexafluoride shall only be classified as: (a) UN No 2977, RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSILE, or (b) UN No 2978,	Consistency with para. 2.7.2.4.5.1 of UN Orange Book which “classifies” rather than “assigns” and lists options separately	CS-143: Accept: General speaking we use classification. TSU: rejected UNOB 2.0.2.1 use “assigned”. Check other paras for consistence.

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		<p>RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, non-fissile or fissile-excepted; or</p> <p>(c) UN No 3XXX, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – URANIUM HEXAFLUORIDE, LESS THAN 0.1 KG PER PACKAGE, in the case of uranium hexafluoride in quantities of less than 0.1 kg package and in an excepted package.</p>		
RA/120D/15	419(b)	UN No 3XXX RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-URANIUM HEXAFLUORIDE, LESS THAN 0.1 KG PER PACKAGE, non-fissile or fissile-excepted .	The description does not add any information to the proper shipping name. Fissile material is not allowed in excepted packages.	CS-143: Accept as WNTI/120D/06
D/120D/19	420 (c)	“at” should be deleted	editorial	CS-143: accept
E/120D/08	420 (c)	The uranium hexafluoride shall be in solid form and the internal pressure shall not be above atmospheric pressure when presented for transport	Editorial. The preposition ‘at’ is not needed	CS-143: accept
IND/120D/10.	420(c)	(C) The uranium hexafluorideand at the.. internal pressure	Editorial. ‘at’ to be removed.	CS-143: Accepted
S/120D/11.	420(c)	Remove “at” from the sentence. Should read: The uranium hexafluoride shall be in solid form and the internal pressure shall not be above atmospheric pressure when presented for transport.		CS-143: accept
CAN/120D/08	422	422. Packages <u>containing material without fissile nuclides, material excluded</u>	Packages containing FISSILE material may not be classified as an excepted package.	TSU: rejected this repeats the requirements in Para. 514 (c)

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		<u>from the definition of fissile material or fissile material that meets one of the exceptions provide by para. 417,</u> may be classified as excepted packages if:	Although the requirement shows up in 514(c) in an indirect way, the matter is also one of classification. Alternately, a paragraph containing prohibition on fissile material in excepted packages may also work. This would require the definition of “non-fissile” and “fissile-excepted”.	
IATA/120D/01	422	strike out “ are designed to ”.	as shown for the other excepted package conditions in (b) through (d) this should be revised to read “They contain less than 0.1 kg...”,	CS-143: accept
D/120D/20	422 (e)	“ <u>and comply with the limited quantities of radioactive material as specified in Table 5</u> ” should be added at the end	to be in compliance with the other subparagraphs of para. 422 regarding the activity limits for excepted packages	CS-143: Accept TRANSSC 21: new issue, rejected. <u>TSU: rejected. See para 424bis</u>
CAN/120D/09	422(e)	(e) They are designed to contain less than 0.1 kg of uranium hexafluoride non-fissile or fissile-excepted . <u>either excluded from the definition of fissile material or fissile material meeting one of the exceptions of para. 417</u>	It is not clear what is meant by the terms “non-fissile” and “fissile-excepted”. An alternative is to define these terms. There is a footnote to Table 1 about what is meant by “fissile-excepted”; however, strictly, it only applies to the description words of the relevant UN numbers.	<u>TSU: rejected. See para 514 (c)</u>
RA/120D/16	422(e)	They contain less than 0.1 kg of uranium hexafluoride non-fissile or fissile-excepted, <u>according to para. 417</u>	For clarification.	CS-143: Reject: not needed because “fissile excepted” means compliance with 417.
S/120D/11.	422(e)	When comparing the clean version in “DS437” with “Table of Changes/2009 Edition versus 20xx (draft 1.1)” the words “ <u>are designed to</u> ” should be removed. The words seem to remain from the previous version of drafted changes in “Table of Changes / 2009 Edition vs 20xx (CS-19).		CS-143: Accept
USA/120D/09	422(e)	They are designed to contain less than 0.1 kg of uranium hexafluoride. ** This comment was	Correctness and consistency with paragraphs 422 (b) – (d)	CS-143: accept

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		agreed at TRANSSC 20 but the 120 day edition of TS-R-1 does not include the change.		
WNTI/120D/10	422(e)	<p>422. Packages may only be classified as <i>excepted packages</i> if the condition of para. 515 is met and if :</p> <p>(a) They are empty packages having contained radioactive material;</p> <p>(b) They contain instruments or articles in limited quantities as specified in Table 5;</p> <p>(c) They contain articles manufactured of natural uranium, depleted uranium or natural thorium;</p> <p>(d) They contain radioactive material in limited quantities as specified in Table 5; or</p> <p>(e) They are designed to contain less than 0.1 kg of uranium hexafluoride non-fissile or fissile excepted.</p> <p>Excepted packages shall not contain fissile material unless provisions of para. 514 (c) are met.</p>	<p>1) Nothing is said about the limit of 5 μSv/h at surface, which is a condition to be met prior to classify a package as excepted package. The condition that para 515 shall be met is proposed to be added (similarly to what is done in para. 411 for LSA material).</p> <p>2) Nothing is said about fissile-excepted materials which are allowed in excepted packages. It is proposed to delete “non-fissile or fissile-excepted” from text in (e), and to add the following sentence applicable to the whole para. 422: <i>Excepted packages shall not contain fissile material unless provisions of para. 514 (c) are met.</i></p>	<p>CS-143: Accept “if the condition of para. 515 is met “ “non-fissile or fissile excepted.””</p> <p>TRANSSC 21: rejected, new issues</p> <p>Secretariat:: 1) These materials may be classified as other big package if consigners want. It is safer. 2) There are other requirements for excepted packages. Para.515 is one of them.</p> <p>Reject: “Excepted packages shall not contain fissile material unless provisions of para. 514 (c) are met.” <u>TSU: rejected everything</u></p>
B/120D/07	423 (b)	<p>b) Each instrument or article bears the marking “RADIOACTIVE”. Where the instrument or article is too small to bear the marking, then the package shall</p>	To restore the text agreed by WG3 of TRANSSC20	CS-143: Accept as E/120D/07 <u>TSU: editorial. Need to check the English</u>

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		<p>bear the marking “RADIOACTIVE” on an internal surface in such a manner that a warning of the presence of <i>radioactive material</i> is visible on opening the <i>package</i>. Excepted that:</p>		
D/120D/21	423 (b)	<p>“<u>on its surface then the package shall bear this marking</u>” should be added after the second “RADIOACTIVE”</p>	for clarification and editorial	CS-143: Accept as E/120D/07
E/120D/07	423 (b)	<p>Each instrument or article bears the marking “RADIOACTIVE”, except:</p> <ul style="list-style-type: none"> (i) Radioluminescent time-pieces or devices; (ii) Consumer products that have either received regulatory approval according to para. 107(d) or do not individually exceed the activity limit for an exempt consignment in Table 2 (column 5), provided that such products are transported in a package that bears the marking “RADIOACTIVE” on an internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package; <p>Other instruments or articles too small to bear the marking “RADIOACTIVE”, provided that they are transported in a package that bears the marking</p>	<p>The wording of this paragraph in 20xx draft Edition is very confused. It is not expressing clearly the aim of the proposed change. An alternative text is offered</p>	<p>CS-143: Accept as modified: Each instrument or article bears the marking “RADIOACTIVE” <u>on its external surface</u>, except:</p> <ul style="list-style-type: none"> (i) Radioluminescent time-pieces or devices; (ii) Consumer products that have either received regulatory approval according to para. 107(d) or do not individually exceed the activity limit for an exempt consignment in Table 2 (column 5), provided that such products are transported in a package that bears the marking “RADIOACTIVE” on <u>its</u> internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package; (iii) Other instruments or articles too small to bear the marking “RADIOACTIVE” provided that they are transported in a package that bears the marking “RADIOACTIVE” on <u>its</u> internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package.

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		“RADIOACTIVE” on an internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package.		
D/120D/22	423 (b) (ii)	“product” in the third line should be replaced by “products”	editorial	CS-143: Accept
N/120D/02	423 b)	Add after “package”: the marking shall be placed on the outside.	The text contains an unfinished phrase omitting the intended requirement.	CS-143: Accept as E/120D/07
CAN/120D/10	423(b)	(b) Each instrument or article bears, where practical, the marking “RADIOACTIVE” where marking the instrument or article is not practical then the packaging shall bear the marking “RADIOACTIVE” on an internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package. Excepted from any such marking are: (i) Radioluminescent time pieces or devices. (ii) Consumer products that have either received regulatory approval according to para. 107(d) <u>provided that such products are transported in a package that bears the marking “RADIOACTIVE” on an internal surface in such a manner that warning of the presence of radioactive material is visible on opening the package.</u> (iii) <u>Consumer products that do not individually exceed the activity limit for an exempt consignment in Table 2 (column 5).</u>	Who determines what “practical” means? It is not defined in the Regulations; recommend that this exception be deleted for instruments or articles. Split (ii) into two separate entries (ii) and (iii). The RADIOACTIVE package marking should be kept for consumer products that have received regulatory approval according to para. 107(d).	Submitted after deadline These para was reworded. A new subpara was added.
CZ/120D/01	423(b)	(b) Each instrument or	Who determines what	CS-143: Reject : The word

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		<p>article bears, where practical, the marking “RADIOACTIVE” where marking the instrument or article is not practical then the packaging shall bear the marking “RADIOACTIVE” on an internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package. Excepted from any such marking are:</p> <p>(i) Radioluminescent time pieces or devices.</p> <p>(ii) Consumer products that have either received regulatory approval according to para. 107(d) <u>provided that such products are transported in a package that bears the marking “RADIOACTIVE” on an internal surface in such a manner that warning of the presence of radioactive material is visible on opening the package.</u></p> <p><u>(iii) Consumer products that do not individually exceed the activity limit for an exempt consignment in Table 2 (column 5).</u></p>	<p>“practical” means? It is not defined in the Regulations; recommend that this exception be deleted for instruments or articles.</p> <p>Split (ii) into two separate entries (ii) and (iii).</p> <p>The RADIOACTIVE package marking should be kept for consumer products that have received regulatory approval according to para. 107(d).</p>	<p>“practical” does not appear in the draft 1.1.</p> <p>Reject: this is a new issue.</p>
S/120D/12.	423(b)	<p>There is something wrong (or missing) in the paragraph 423(b).</p> <p>The second sentence: “Where the instrument or article is too small to bear the marking “RADIOACTIVE” on an internal surface in such a manner that a warning that a warning of presence of <i>radioactive material</i> is visible on opening the <i>package</i>” is not understandable!?”</p>	<p>Either a part of the sentence has been dropped by mistake or the sentence was never was never completed.</p>	CS-143: Accept as E/120D/07
WNTI/120D/11	423(b)	Each instrument or article	Editorial	CS-143: Accept

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		bears, the marking "RADIOACTIVE". Where ...		
WNTI/120D/12	423(b)	(...). Where the instrument or article is too small to bear the marking "RADIOACTIVE" on an internal surface in such a manner that a warning of the presence of <i>radioactive material</i> is visible on opening the <i>package</i> . (...)	Some words are missing in this sentence (there is no verb).	CS-143: Accept as E/120D/07
F/120D/13	423(b)(ii)	Change " <i>is visible in opening the package</i> " by " <i>is visible on opening the package</i> ".	Editorial	CS-143: Accept as E/120D/07
RA/120D/17	423(b)(ii)	Consumer products that have either received regulatory approval according to para. 107(d) or do not individually exceed the activity limit for an exempt consignment in Table 2 (column 5) do not require markings.	The last part of the text is the same that appears in (b).	CS-143: Accept as E/120D/07
RA/120D/18	424 (b)	The package bears the marking "RADIOACTIVE" on an internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package; and	Reason: it seems better that "RADIOACTIVE" will be not visible on an external surface of Excepted packages. It is preferable to leave the text as it is in the 2009 Edition of TS-R-1.	CS-143: Reject: Draft 1.1 refers to marking on internal surfaces. However, there are packages where internal marking are unpractical. (e.g. tanks)
D/120D/23	424 (c)	" In addition, " should be added at the beginning of the last sentence	for clarification	CS-143: Accept as J/120D/07
E/120D/04	424 (c)	(c) For transport by post, the total activity in each excepted package shall not exceed one tenth of the relevant limits specified in column 4 of Table 5.	The criteria of 10g of UF6 (one tenth of the maximum mass - 0.1Kg - of the UF6 in the excepted package) is not consistent with the criteria for other excepted packages: one tenth of the relevant Activity limits specified in column 4 of Table 5; which is also used for another Uranium compounds. Apart from that, it should be considered that the par. 424 only refers to UN 2910; so, it is not adequate to include in 424 (c) a provision for a different UN material (UN3XXX). In case that finally is decided to keep the criteria of 10g per package for the particular case	CS-143: Accept as J/120D/07

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
			of the UF6 , it means more appropriate to include the provision on the transport of UF6 (UN3XXX) by post in the par. 424.bis, which refers exclusively to UN 3XXX	
IND/120D/11.	424(b) (ii)	The outside of the package, where impractical to mark on an internal surface	The whole sentence should be deleted. Marking of RADIOACTIVE on the outer surface of an <i>excepted package</i> is not permitted by para 529 – 535 under MARKING.	CS-143: Rejected: the preferred option is still to mark on the internal surface but there are cases where this is not possible. See RA/120D/18
WNTI/120D/13	424(c) + 424bis	424 [...] (c) For transport by post, the total activity in each <i>excepted package</i> shall not exceed one tenth of the relevant limits specified in column 4 of Table 5. Uranium hexafluoride (UN3XXX) is limited to 10g per package for transport by post. 424bis. Uranium hexafluoride not exceeding the limits specified in column 4 of Table 5 may be classified under UN 3XXX RADIOACTIVE MATERIAL, EXCEPTED PACKAGE – URANIUM HEXAFLUORIDE, LESS THAN 0.1 KG PER PACKAGE less than 0.1 kg per package, non fissile or fissile excepted , provided that the conditions of 424 (a)– (c) are met. Uranium hexafluoride is limited to 10 g per package for transport by post.	1) If needed, depending on the outcome of the investigation of the UPU position on this requirement, following the TM in January 2010 decided), the sentence “uranium hexafluoride (UN3XXX) is limited to 10g per package for transport by post” should be in 424bis. It is proposed to delete this sentence from 424, since that para. 424 concerns packages classified under UN2910 not allowed for uranium hexafluoride, and to report this condition in 424bis. 2) Correction of description of the proper shipping name. 3) Correct typo by adding space between “10” and “g”.	CS-143: Accept as J/120D/07 Confirmation is need by UPU
E/120D/05	424bis	Less than 0.1Kg per package of Uranium hexafluoride not exceeding the limits specified in column 4 of Table 5 may be classified under UN 3XXX RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - URANIUM HEXAFLUORIDE, LESS THAN 0.1 KG PER	The description of the material should also refer to the quantity of UF6 per package (less than 0.1Kg) As additional comment: in case that finally is decided to keep the criteria of 10g per package for the particular case of the UF6 transported by post, it means more appropriate to	CS-143: Accept as J/120D/07

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		PACKAGE, provided that: (a) The conditions of 424 (a)–(b) are met. For transport by post the Uranium hexafluoride is limited to 10g per package	include this provision on the transport of UF6 (UN3XXX) by post in this par. 424.bis, which refers exclusively to UN 3XXX, since the par. 424 refers to UN 2910.	
J/120D/07	424bis	424bis. Uranium hexafluoride not exceeding the limits specified in column 4 of Table 5 may be classified under UN 3XXX RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - URANIUM HEXAFLUORIDE, LESS THAN 0.1 KG PER PACKAGE, provided that the conditions of 424 (a)–(c) are met. : <u>(a) A mass in the package shall be less than 0.1 kg.</u> <u>(b) The conditions of paras 420 and 424 (a), (b) shall be met.</u> <u>(c) For transport by post, a mass in the package shall be less than 10 g.</u>	The limit of 0.1 kg should be specified, and compliance to para 420 should be added. The limitation on the post transport is moved from 424(c).	CS-143: Accept as modified: 424bis. Uranium hexafluoride not exceeding the limits specified in column 4 of Table 5 may be classified under UN 3XXX RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - URANIUM HEXAFLUORIDE, <u>less than 0.1 kg per package, non fissile or fissile excepted.,</u> provided that the conditions of 424 (a)–(c) are met. : <u>(a) The mass of uranium hexafluoride in the package shall be less than 0.1 kg.</u> <u>(b) The conditions of paras 420 and 424 (a), (b) shall be met.</u> <u>(c) For transport by post, a mass in the package shall be less than 10 g.</u>
RA/120D/19	425	Delete the initial blank	Editorial	CS-143: Accept
CAN/120D/11	431	<i>Type B(U), Type B(M) and Type C packages</i> shall not contain: (a) Activities greater than those authorized for the <i>package design</i> ; (b) Radionuclides different from those authorized for the <i>package design</i> ; or (c) Contents in a form or a physical or chemical state different from those authorized for the <i>package design</i> ; as specified in the certificate of approval.	This change was discussed at TRANSSEC 20 and aims to combine almost identical paragraphs (431, 432, 434).	TSU: Merge paras 431, 432 and 434 as one para: <u>The content of a Type B(U), Type B (M) and Type C package shall be as specified in the certificate of approval.</u>
F/120D/14	431	431. A <i>Type B(U) package</i> shall not contain: (a) Activities greater than	Subparas. b) and c) should be deleted because redundant with new para. 606bis. See 606bis.	CS-143: Accept as modified:

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		<p>those authorized for the <i>package design</i>;</p> <p>(b) Radionuclides different from those authorized for the <i>package design</i>; or</p> <p>(c) Contents in a form or a physical or chemical state different from those authorized for the <i>package design</i>;</p> <p>as specified in the certificate of approval.</p>		
CAN/120D/12	432	Delete para	See new para 431 (CAN/120D/11)	Submitted after deadline, accepted
F/120D/15	432	<p>432. A <i>Type B(M) package</i> shall not contain:</p> <p>(a) Activities greater than those authorized for the <i>package design</i>;</p> <p>(b) Radionuclides different from those authorized for the <i>package design</i>; or</p> <p>(c) Contents in a form or a physical or chemical state different from those authorized for the <i>package design</i>;</p> <p>as specified in the certificate of approval.</p>	Subparas. b) and c) should be deleted because redundant with new para. 606bis. See 606bis.	CS-143: Accept as modified: The content of a Type B(M) package shall be as specified in the certificate of approval.
CAN/120D/13	434	Delete para	See new para 431 (CAN/120D/11)	Submitted after deadline, accepted
D/120D/24	434 (b)	“nor” should be deleted	editorial	CS-143: Accept as modified: (see F/120D/14 and 15) The content of a Type C package shall be as specified in the certificate of approval.
IND/120D/12.	435		‘CS-19 amended’ is not listed here.	CS-143: No need
J/120D/08	<u>501</u>	To review Para 501, Description in this para should be applied for packaging.	Due to this Para. 501 is only applied for packaging.	CS-143: Accept as follows: (a) If the <i>design</i> pressure of the <i>containment system</i> exceeds 35 kPa (gauge), it shall be ensured that the <i>containment system</i> of each

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
				<p>package <u>packaging</u> conforms to the approved <i>design</i> requirements relating to the capability of that system to maintain its integrity under that pressure.</p> <p>(c) For each <i>packaging</i> intended to contain <i>fissile material</i>, it shall be ensured that the effectiveness of the criticality safety features are within the limits applicable to or specified for the <i>design</i>, in particular where, in order to comply with the requirements of para. 671, neutron poisons are specifically included as components of the package, checks shall be performed to confirm the presence and distribution of those neutron poisons.</p>
PK/120D/06	501	<p>Before a packaging is first used to transport radioactive material, it shall be confirmed that it has been manufactured <u>by an authorized manufacturing facility</u> in conformity with the design specifications</p>	<p>To ensure safety and quality of the package, it is important that the manufacturer of the transport package be a valid license holder.</p>	CS-143: Reject: this is a new issue.
ZA/120D/10	501	<p>Before a packaging is first used to transport radioactive material, it shall be confirmed that it has been manufactured in conformity with the design specifications to ensure compliance with the relevant provisions of these Regulations and any applicable certificate of</p>	<p>No new text is proposed HOWEVER clarity is required as to the following</p> <p>Does this to apply to both certified packages AND validated packages? [i.e. if a user wishes to make use of a package of foreign design must the user confirm this? Also is this, confirmation</p>	<u>TSU: TS-G-1.1 explain further</u>

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		approval. The following requirements shall also be fulfilled, if applicable:	required to be made to the Competent Authority or just in-house?	
D/120D/25	501 (b)	“and” after “Type B(M)” should be replaced by “or”	editorial	CS-143: Accepted.
RA/120D/21	501 (b), 2nd line.	“... and for each packaging intended to contain fissile material, ...”.	Reason: consistency with para. 501 (c) and first line of para. 501 (b).	Accepted
RA/120D/20	501,	Before a package is first used to transport radioactive material, the following requirements shall be fulfilled, if applicable:	The confirmation that the packaging was manufactured according to design specifications must be done to competent authority in order to obtain the approval certificate.	CS-143: Rejected: new issue
RA/120D/01	501bis	Delete “ 501bis ”.	Reason: para. 501bis does not exist in proposed 20XX Edition of TS-R-1.	TSU: check consistence with 502
RA/120D/22	502	Harmonize format of the text	Editorial	CS-143: ccepted
J/120D/09	502/2-5	To confirm the following amendment by the technical editor in the Agency . Amend ‘specified in the relevant provisions of these Regulations and in the applicable approval certificates’ to read ‘specified in the relevant provisions of these Regulations and the applicable approval certificates’.	The later preposition ‘ in ’ is unnecessary.	CS-143: Editorial refer to IAEA technical editor
PK/120D/08	503	A package shall not contain any items other than those that are necessary for the use of the radioactive material. This requirement shall not preclude the transport of low specific activity material or surface contaminated objects with other items. The interaction between these items and the package, under the conditions of transport applicable to the design, shall not reduce the safety of the package.	To Keep the text as given in 1996 edition which is more comprehensive.	CS-143: Rejected: new issue
RA/120D/23	504	Freight containers, IBCs, overpacks...	editorial	CS-143: Accepted
WNTI/120D/14	504	504. Conveyances, freight containers, IBCs, overpacks and tanks , as well as other	Completeness of the list.	CS-143: Rejected: this is a new issue.

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		<i>packagings</i> used for the transport of <i>radioactive material</i> shall not be used for the storage or transport of other goods unless decontaminated below the level of 0.4 Bq/cm ² for beta and gamma emitters and <i>low toxicity alpha emitters</i> and 0.04 Bq/cm ² for all other alpha emitters.		
ZA/120D/11	507	These limits are applicable when, averaged over any area of less than or equal to 300 cm ² of any part of the surface.	Clearer	TSU: rejected previous decision is current text.
RA/120D/24	512, last line.	“... the fixed contamination on surfaces after decontamination shall not exceed 5 µSv/h at the surface.”	Reason: the limit should include 5 µSv/h; similar to para. 515.	CS-143: Accept as modified: “...person and shall not be reused unless - the <i>non-fixed contamination</i> does not exceed the limits specified in para. 507, - and the <i>radiation level</i> resulting from the <i>fixed contamination</i> does not exceed 5 µSv/h at the surface.”
RA/120D/25	514		It would be important that under “Particular of consignment” title had more information about the content of excepted packages, at least the radionuclide and its activity transported.	CS-143: Reject: this is a new issue and there is no precise proposal.
WNTI/120D/15	514	(c) If the <i>excepted package</i> contains <i>fissile material</i> , one of the fissile exceptions provided by para. 417 shall apply and the requirement of para. 634 shall be met.	Paragraph reference missing.	CS-143: Accept. TSU: review the para number in para 514 again when the section V and VI are renumbered
B/120D/08	514 (a)	514. <i>Excepted packages</i> shall be subject only to the following provisions in Sections V and VI: (a) The requirements specified in paras 502, 503, 504, 506–512, 515, 528-531, 544	The para 544 (i) (i) and the para 544 (i) (ii) are applicable for excepted packages with fissile excepted material	CS-143: accepted

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		introductory sentence, 544 (a), (i) and (j), 549, 558, 561, 578 and 579.		
D/120D/26	514 (a)	The following paras should be added to the listing: 543, 544 (k), 548, 550, 551, 552bis, 553	for completion and taking into account the provisions for special form radioactive material which may be used in excepted packages	CS-143: Accept, with the addition of 544(i) (see B/120D/08).
D/120D/27	514 (b)	“and the requirements in paras 602 – 604, if the excepted package contains special form radioactive material” should be added at the end	taking into account the provisions for special form radioactive material	CS-143: Reject: paragraphs 602-604 are applicable to all special forms, and are not specific to Excepted Packages.
D/120D/28	514 (c)	“634” should be added after “and the requirement of para.”	editorial	CS-143: Accept
GB/120D/08	514 (c)	Sentence to end: “...and the requirement of paragraph 634 shall be met.”	Correction of a typographical error.	CS-143: Accept
CAN/120D/14	514(a)	<i>Excepted packages</i> shall be subject only to the following provisions in Sections V and VI: (a) The requirements specified in paras 502, 503, 504,-506–512, 515, 528-531, 544 introductory sentence, 544 (a), (i) and (j), 549, 558, 561, 578 and 579.	In agreement with the content, however the para numbers referenced seem to be incorrect. Also, add 544(i) to 514(a)	Submitted after deadline, accepted
CAN/120D/15	514(d)	(c) If the excepted package contains fissile material, one of the fissile exceptions provided by para. 417 shall apply and the requirement of para. <u>634</u> shall be met.	Missing paragraph number, probably “634”.	Submitted after deadline, accepted but included in 514 (c).
WNTI/120D/16	517	For <i>LSA material</i> and <i>SCO</i> which is or contains <i>fissile material</i> , that is not excepted under para. 417, and for which the requirements of 672 and 672bis are not met , the applicable requirements of paras 565, 566 and 671 shall be met.	For those materials for which para. 672 or 672bis requirements are met, conditions put under para. 671 are met. It is suggested to say “the applicable requirements of paras 565, 566 and 671 and for which the requirements of 672 and 672bis are not met , shall be met.”	CS-143: Accepted as modified: 517. For <i>LSA material</i> and <i>SCO</i> which is or contains <i>fissile material</i> , that is not excepted under para. 417, the applicable requirements of paras 565 and 566 shall be met. 517bis. For <i>LSA material</i> and <i>SCO</i> which is or contains <i>fissile material</i> , that is not excepted under para. 417, and for which the requirements of 672 and 672bis are not met, the applicable requirements of para. 671 shall be met.

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
IND/120D/13.	518	(d)Unpackaged <i>fissile material</i> shall meet the requirements in paras 417 (e) and 580 566 bis .	Editorial: 'fissile material' is a defined term , so must be italicized. Para. 580 is not listed. It is proposed to give reference to 566bis which is appropriate.	CS-143: Accept "Fissile material" Reject "566bis" see E/120D/09.
WNTI/120D/17	518 (a)	<i>LSA material</i> and <i>SCO</i> in groups <i>LSA-I</i> and <i>SCO-I</i> may be transported, unpackaged, under the following conditions: (a) All unpackaged material other than ores containing only naturally occurring radionuclides shall be transported in such a manner that under routine conditions of transport there will be no escape of the <i>radioactive contents</i> from the <i>conveyance</i> nor will there be any loss of shielding.	What does this sentence mean? - ores cannot be transported as unpackaged LSA-I, or - this para (a) does not apply to ores transported as unpackaged LSA-I, Since there is no reason to consider ores containing naturally occurring radionuclides differently from other LSA-I material, it is proposed to delete this part of the sentence " <u>other than ores containing only naturally occurring radionuclides</u> "	CS-143: Rejected: This is a new issue.
B/120D/09	518 (d)	(d) Unpackaged <i>fissile material</i> shall meet the requirements in paras 417 (e) and 580-566bis .	Editorial	CS-143: Accepted as E/120D/09
D/120D/29	518 (d)	"and 580" should be deleted	wrong reference	CS-143: Accepted as E/120D/09
E/120D/09	518 (d)	Unpackaged fissile material shall meet the requirements in paras. 417 (e) and 566bis	The para. 580 doesn't exist. It means that the cross reference should be the para. 566bis.	CS-143: Accepted in principle. 417 (e) in identical to 566bis. So only one need to be quoted. Modified as : Unpackaged fissile material shall meet the requirements of para. 417 (e).
GB/120D/21	518 (d)	Reference to para 580 is incorrect as para 580 does not exist.	Typographic error	CS-143: Accepted as E/120D/09
RA/120D/26	518 (d)	Unpackaged material shall meet the requirement in para 417(e).	Para. 580 does not exist.	CS-143: Accepted as E/120D/09
J/120D/10	518(b)	(b) Each <i>conveyance</i> shall be under <i>exclusive use</i> , except when only transporting <i>SCO-I</i> on which the <i>contamination</i> on the accessible and the inaccessible surfaces is not greater than ten 10 times the applicable level	Editorial	CS-143: Accepted

UN/SCETDG/39/INF.8/Add.1

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		specified in para. 214.		
CAN/120D/16	518(d)	(d) Unpackaged fissile material shall meet the requirements in paras 417 (e) and 566bis 580	Para 580 has been replaced by 566bis. This change was to have been made following TRANSSC 20.	Submitted after deadline, para. 417 (e) makes reference to para. 566bis
F/120D/16	518(d)	Delete reference to para 580.	Draft para 580 about exclusive use has been deleted. Requirement for exclusive use is already stated in 518 b).	CS-143: accepted as E/120D/09
J/120D/11	518(d)	(d) Unpackaged <i>fissile material</i> shall meet the requirements in para. 417 (e) and 580 .	This subpara. should only be applied to unpackaged fissile material. Reference to para. 580 should be deleted, since it no longer does exist.	CS-143: accepted as E/120D/09
S/120D/13.	518(d)	The word “fissile” should be inserted after “Unpackaged”. In the same paragraph, the word “requirement” should read “requirements”.		CS-143: accepted as E/120D/09
USA/120D/10	518(d)	Unpackaged material shall meet the requirement in paras 417(e) and 566bis 580 . ** This comment was agreed at TRANSSC 20 but the 120 day edition of TS-R-1 does not include the change.	To update para cross-reference. Paragraph 580 does not exist in 120 edition of TS-R-1	CS-143: accepted as E/120D/09
PK/120D/11	518-d Section V	Unpackaged material shall meet the requirement in para 417(e) and 580 .	There is no para/subsection such as 580 in the draft which may be corrected.	CS-143: rejected: see E/120D/09
CAN/120D/17	520 and Table 7	Heading of column 2: “Activity limit for conveyances other than by inland waterway <u>craft</u> ”	Editorial. There is a disconnect between the paragraph and the headings. Paragraph is about conveyances and the heading without the addition relates to where the conveyance is moving. This likely occurred due to truncation of the heading at some point in the past leading up to the 1985 edition when the title “Vehicle, aircraft, hold, compartment or deck area of a seagoing vessel” (Title of column 2 of Table VI of the 1973 edition) was simplified.	<u>TSU: accepted as modified:</u> <u>Activity limit for conveyances other than by inland waterway craft</u>

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
RUS/120D/02	527, table 9, reference d)	If a package or an overpack requiring exclusive use shipment is contained in a freight container, the conveyance which carries the freight container, except large freight container , must also be under exclusive use	In the proposed new text the words “except large freight container” are added because large freight container itself is the object of definition of exclusive use (according to para.221), that is large freight container according to para. 221 being under exclusive use may be transported on conveyance together with other consignments of other consignors.	This proposal reverses the intention of draft 1.1 footnote (d) and need to be examined in separate group. TRANSSC 21: Adopt UN 17th Edition
ZA/120D/12	528	In all cases of international transport of packages requiring competent authority design or shipment approval, for which different approval types apply in the different countries concerned by the shipment, the UN number, proper shipping name, categorization, labeling and marking shall be in accordance with the certificate of the country of origin of design.	Clarity is needed as to what happens in case of a multilateral approval i.e. Type B(m)	TSU: to TS-G-1.1
IND/120D/14.	529Each <i>overpack</i>	‘Overpack’ is a defined term, so must be italicized.	CS-143: accepted
RA/120D/27	529	“Each package and freight container shall be legibly and durably marked...”	It is important that freight containers have the identification of consignor or consignee or both.	CS-143: rejected: It not needed because the overpack is included in the draft 1.1.
IND/120D/15.	530	and the UN marking as the <i>packages within the overpack</i> are clearly visible.	Editorial. ‘package ’ is defined term so must be italicized The packages must be followed by ‘within the overpack’ for consistency with para. 529.	CS-143: accepted see US/120D/11
USA/120D/11	530	Each <i>package</i> shall be legibly and durably marked on the outside with the UN marking as specified in Table 10. Additionally, each <i>overpack</i> shall be legibly and durably marked with the word “OVERPACK” and the UN marking as specified in Table 10 unless all markings of the <i>packages within the overpack</i> are clearly visible. ** This comment was discussed at TRANSSC 20	Consistency with overpack marking requirements of para. 529.	CS-143: accepted

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		and the resolution was to resubmit in 120 day comment period.		
B/120D/10	533	533. Each <i>package</i> which conforms to a <i>design</i> approved under one or more of the paras 805–814, and 816 and 817 shall be legibly and durably marked on the outside of the <i>packaging</i> with:	To take into account the possibility of multiple type approvals for the same design of packaging Editorial	CS-143: accepted
D/120D/31	533	“, 816 and 817” should be deleted and replaced by “and 816”	Para. 817 is no longer applicable.	CS-143: accepted
S/120D/15.	533 and 802(a)(v)	The reference seem inaccurate. “(see paras 805-814, 816 and 817)” should read “(see paras 805-814 and 816)”. The old text in 817 is incorporated in 816. Reference to para. 817 is also made in several places under “Index” and should be amended or removed (See next column!):	-“Index” under “Activity limits” on page 169 -“Index” under “Air (transported by)” on page 169 -“Index” under “Fissile material” on page 171 -“Index” under “Multilateral approval” on page 173 -“Index” under “Package design” on page 174 -“Index” under “Packaging” on page 174	CS-143: accepted
S/120D/16.	538, Heading before para.	Labelling fo “radioactive” contents should read Labeling for “radioactive” contents		CS-143: accepted
WNTI/120D/20	539	539. Each label conforming to the model in Fig. 5 shall be completed with the <i>CSI</i> as stated in the applicable certificate of approval <u>applicable in the countries through or into which the consignment is transported and</u> issued by the <i>competent authority</i> or as specified in paras 672 or 672bis.	Clarification about what is meant by “applicable”.	CS-143: accepted
D/120D/32	544 (d)bis	1. para. 544 (d)bis should be renumbered to 544 (c)bis 2. “ <u>according to the UN Model Regulations</u> ” should be added at the end	following the order of 5.4.1.4.1 of the UN Model Regulations	1) accepted 2) rejected: All UN Model regulations should be complied with. <u>TSU: reference [10] to be added.</u>
D/120D/33	544 (f), 544 (i)	“fissile material” should be italicized	editorial	accepted

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
E/120D/10	544 (i)	For fissile material: (i) Shipped under one of the exceptions of paras 417(a)–(f), reference to that para. (ii) Contained in a package for which one of paras 672(a)–(c) or 672bis is applied, reference to that para. (iii) The CSI, where applicable.	The point (ii) means unnecessary since the requirement of the mass of fissile nuclides is already required by the previous 544 (f)	CS-143: rejected: 544 (f) is not the same as point (ii).
GB/120D/23	544 (i) (i)	Shipped under one of the exceptions of para's 417 a-f reference to that para and sub-para	Para 417 has 6 options, need consignors to state which option has been taken	CS-143: accepted as modified: Shipped under one exceptions of the of sub-para's 417 a-f reference to that sub-para.
S/120D/18.	544(i)(iii)	We believe "paras 672(a)-(c) and 672bis" should read "paras 672(a)-(c) or 672bis".		CS-143: accepted
CAN/120D/19	552bis	Delete para.	Delete this paragraph. This is a brand new paragraph that was never discussed or introduced before and was not approved by TRANSSC.	TSU: accept the IATA proposal in TS-R-1 to permit for the comments.
E/120D/11	552bis	The consignor shall retain copies of the transport documents for a minimum period of three months. When the documents are kept electronically or in a computer system, the consignor shall be able to reproduce them in a printed form.	The term 'dangerous goods transport document' is belonging to some modal regulations, as the ICAO Technical Instructions. The term generally used by the TS-R-1 is 'transport documents' (paras. 544 and 552). To use 'dangerous goods document' and other particular references to general dangerous goods requirements is very confused for users of TS-R-1. Each international modal regulation shall adapt the general terminology used by the TS-R-1 to each particular case. It is not adequate to try to adapt the TS-R-1 to each particular case of international modal regulations, which may make very confuse the TS-R-1.	CS-143: accepted but moved to 551bis. See J/120D/12 TRANSSC 21: consider moving 552bis to TS-G-1.1. WG. Not appropriate for TS-G-1.1.
J/120D/12	552bis	552bis 551bis The consignor shall retain copies of dangerous goods transport information as follows:	This para. should be placed under one of the heading "Consignor's certification of declaration", not under "Information for carriers"	CS-143: accepted but use the wording in E/120D/11 TRANSSC 21: consider moving 552bis to TS-G-1.1.

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
RA/120D/28	552bis	Delete or move	It is inconsistent with the title "Information for carriers"	CS-143: accepted as J/120D/12 TRANSSC 21: consider moving 552bis to TS-G-1.1.
WNTI/120D/19	552bis	552bis The consignor shall retain copies of dangerous goods transport information as follows: (a) a copy of the dangerous goods transport document and additional information and documentation as specified in these Regulations shall be retained for a minimum period of three months. (b) When the documents are kept electronically or in a computer system, the consignor shall be able to reproduce them in a printed form.	Delete. This is a country-specific requirement.	CS-143: rejected: see E/120D/11 TRANSSC 21: consider moving 552bis to TS-G-1.1.
RA/120D/30	552bis (a), 1st line	“(a) <u>A</u> copy of the radioactive materials transport document...”	Reason: for consistency “A” should be in capital letter.	CS-143: accepted as E/120D/11 TRANSSC 21: consider moving 552bis to TS-G-1.1.
RA/120D/29	552bis first sentence	The consignor shall retain copies of <u>radioactive materials</u> transport information as follows:	These Regulations apply only to radioactive materials not to dangerous goods.	CS-143: accepted as E/120D/11 TRANSSC 21: consider moving 552bis to TS-G-1.1.
ZA/120D/13	554	<u>The consignor is not required to await an acknowledgement of receipt of the certificate</u>	It is not clear as to why should there be a notification if an acknowledgement of receipt is not required from the competent authority.	<u>TSU: rejected new issue</u>
E/120D/12	566bis	Delete the paragraph	566bis is really repeating those requirements established in 417 (e), so the para. 566bis may be deleted to simplify the TS-R-1	CS-143: accepted
N/120D/04	566bis	Delete the whole para.	Duplication of 417 e)	CS-143: accepted
RA/120D/31	566bis	Delete	It is not an additional requirement, it is the same text than para. 417(e)	CS-143: accepted
D/120D/34	576	“In addition,” should be added at the beginning of the last sentence	for clarification	<u>TSU: CS-143: accepted as WNTI/120D/21</u>
E/120D/06	576	A consignment that conforms with the requirements of para. 514,	The criteria of 10g of UF6 (one tenth of the maximum mass - 0.1Kg - of the UF6 in the	CS-143: accepted as WNTI/120D/21

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		and in which the activity of the radioactive contents does not exceed one tenth of the limits prescribed in Table 5, may be accepted for domestic movements by national postal authorities, subject to such additional requirements as those authorities may prescribe.	excepted package) is not consistent with the criteria for other excepted packages: one tenth of the relevant Activity limits specified in column 4 of Table 5; which is also used for another Uranium compounds. In addition, it is not enough justified whether the corrosive hazard of the UF6 has been considered to define the criteria of 10g of UF6 per package.	
GB/120D/10	576	Delete the last sentence	This sentence repeats the last sentence of paragraph 424 (c).	CS-143: rejected: Para 576 is specific for the transport by post.
J/120D/13	576	The additional sentence(Uranium hexafluoride (UN3XXX) is limited to 10g per package for transport by post) should be deleted.	Due to the same description in para 424.	CS-143: rejected: Para 576 is specific for the transport by post.
RA/120D/32	576	A consignment that conforms with the requirements of para. 514, and in which the activity of the radioactive contents does not exceed one tenth of the limits prescribed in Table 5 or 10 g of uranium hexafluoride under UN 3XXX , may be accepted for domestic movements by national postal authorities, subject to such additional requirements as those authorities may prescribe.	It is easier to read.	CS-143: accepted as WNTI/120D/21
S/120D/19.	576	In the paragraph 576, uranium hexafluoride is mentioned in amounts limited to 10 g per package. Sweden prefers the removal of uranium hexafluoride from this paragraph.	It is not clear how the value of 10 gram was arrived at. Furthermore the justification of such transport is also needed.	Need confirmation from UPU.
WNTI/120D/21	576	576. A consignment that conforms with the requirements of para. 514, and in which the activity of the radioactive contents does not exceed one tenth of the limits prescribed in Table 5, and which does not contain more than 10 g of uranium hexafluoride per package , may be accepted	If needed, depending on the outcome of the investigation of the UPU position on this requirement, following the TM in January 2010 decided), re-wording suggested.	accepted

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		for domestic movement by national postal authorities, subject to such additional requirements as those authorities may prescribe. Uranium hexafluoride (UN3XXX) is limited to 10 g per package for transport by post.		
WNTI/120D/22	577	A <i>consignment</i> that conforms with the requirements of para. 514, and in which the activity of the <i>radioactive contents</i> does not exceed one tenth of the limits prescribed in Table 5, <u>and which does not contain more than 10 g of uranium hexafluoride per package.</u> may be accepted for international movement by post, subject in particular to the following additional requirements as prescribed by the Acts of the Universal Postal Union: [...]	If needed, depending on the outcome of the investigation of the UPU position on this requirement, following the TM in January 2010 decided), the limitation to 10 g per package in case of uranium hexafluoride added in para. 576 shall also be added in that para.	CS-143: accepted
IATA/120D/02	579bis	A carrier shall not accept a <i>consignment</i> for transport unless: (a) A copy of the dangerous goods transport document and other documents or information as required by these Regulations are provided; or (b) The information applicable to the <i>consignment</i> is provided in electronic form.		Leave it to specific group during TRANSSC 21. TRANSSC 21: Don't add text to TS-R-1, but consider for TS-G-1.1. TSU: retain text for further comments
IATA/120D/03	580bis	The information applicable to the <i>consignment</i> shall accompany the <i>consignment</i> to final destination. This information may be on the dangerous goods transport document or may be on another document. This information shall be given to the consignee when the <i>consignment</i> is delivered.		Leave it to specific group during TRANSSC 21. TRANSSC 21: Don't add text to TS-R-1, but consider for TS-G-1.1. TSU: retain text for further comments
IATA/120D/04	581bis	When the information applicable to the <i>consignment</i> is given to the carrier in electronic form, the information shall be		Leave it to specific group during TRANSSC 21. TRANSSC 21: Don't add text to TS-R-1, but consider for TS-G-1.1. TSU: retain text for further

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		available to the carrier at all times during transport to final destination. The information shall be able to be produced without delay as a paper document.		comments
IATA/120D/05	582bis	The carrier shall retain a copy of the dangerous goods transport document and additional information and documentation as specified in these Regulations, for a minimum period of three months		CS-143: rejected: duplication of 552bis. TRANSSC 21: Don't add text to TS-R-1, but consider for TS-G-1.1. TSU: retain text for further comments
IATA/120D/06	583bis	When the documents are kept electronically or in a computer system, the carrier shall be capable of reproducing them in a printed form.		CS-143: rejected: duplication of 552bis. TRANSSC 21: Don't add text to TS-R-1, but consider for TS-G-1.1. TSU: retain text for further comments
CAN/120D/20	605 bis	To be determined.	It is not clear what the requirement is. The requirements are intended to apply to a material (design approval) certificate; however, examination of the referenced paragraphs show that they only apply to packages. As a result, it is unclear. a) Do these requirements apply to the material or to the package that contains the material? b) Does one just substitute the words "fissile material" wherever the word "package" is found in any referenced paragraph and do the assessment? Can the words be adjusted to state this unambiguously? c) If the certificate is for a material/package combination, then how is it different than an approved fissile material package design with a CSI of 0, however, without considering the controls etc.)	
ZA/120D/14	605 bis (a)	Conditions of para. 671(a) and water ingress that result in maximum neutron multiplication	Reads better	

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
E/120D/13	605bis (b)	No new test is proposed	The requirement of para.605bis (b) is too undefined and vague. It is not clear what it is expected with the sentence 'Conditions consistent with'. The provision is not requiring to comply with paras 681(b) and 682(b), because those paragraphs only apply to packages, it only requires 'to be consistent with', but what does 'consistent' means in this particular case. This requirement is too general for a multilateral approval process and it opens the door for applying different approaches in the assessments made by different competent authorities involved in an international transport.	CS-143: rejected: 1) This text is the result of the consensus of criticality experts. 2) Guidance on compliance with 605bis (b) and (c) will be provide in TS-G-1.1. 3) Different approaches in different member states is accepted by the requirement for multilateral approval.
J/120D/14	605bis heading	REQUIREMENTS FOR FISSILE MATERIAL EXCEPTED BY COMPETENT AUTHORITY.	Editotial (full-stop should be deleted)	CS-143: accepted
RA/120D/33	605bis(a).	Conditions of para. 671(a) where water inleakage will result in maximum neutron multiplication	Water inleakage is contemplated in para. 671(a)	CS-143: accepted
B/120D/11	606 bis	606 bis. <i>Packages</i> shall contain neither: (a) Radionuclides or radioactive materials different from those assessed for the <i>package design</i> ; nor (b) Contents in a form, or physical or chemical state different from those assessed for the <i>package design</i> .	To take into account the spent fuel or waste for which an exhaustive list of radionuclides is not always available Clarify the terms: physical or chemical form versus physical or chemical state (see paras 418, 831 ...). If no difference wording should be harmonized throughout the regulation.	CS-143: (a) Rejected: Guidance should be provided to explain that 606bis (a) does not imply a comprehensive list of radionuclides. (b) rejected: A form, or physical or chemical state is used in several places.
F/120D/17	606bis	Relocate the para. in section 5. 606 bis. <i>Packages</i> shall contain neither: (a) Radionuclides different from those assessed for the <i>package design</i> ; nor (b) Contents in a form, or physical or chemical state different from those	It is an operational requirement. Note that it makes subparas. b and c of paras. 431 and 432 useless.	CS-143: accepted: move to 501bis

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		assessed for the <i>package design</i> .		
RA/120D/34	606bis	Delete	The title says “General requirements for all packagings and packages, but this para. Applies only to packages requiring approval certificate.	CS-143: rejected: 606bis does not mention certificate of approval.
WNTI/120D/23	606bis	606 bis. 501bis Packages shall contain neither: (a) Radionuclides different from those assessed for the <i>package design</i> ; nor (b) Contents in a form, or physical or chemical state different from those assessed for the <i>package design</i> .	The contents of this paragraph is related to Section V “Requirements and controls for transport” and not to Section VI “Requirements for radioactive materials and for packagings and packages”.	CS-143: accepted as F/120D/17
D/120D/35	615bis	“ would ” should be replaced by “would”	editorial	CS-143: rejected: see WNTI/120D/24
E/120D/14	615bis	A package shall be so designed that it provides sufficient shielding to ensure that, under routine conditions of transport and with the maximum radioactive contents which the package is designed to contain, the radiation level at any point on the external surface of the package would not exceed the values specified in paras. 515 , 525 , 526 , as applicable taking into account paras 563(b) and 569 .	Para. 515 should be included since it applies to Excepted packages, which only have to comply with General Requirements for packages (paras. 606 to 616). Otherwise the para. 620 would be inconsistent.	CS-143: rejected: see WNTI/120D/24
RA/120D/35	615bis	“... designed to contain, the radiation level at any point on the external surface of the package shall not exceed the values specified in paras 525 , 526 , as applicable taking into account paras 563(b) and 569 , as well as the applicable radiation protection requirements shall be taken into account. ”	Reason: the text of the paragraph should be mandatory. Then, “would” should be replaced by “shall”. In addition, the consideration of the BSS applicable radiation protection requirements should be included, e.g. optimization of protection and safety.	CS-143: rejected: see WNTI/120D/24
WNTI/120D/24	615bis	615 bis. A package shall be so designed that it provides sufficient shielding to ensure that, under routine conditions of transport and with the maximum radioactive contents which the package is designed to	There is no safety justification for this new para., whilst there is a risk of different implementation of the requirement by the competent authorities. This paragraph should be deleted	CS-143: accepted: Because the risk of noncompliance is borne by the users and transport safety is not compromised. TRANSSC 21: reject to delete 615bis. 615bis is retained as draft 1.1.

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		contain, the radiation level at any point on the external surface of the package would not exceed the values specified in paras 525, 526, as applicable taking into account paras 563(b) and 569.		
WNTI/120D/25	620	An <i>excepted package</i> shall be designed to meet the requirements specified in paras 606–616 and, in addition, the requirements <u>of para. 634 in case of fissile material excepted under para 417</u> and paras 617–619 if carried by air.	All paragraphs applicable to the design of the package should be listed in that para. It is proposed to add requirements of para 634 in case of fissile material excepted under para 417.	CS-143: rejected: covered by para 514.
RUS/120D/03	651 (a)	Alter the arrangement, the geometrical form or the physical state of the <i>radioactive contents</i> or, if the <i>radioactive material</i> is enclosed in a can or receptacle (for example, clad fuel elements), cause the can, receptacle or radioactive material to deform or melt (the temperature of the radioactive content shall not exceed maximum allowable temperature defined by appropriate national standard or technical specification on this content);	Maximum allowed temperature after which the content will deform or melt is defined by appropriate standard or technical specification. It's necessary to point out that compliance with requirements of para 651 (a) is shown if and only if the temperature of content doesn't exceed that maximum allowed temperature. For example: during spent fuel transportation in a dry cask temperatures of fuel claddings shall not exceed maximum allowed temperatures, defined by technical specification on that type of fuel.	CS-143: rejected: should go to TS-G-1.1.
RA/120D/36	657	Re-name subparas. (b) and (c) to be read as (a) and (b)	Editorial and needed to understand the text.	CS-143: accepted
RA/120D/37	671(a)	“Maintain subcriticality during <u>routine</u> , normal and accident conditions of transport...”	Subcriticality shall be maintained under routine conditions of transport.	CS-143: accepted
CAN/120D/21	672		This modification is significant deviation from previous practices. The main concern is that in determination of CSI, the proposed modification replaces true reactor physics calculations of CSI by a formula and a set of tabulated data.	<u>TSU: rejected no proposal</u> CS-05: will be addressed in TS-G-1.1

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			<p>Extensive use of smallest critical masses instead of true reactor physics calculations is a significant simplification and the issue is that, assumptions, which were made to derive limits/smallest critical masses, may not be valid in a wide range of cases. That is, the derived masses/limits are safe in a very specific range.</p> <p>It is believed that the proposed modification of TS-R-1 should specify the exact range of conditions, under which they might be applied.</p>	
F/120D/18	672	<p>After the sentence <i>“Beryllium incorporated in copper alloys up to 4% in weight of the alloy does not need to be considered.”</i> Add : <u>“When a consignment is authorized in compliance with one of the provisions of the subparagraphs a, b and c of para. 672, this provision shall be applicable to any package containing fissile material in the consignment.”</u></p>	<p>Values of table M have been calculated for different configurations which are specific for individual subparas. a and b of para. 672. They are not valid for mixtures of these configurations.</p> <p>In addition, mixtures with packages approved to contain fissile material are also not recommended since mixture of fissile material dispersed from these packages with material dispersed from packages excepted according to 672 are not covered by calculations of Table M values and could be critical.</p> <p>Therefore mixture of one type of fissile exception according to para 672 with another type or with package approved to transport fissile material should be excluded.</p> <p>This provision is made possible by the transport document defined in para.544 according to subpara.(i) (iii).</p> <p>There is a similar issue for approved package designs since their criticality control is based on assuming some typical</p>	<p>CS-143: rejected: CSI was introduced in 672 in order to allow mixing of different package designs as it is permitted for competent authority approved fissile package designs.</p> <p>Mixing of different package designs is a new issue.</p> <p>CS-29: rejected</p>

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			environment conditions (20 cm water reflection) and no mixture either with CH2 or with other packages. It should be envisaged, for instance during the next review cycle, to review the environment conditions to be assessed for package arrays (nature of reflector and moderator, or presence of other packages containing fissile materials).	
F/120D/19	672	<p>672. Packages containing fissile material that meet one of the provisions of subparas (a)–(c) are excepted from the application of paras 673–683. The total mass of beryllium, hydrogenous material enriched in deuterium, graphite and other allotropic forms of carbon in an individual package shall not be greater than the mass of fissile nuclides in the package except where their total concentration does not exceed 1 g in any 10³ g of material Beryllium, hydrogenous material enriched in deuterium, graphite and other allotropic forms of carbon shall not be present in a total quantity exceeding 500 g per consignment except where their total concentration does not exceed 1 g in any 10³ g of material.</p> <p>Beryllium incorporated in copper alloys up to 4% in weight of the alloy does not need to be considered.</p> <p>...</p>	<p>As In 2009 edition of regulations (and previous editions) it is important to keep limits for beryllium and deuterium per consignment.</p> <p>The 500g value has been presented to the criticality expert group and is considered reasonable.</p>	<p>CS-143: Rejected: the criticality experts group agreed that beryllium limits should be on a package basis not consignment basis. This is because, it's impossible to know in advance the total mass in a consignment.</p> <p>CS-29: rejected</p>
WNTI/120D/26	672 (b) + (c)	<p>Packages containing fissile material that meet one of the provisions of subparas (a)–(c) are excepted from the application of paras</p>	<p>Subpara. (b) and (c) should include the possibility to consider alternative requirements for IP-2 and IP-3 (see para. 624 to 628). A large number of shipments of LSA or SCO with fissile</p>	<p>CS-143: rejected: The issue of alternative IP-2 tests for fissile purpose is a new issue.</p> <p>CS-29: to be reviewed by next review cycle.</p>

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		<p>673–683. The total mass of beryllium, hydrogenous material enriched in deuterium, graphite and other allotropic forms of carbon in an individual package shall not be greater than the mass of fissile nuclides in the package except where their total concentration does not exceed 1 g in any 103 g of material. Beryllium incorporated in copper alloys up to 4% in weight of the alloy does not need to be considered.</p> <p>(a) [...]</p> <p>(b) Packages containing fissile material in any form provided that:</p> <p>(i) The smallest external dimension of the package is not less than 30 cm.</p> <p>(ii) The package, after being subjected to the tests specified in paras 719–724 (or, in case of Type IP-2 or Type IP-3 conforming to one of the paras. 624 to 628, the alternative test requirements when required), shall;</p> <ul style="list-style-type: none"> — retain its fissile material contents. — preserve the minimum overall outside dimensions of the package to at least 30 cm. — prevent the entry of a 10 cm cube. <p>(iii) The CSI of the</p>	<p>excepted material use these alternatives possibilities. It is proposed that the “alternative requirements allowed for IP-2 and IP-3” may also be allowed for fissile material complying with 672 (b) or 672(c).</p> <p>The proposal is the following::</p> <p>“The <i>package</i>, after being subjected to the tests specified in paras 719–724 (<u>or, in case of Type IP-2 or Type IP-3 conforming to one of the paras. 624 to 628, the alternative test requirements when required</u>), shall:”</p>	

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		<p>package is calculated using the following formula:</p> $CSI = 50 \times 2 \times \{ [\text{mass of U-235 in package (g)}] / Z + [\text{mass of other fissile nuclides in package (g)}] / Y \}$ <p>Where the values of Z and Y are taken from Table M.</p> <p>(iv) The CSI of any package shall not exceed 10.</p> <p>(c) Packages containing fissile material in any form provided that:</p> <p>(i) The smallest external dimension of the package is not less than 10 cm.</p> <p>(ii) The package, after being subjected to the tests specified in paras 719–724 (or, in case of Type IP-2 or Type IP-3 conforming to one of the paras. 624 to 628, the alternative test requirements when required), shall;</p> <ul style="list-style-type: none"> — retain its fissile material contents. — preserve the minimum overall outside dimensions of the package to at least 10 cm. — prevent the entry of a 10 cm cube. <p>(iii) The CSI of the package is calculated using the following formula:</p> $CSI = 50 \times 2 \times \{ [\text{mass of U-235 in package (g)}] / Z + [\text{mass of other fissile nuclides in package (g)}] / Y \}$ <p>Where the values of Z and</p>		

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		<p>Y are taken from Table M.</p> <p>(iv) The maximum mass of fissile nuclides in any package shall not exceed 15 g</p>		
GB/120D/24	672 b (ii) and c (ii)	The package after being subjected to the tests specified in paras 719-724 or the alternative requirements listed in paras 624-628	The alternative tests specified in paras 623-628 have been assessed as safety equivalent to the normal conditions of transport listed in 719-724. Thousands of these package types are in operation with an excellent safety record, we see no reason to prohibit the use of these designs for para 672 b & c	CS-143: Rejected: The issue of alternative IP-2 tests for fissile purpose is a new issue. CS-05: was deemed the same as a previous WNTI/120D/26 comment
F/120D/20	672(b)	Delete the subpara.	In subparas. 672 (b) and (c), a minimum overall outside dimension of package is required under the tests representative for normal conditions of transport for which no check will be done by competent authority. Consignors concerned by this paragraph are not always trained about it. Nevertheless, paragraph 672 (c) could be acceptable since there is the same provision for distribution of fissile nuclides through the consignment to prevent the accumulation of fissile material as in current paragraph 417 and it has been improved by the use of CSI. This paragraph allows industry to use the same packages as now. Conversely para 672 (b) does not provide same level of safety and should be deleted.	CS-143: rejected: 672 was designed not to require approval by CA but to allow self-certification. CS-29: This comment deals with the more fundamental issue of self-certified packages. If it is to be discussed, it should be done at TRANSSC
J/120D/15	672(c)(iii)	<p>(c)(iii) The <i>CSI</i> of the <i>package</i> is calculated using the following formula:</p> $CSI = 50 \times 2 \times \{[\text{mass of U-235 in package (g)}] / Z + [\text{mass of other fissile nuclides in package (g)}] / Y\}$ <p>Where the values of Z</p>	Para. 672.4 of the advisory material addresses that para. 672(c) does not allow credit for lower enrichment of uranium. Thus, Z should be taken from the row for 100% enriched uranium in Table M.	CS-143: Accepted as modified: <u>Where the values of Z and Y are taken from Table M. The value of Z shall be that for 100% enriched uranium.</u> <u>TSU: if only one column in the table M then Y and Z may be replaced by value in the formula.</u>

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		is taken from the 6th row and Y are is taken from Table M.		
J/120D/16	672(c)(iv)	(c)(iv) The maximum mass of <i>fissile nuclides</i> in any <i>package</i> shall not exceed 15 g.	Editorial (full-stop is missing)	accepted
RA/120D/39	679	Delete “assuming close reflection by at least 20 cm of water, and”	If reflection by 20 cm of water implies maximum neutron multiplication such condition must be considered with the original wording. There could be other reflection condition more restrictive than 20 cm of water.	CS-143: rejected: This is a new issue because it challenges the adequacy of 20 cm water reflection.
WNTI/120D/27	679	679. The <i>package</i> shall be subcritical under the conditions of paras 677 and 678, assuming close reflection by at least 20 cm of water, and with the <i>package</i> conditions that result in the maximum neutron multiplication consistent with ...	This condition is already included in para. 678 and it is not necessary to repeat it in para. 679.	CS-143: accepted:
D/120D/36	706	“3.0 ± 0.3” should be in parentheses	editorial	Leave it to technical editor
D/120D/37	711 (a) (ii)	“50 ± 5” should be in parentheses	editorial	Leave it to technical editor
D/120D/38	727 (b)	“15.0 ± 0.5” should be in parentheses	editorial	Leave it to technical editor
D/120D/39	729	“h” before “hours” should be deleted	editorial	CS-143: accepted
D/120D/40	733	“h” should be replaced by “hours”	editorial	CS-143: accepted
RA/120D/40	735	“Puncture-tearing test: The specimen shall be subjected to the damaging effects of a vertical <u>oriented</u> solid probe...”	The word vertical refers to a position of the probe, not to the probe itself.	CS-143: rejected; no obvious need.
D/120D/42	802 (a) (v)	“, 816 and 817” should be deleted and replaced by “and 816”	Para. 817 is no longer applicable.	CS-143: accepted
F/120D/22	802 (a) (v)	... (v) Packages containing fissile material unless excepted by para. 417, 672 (a) or (c) or 672bis (see paras 812–814, 816 and	Paragraphs 672(b) should require approval by CA because sub-criticality is based on the demonstration of resistance of the packages to the test specified in the regulations for normal	<u>TSU: rejected. Refer para 672 (b)</u>

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		817). ...	conditions of transport and the objective is to obtain an equivalent safety level to the one of the approved packages. The consignors are not all competent for certifying the behaviour of packages under regulatory tests.	
S/120D/21.	802(a)(vi)	The reference in brackets should read "(see paras 806-811 and 816)		CS-143: accepted
J/120D/18	804 bis/(b)	The phrase "calculative methods" should be replaced by "calculation methods."	"The calculation methods" is more commonly used than "calculative methods."	CS-143: accepted
IND/120D/16	804 bis/first line	<i>A fissile material to be excepted</i>	Editorial. "To be excepted" should not be italicized.	CS-143: accepted
J/120D/19	804 ter/2	Add "excepted by the competent authority" after "fissile material."	Editorial error.	Accepted
IND/120D/17.	804bis(d)	Specific actions to be taken prior to shipment.	To harmonize with para 830bis(h)	CS-143: accepted
RA/120D/41	804ter, 2nd line	"...stating that the approved materials meet the requirements for fissile material <u>excepted by competent authority...</u> "	Para 605bis refers to fissile-excepted materials, not to fissile materials.	CS-143: accepted
F/120D/23	812	812. Each package design for fissile material, unless excepted by any of paras 417(a)-(e), 672 and 672bis, shall require multilateral approval.	417 (f) requires multilateral approval.	CS-143: accepted
S/120D/22.	812	Sweden does not approve of the new formulation of 812. Hence also the paragraphs 672 and 672bis can be removed.	The complexity in showing compliance, calculating correct CSI values etc., is high and the consequences of making errors could be severe. Sweden is of the view that it requires approval by a competent authority.	CS-143: rejected: see F/120D/20 This comment concerns the issue of self-certification for para 672 (b).
WNTI/120D/28	812	812. Each <i>package design for fissile material, unless which is not</i> excepted by any of paras 417, 672 and 672bis, shall require <i>multilateral approval.</i>	Clarification: the paras 417, 672 and 672bis provide exceptions for the material, not for the need for the multilateral approval.	CS-143: accepted
F/120D/24	815	Add : (d) documentary evidence of the compliance of the	Para. 815 should be completed by this provision that is similar to what is required in para. 801 for all packages that do not	Reject: documentary evidence of compliance is implicit in the requirement for management systems. This could be included in

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		<i>package design with all the applicable requirements of the relevant Edition of these Regulations.</i>	require CA approval of the design.	TS-G-1.1
F/120D/25	815	Re-numbering of the subparas. is needed.	Typo	CS-143: accepted
GB/120D/13	815	Replace “package” with “packages” in two places.	Correction of a typographical errors.	CS-143: accepted: in two place in the first line.
GB/120D/14	815	TRANSSC 21 is requested to review and confirm the meaning of the last two sentences of this paragraph.	The significance of the 31 December 2003 date is unclear, particularly in respect of packages prepared for transport in respect of fissile exceptions no longer permitted in TS-R-1 20xx.	accepted
GB/120D/25	815	Clarification required	Will para 815 permit the transport of fissile excepted packages loaded prior to the introduction of these regulations	Packages already loaded under the existing fissile exception criterion must be transported under the provisions of para 417 or 672. It is believed that sub-para 815 (c) requires this via para 539. However a more explicit requirement in para 815 may be required.
WNTI/120D/29	815	815. Excepted packages, Type IP-1, Type IP-2, Type IP-3 and Type A package shall meet this Edition of these Regulations in full. As an exception, packages prepared for transport prior to 31 December 2003 under the 1985 or 1985 (As Amended 1990) Editions of these Regulations, may continue in transport, provided Use of excepted package, Type IP-1, Type IP-2, Type IP-3 and Type A package that they were not designed to contain uranium hexafluoride and that did not require approval of design by the competent authority and which meet the requirements of the 1985 or 1985 (As Amended 1990) Editions of these Regulations shall be subject to:	- It is better to start with the basic requirement (i.e. to transport with a package that meets the latest edition of the Regulations) which is currently set forth at the end of para. 815. - The sentence “Any packaging modified or manufactured after 31 December 2003 shall meet this Edition of these Regulations in full” can be deleted as this requirement is covered by the fact that a package can only be transported under the provisions of the 1985 or 1985 (As Amended 1990) Editions of these Regulations is it was prepared prior to 31 December 2003 and subsequently manufactured prior to this date.	CS-143: accepted as modified: 815. Excepted packages, Type IP-1, Type IP-2, Type IP-3 and Type A packages which did not require competent authority design approval and which meet the requirements of the 1985 or 1985 (As Amended 1990) Editions of these Regulations, may continue to be used, provided that they were not designed to contain uranium hexafluoride and subject to: (a) The <i>management system</i> in accordance with the applicable requirements of para. 306 (b) The activity limits and classification material restrictions of Section IV. (c) The requirements and controls for transport in Section V. Any packaging modified, unless to improve safety, or manufactured after 31 December 2003 shall meet this Edition of these Regulations in full. TRANSSC 21: refer to CS to

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		<p>(a) The <i>management system</i> in accordance with the applicable requirements of para. 306</p> <p>(b) The activity limits and classification material restrictions of Section IV.</p> <p>(c) The requirements and controls for transport in Section V.</p> <p>Any <i>packaging</i> modified or manufactured after 31 December 2003 shall meet this Edition of these Regulations in full.</p> <p><i>Packages</i> prepared for transport shall meet this Edition of these Regulations in full, except for <i>packages</i> prepared for transport prior to 31 December 2003 under the 1985 or 1985 (As Amended 1990) Editions of these Regulations, which may continue in transport.</p>		address again.
E/120D/02	815 – 817 Transitional Arrangements		The new edition should define particular transitional arrangements for those packages already prepared complying with the fissile exceptions criteria of previous TS-R-1 editions. Otherwise new criteria for fissile exceptions will require in many cases the handling of the material already packed under previous TS-R-1 editions by re-conditioning and re-packing material (inter alia ALARA should be considered).	See GB/120D/25. If a pre-loaded fissile excepted package cannot be transported under 417 or 672 then an arrangement should be made with the CA to avoid the need for repacking
IND/120D/19.	815(b)	<p>...material restriction of...</p> <p>Any <i>packaging</i> modified or manufactured</p> <p><i>Packages</i> prepared for transport except for <i>packages</i> prepared</p>	<p>‘material restriction’ to be deleted to make consistency with para 816(C) and title of Section IV.</p> <p>‘<i>packaging</i>’ and ‘<i>packages</i>’ are defined words, so must be italicized.</p>	CS-143: accepted
RA/120D/42	815, 1st and 2nd lines	Use of excepted packages, Type IP-1, Type IP-2, Type	Editorial	CS-143: accepted

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		IP-3 and Type A packages...		
J/120D/20	815/2	Amended 'uramiur' to 'uranium'	Erratum	CS-143: accepted
J/120D/21	815/8	Add ", unless to improve safety," between 'Any packaging modified' and 'or'.	This phrase is necessary to use the packaging.	CS-143: accepted: see WNTI/120D/29
IND/120D/18.	815/first & 2 nd line	Use of <i>excepted package, Type IP-1, Type IP-2, Type IP-3</i> and <i>Type A package</i> that were ...uranium hexafluoride.	Editorials: I. Defined words. It should be italicized. II. To keep gap between 'package' and 'that' III. Uranium is the correct word	CS-143: accepted
WNTI/120D/33	815-816	Section VIII APPROVAL AND ADMINISTRATIVE REQUIREMENTS¹ (...) ¹ Although this publication is identified as a new edition, there are no changes that affect the administrative and approval requirements in Section VIII.	It is suggested to keep footnote found in Section VIII of the 2009 edition of the Regulations, "Although this publication is identified as a new edition, there are no changes that affect the administrative and approval requirements in Section VIII", in order to clarify how the regulations allow for the continued use of packages approved to the 1996, 2005 and 2009 editions of the IAEA regulations.	CS-143: accepted as D/120D/41
F/120D/26	816	Add: ... <u>(g) the package design has not been modified during transitional period unless to improve safety.</u> ...	According to previous Editions of the Regulations, a package approved by the competent authority under the provisions of the 1973 or the 1985 or the 1996 Editions of these Regulations could not be modified unless to improve safety.	CS-143: accepted:
IND/120D/20.	816	<i>Packages</i> requiring <i>competent authority</i> (a)(bis) <i>Packagings</i> to a <i>package</i> <i>competent authority</i> (a) The <i>packages</i> design is subject to <i>multilateral approval</i> . (e) For a <i>package</i> containing <i>fissile material</i> (f) For <i>packages</i> which (i)The <i>packages</i> _ <i>package</i> which the	Editorials. All defined words must be italicized.	CS-143: accepted

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		<i>package</i>(ii) The <i>packages</i> (iii) of each <i>packaging</i> .		
WNTI/120D/30	816	(a) The <i>packages design</i> is subject to <i>multilateral approval</i> .	- 816(a): Editorial - More generally, the limit date for manufacturing has disappeared and should be reintroduced.	CS-143: accepted
D/120D/44	816 (a)(bis)	“and were in use continuously” should be added at the end	for clarification (consistent with the current provisions to avoid new approval of old designs)	CS-143: rejected: If needed this can be covered by multilateral nature of the approval. It can be provided by TS-G-1.1.
D/120D/43	816 (first sentence)	“ <u>all of</u> ” should be added after “unless”	for clarification	CS-143: rejected: Because the “all of” is implicit.
B/120D/12	817	817. Packages designed to meet <i>Packagings shall no longer be manufactured to a package design</i> under the provisions of the 1973, 1973 (As Amended), 1985, and 1985 (as Amended 1990) Editions of these Regulations shall no longer be allowed .	The packagings are manufactured and not the packages	CS-143: accepted
D/120D/45	817	“817” should be replaced by “817.” “Packages” should be italicized	editorial editorial	CS-143: accepted
F/120D/27	817	817. To be used for the transport of radioactive material, <i>packagings</i> manufactured to a <i>package design</i> approved by the <i>competent authority</i> under the provisions of the 1973 or 1973 (As Amended) Editions of these Regulations and which manufacture has begun begins after 31 December 1995 shall meet this Edition of the Regulations in full. <u>817bis. To be used for the transport of radioactive material,</u> <i>packagings</i> <u>manufactured to a package design approved by the competent authority under the provisions of the 1985 or 1985 (As Amended 1990) Editions of these Regulations and which manufacture has begun</u> begins after 31 December 2006 shall meet this Edition of the Regulations in full.	It is not possible to forbid manufacturing of packagings when they are used for other purposes than transport	CS-143: accepted as modified: (by nature, TS-R-1 only applies to the transport of RM) 817. To be used for the transport of radioactive material, <i>packagings</i> manufactured to a <i>package design</i> approved by the <i>competent authority</i> under the provisions of the 1973 or 1973 (As Amended) Editions of these Regulations and which manufacture has begun begins after 31 December 1995 shall meet this Edition of the Regulations in full. <u>817bis. To be used for the transport of radioactive material,</u> <i>packagings</i> <u>manufactured to a package design approved by the competent authority under the provisions of the 1985 or 1985 (As Amended 1990) Editions of these Regulations and which manufacture has begun</u> begins after 31 December 2006 shall meet this Edition of the Regulations in full.

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		<u>begins after 31 December 2006 shall meet this Edition of the Regulations in full.</u>		
GB/120D/12	817	“ <u>Packages not compliant with the 1996 or later editions of these Regulations shall no longer be manufactured.</u> ”	As written this paragraph excludes package designs originally certified to earlier editions of the regulations, but subsequently re-certified to the 1996 or later editions, from new manufacture.	CS-143: rejected: see F/120D/27
IND/120D/21.	817	<i>Packages</i> designed to meet the provisions of	Defined word must be italicized.	CS-143: accepted
S/120D/23.	817, New para.	The comma after “1985” should be removed		See F/120D/27
PK/120D/09	819/2nd	The competent authority shall be informed of the serial number of each packaging manufactured to a design approved under paras 806, 809, 812 and 816, <u>817</u> .	Competent authority should also be informed about para 817. Because information mentioned in this para is important for competent authority.	CS-143: rejected: no need
F/120D/28	828	FE Fissile excepted material meeting requirements in complying with provisions of para. 417(f)	Clarification of the wording	CS-143: accepted as modified: Fissile excepted material meeting requirements in complying with <u>the provisions</u>
E/120D/15	830bis	Delete point (1)	The reference to documentation that demonstrates compliance with para. 605bis is not necessary to be included in the certificate. That information will be a part of the application for the approval certificate. There are not other similar references in other types of certificates as special form or low dispersible radioactive material (para.830) or packages, fissile included (para.833)	CS-143: rejected: the certificate should reference the safety case. As it is case 831 (k) (iii), 833 (n) (iv)
D/120D/46	830bis Heading of para.	the heading should be in bold letters	editorial	CS-143: accepted
RA/120D/43	830bis(h)	<u>Reference to information provided by the applicant relating to</u> specific actions to be taken prior to shipment.	For consistency with para. 830	CS-143: accepted
RA/120D/44	830bis(l)	<u>If deemed appropriate by the competent authority.</u> reference to documentation that demonstrates	Competent authority decides about the inclusion of references.	CS-143: rejected: the certificate should reference the safety case. As it is case 831 (k) (iii), 833 (n) (iv)

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		compliance with para. 605bis.		
S/120D/24.	830bis, Heading before	The heading should be in bold		CS-143: accepted
D/120D/47	831 (k) (vi)	“the” at the beginning of the sentence should be replaced by “The”	editorial	CS-143: accepted
S/120D/25.	831(j)	The comma before “or fissile material excepted under para. 417(f)” should be removed (compare paras 832(j) and 833(l)).		CS-143: accepted
RA/120D/45	833(n)	Delete “package design” to read “multilateral approval”	To harmonize the wording	CS-143: accepted
D/120D/02	ANNEX Contents	“ANNEX” after “ANNEX III” should be deleted	editorial	CS-143: accepted as modified: “ANNEX “ should be replaced by “ANNEX IV” (Annex IV will be available later, subject to BSS approval).
RA/120D/46	ANNEX I, para. 803	803 - Design Yes <u>No</u> No Applied to special form radioactive material (SFRM), replace second “Yes” by “No”.	Reason: in accordance to para. 803, SFRM design requires unilateral approval (approval of the design by the competent authority of the country of the origin of the design only). Then, SFRM design does not require the approval of competent countries in route.	CS-143: accepted Additional line is need for para 804bis. (Yes Yes No)
WNTI/120D/31	Annex III	Title should be: “Shipments requiring exclusive use”.	The title is not appropriate and should be changed.	CS-143: accepted as modified: Summary of shipments requiring exclusive use
WNTI/120D/32	Annex III	Exclusive use applies for shipments of the following (...) (k) required by the consignor	To be consistent with suggested change in para. 221.	CS-143: rejected: the change of para 221 was rejected.
IND/120D/22.	Annex III(j) <i>exclusive use</i> , either packaged or unpackaged, per the provisions of paras 417(e), 518 (d) and 580 566bis .	‘Para. 580 is not listed. It is proposed to give reference to 566bis which is more appropriate.	CS-143: rejected: see RA/120D/47
F/120D/29	Annex III(j)	(j) Up to 45 g of <i>fissile nuclides</i> on a conveyance shipped as <i>exclusive use</i> , either packaged or unpackaged, per the provisions of 417(e), 518(d) and 580 566bis .	Consistency	CS-143: rejected: see RA/120D/47
RA/120D/47	Annex III(j)	Up to 45 g of fissile nuclides on a conveyance <u>either</u>	The wording “shipped as exclusive use” is not necessary	CS-143: accepted

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		<u>packaged or unpackaged, per the provisions of paras. 417(e) and 518(d).</u>	because all the requirements in the Annex III are for exclusive use. The para. 580 does not exist.	
J/120D/23	ANNEX III/(a)	(a) Unpackaged <i>LSA-I</i> material and <i>SCO-I</i> , <u>except when only transporting SCO-I on which the contamination on the accessible and the inaccessible surfaces in not greater than 10 times the applicable level specified in para.214</u> (see para. 518).	Exception should be added for unpackaged SCO-I (see para. 518(b)).	CS-143: rejected: the purpose of Annex III is not to give all the details.
J/120D/24	ANNEX III/(e)	(e) <i>Package</i> or <i>overpack</i> having an individual <i>TI</i> greater than 10 or an individual <i>CSI</i> greater than 50, <u>or consignment having a CSI greater than 50</u> (see paras 524 and 564).	The consignment CSI limit should be addressed.	CS-143: accepted as modified: <i>Package</i> or <i>overpack</i> having an individual <i>TI</i> greater than 10 or a <u>individual consignment</u> <i>CSI</i> greater than 50 (see paras 524 and 564).
J/120D/25	ANNEX III/(f)	(f) <i>Package</i> or <i>overpack</i> having a <u>the maximum</u> radiation level at the contact of any point on <u>the</u> external surfaces that exceed 2 mSv/h (see para. 525).	To be consistent with text in para. 525.	CS-143: accepted
J/120D/26	ANNEX III/(g)	(g) Loaded <i>conveyance</i> or large <i>freight container</i> with a total sum of <i>TI</i> exceeding the values given in Table 11, <u>except for consignments of LSA-I material</u> (see para. 563 (a));	Exception for consignments of LSA-I material should be addressed (see para. 563(a)).	CS-143: rejected: the purpose of Annex III is not to give all the details
J/120D/27	ANNEX III/(i)	(i) <i>Type B(U)</i> , <i>Type B(M)</i> or <i>Type C package</i> which temperature of accessible surfaces higher than 50°C <u>but not higher than 85°C</u> when subject to the ambient temperature of 38°C in absence of insolation (see paras 652 and 653).	Restriction (not exceed 85°C) should also be added (see para. 653).	CS-143: rejected: the purpose of Annex III is not to give all the details
J/120D/28	ANNEX III/(j)	(j) Up to 45 g of <i>fissile nuclides</i> on a <i>conveyance</i> shipped as exclusive use, either packaged or unpackaged, per the provisions of paras 417(e), <u>and 518 (d)</u> and 580.	Para. 580 does no longer exist.	CS-143: accepted

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
J/120D/22	ANNEX III/title	ANNEX III: SUMMARY OF REQUIREMENTS FOR SHIPMENTS WHERE EXCLUSIVE USE <u>IS APPLIED</u>	Annex III addresses shipments for which exclusive use required, not the requirements for exclusive use.	CS-143: accepted as WNTI/120D/31
S/120D/17.	Figures 2-7 under paras. 537, 540 and 542	The figures 2-7 under paras 537, 540 and 542 are placed differently (under different paras) in “Ds437” as compared to “Table of changes/2009 Editions 20xx (draft 1.1)”. Should this be checked?		CS-143: accepted
D/120D/01	General	When there is a list of requirements within a paragraph, it is often not clear, if it means “and” or “or”. An appropriate rule has to be defined. “approval” should be italicized, it is not consistent in the draft, therefore the draft has to be checked	clarification is needed for consistency in the whole draft editorial	Leave to technical editor
S/120D/01	General	The reference to paragraph 827 should be amended or removed since para. 827 has been deleted and relevant parts of that text has been shifted to para. 802. This comment applies to (see next column):	- “Lists of contents” under Section VIII on page 5: For “competent authority approval certificates (802-829) - Para. 821 - “Index” under “Low dispersible radioactive material” on page 172 - “Index” under “Package Design” on page 174 - “Index” under “Package Design” on page 175	CS-143: accepted
S/120D/02	General	In the following paragraphs there are words or terms that should be written in italic. They are defined words or terms in Section II, Definitions, which seems to be written in italic throughout the draft: This comment applies to (see next column):	Para. 105, third row: “management systems” Para. 221, third row: “shipment” Para. 222(b), last word: “package” Para. 223, fifth row: “freight container” Para. 409(a)(ii): “Natural uranium, Depleted uranium” Para. 539, second row: “approval” Para. 544 (i): “Fissile material” Para. 830bis (h): “shipment”	CS-143: accepted

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
			Annex III, SUMMARY OF REQUIREMENTS FOR EXCLUSIVE USE on page 167, first row: “shipments”	
S/120D/03.	General	A reminder that UN 3XXX should be amended to the appropriate UN number before the regulations are printed. There is a proposal submitted by IAEA to the UN Sub-Committee meeting for December 2010 (Working Document ST/SG/AC.10/C.3/2010/78).]	This applies to paras 401 (table 1 under “Uranium hexafluoride”), 419 (b), 424 (c), 424bis and 576	CS-143: accepted to be considered by the technical editors
RA/120D/48	General comments	Different wordings are used to designate certificates issued by competent authority: certificate of approval, competent authority approval certificate, approval certificate, certificate, competent authority certificate, design certificate, package design certificate, and package design approval certificate, being “approval certificate” the one most used. It would be reasonable to adopt one of these designations and maintain it along all the Regulations.	To facilitate the comprehension of the Regulations.	Leave it to technical editors – use defined terms wherever possible, CS-32 made a proposals.
RA/120D/49	General comments	With the same objective that comments No 47, it would be reasonable to adopt “fissile excepted material” as the only way to designate fissile material excepted from the application of paras. 673-683.	To facilitate the comprehension of the Regulations.	Previous TRANSSEC meetings had objected to the term “Fissile excepted material”
RA/120D/50	General comments	It is quite difficult to identify the exceptions to the requirements for fissile material due that they are located in two different sections of the Regulations (paras. 417, 672 and 672bis). It would be more understandable if all the exceptions were located in the same place.	To facilitate the comprehension of the Regulations.	417 contains fissile exceptions but 672 is fissile and requires a CSI. It is appropriate that they should be separate.
S/120D/26.	INDEX	The reference on page 171 to		Review and amend index once text

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
	Page 171 Excepted package	para 426 for “Excepted package” should be amended since 426 has been changed to 424ter!		finalised
D/120D/03	List of Tables	“Table 4 Consignment mass limits for exceptions from the requirements for packages containing fissile material” should be deleted the following tables after “Table 4” have to be renumbered the titles of the tables in the text should be checked for consistency with the titles in the List of Tables	consistency (Table 4 is no longer contained in the current draft) consequential change editorial	Review and amend list of tables once text finalised
PK/120D/07	Section III	A new para with the title “Quality Assurance Program” may be included as follows: A QA program shall be established for all aspects of radioactive material transport, and it covers the design, manufacture, testing, documentation, use, maintenance and inspection of all packages as well as transport and in transit storage operations. The competent authority shall approve the design or shipment, and be contingent upon the adequacy of the quality assurance program.	Quality assurance program should be established for all aspects of radioactive material transport, and should cover the design, manufacture, testing, documentation, use, maintenance and inspection of all packages as well as transport and in-transit storage operations.	Reject – guidance in TS-G-1.1 should be provided
CAN/120D/18	Section V, Table 9, footnote d	If a package or an overpack requiring exclusive <u>use shipment</u> is contained in a freight container, the freight container conveyance which carries the freight container shall also be transported under exclusive use.	Revert back to the text proposed by TM-38941, the text as proposed in DS437 could lead to issues in interpretation. This change was proposed and accepted at TRANSSC 20 but was not incorporated in DS437.	TSU: see TRANSSC 21 decision about Table 9 footnote (d) CS-29: The meeting decided to clarify how exclusive use is applied when dealing with freight containers in the advisory material (TS-G-1.1).
D/120D/41 (Annex 1)	Section VIII, footnote 1	“Although this publication is identified as a new edition, there are no changes that affect the administrative and approval requirements in Section VIII of previous editions, amendments or revisions since the 1996 edition.”	The text for footnote [1] is missing; see also ANNEX 1 of these comments.	CS-143: accepted
D/120D/11	Table 1	“UN3xxx RADIOACTIVE	The UN numbers for excepted	Reject - Better to have all UF6 UN

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSEC 21 and TSU
		MATERIAL, EXCEPTED PACKAGE - URANIUM HEXAFLUORIDE, LESS THAN 0.1 KG PER PACKAGE” under the headline of “Uranium hexafluoride” should be moved under the headline of “Excepted package” And a new footnote c should be added to the headline “Uranium hexafluoride” to read as follows: “c For uranium hexafluoride less than 0.1 kg per package see UN 3xxx under “Excepted package”.”	packages should be combined in Table 1 under the same headline.	numbers grouped together
J/120D/02	Table 1	UN 3322 bis RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I), FISSILE	In para. 409(a) no fissile LSA-I material is defined. (see comment on 409(a)(iii) and (iv), JAP-R-005 and 006).	Reject - Reject as a UN number for fissile LSA-I had been introduced to facilitate the use of para 672(a) TRANSSEC 21: accept the proposal. Delete UN 3322bis
WNTI/120D/06	Table 1 419(b)	TABLE 1 UN 3XXX RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - URANIUM HEXAFLUORIDE, LESS THAN 0.1 KG PER PACKAGE less than 0.1 kg per package, non fissile or fissile excepted.	1) “Less than 0.1 kg per package” should be in small letters, to shorter the proper shipping name. The remaining text is sufficiently different from the two other proper shipping names assigned to uranium hexafluoride to avoid confusion. 2) “Non fissile or fissile excepted” shall be added to allow fissile exception 417 (c), and to avoid the use of this UN number for fissile material. <i>NOTA : samples of UF6 may also be shipped as FISSILE with the benefit of 672 (a) exception when shipped together with fissile UF6 in 30B cylinders. In this case the UN number and corresponding proper shipping name should be UN2977.</i>	1) and 2) Accept TRANSSEC 21: Para 401 should be left as proposed.
USA/120D/05	Table 1 (401)	<i>Low specific activity material</i> replaces Low specific activity radioactive	Italicized text TS-R-1 must match terms defined in Section 2.	accept

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		<p>material</p> <p>Uranium Hexafluoride replaces Uranium Hexafluoride</p> <p>** This comment was agreed at TRANSSC 20 but the 120 day edition of TS-R-1 does not include the change.</p>		
D/120D/12	Table 1, UN 3322bis	“UN 3322bis RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I), FISSILE” should be deleted	LSA-I is per definition only non-fissile or fissile-excepted (see para. 409)	Reject - Reject as a UN number for fissile LSA-I had been introduced to facilitate the use of para 672(a) TRANSSC 21: to address in Feb. CSMS if LSA-I include fissile. Reject the proposal. Do not recover the reference to para 672 TSU: address further in Feb CSM
D/120D/30	Table 10	“or for overpacks containing packages which are classified as another class” should be deleted in column 1 under the headline “Excepted package” “UN number, preceded by the letters “UN”.” should be deleted in column 2 under the headline “Overpack containing only excepted packages”	TS-R-1 refers only to class 7 editorial	To be considered by an ad-hoc group during TRANSSC 21. TRANSSC 21: Accept to delete “or for overpacks containing packages which are classified as another class”
GB/120D/09	Table 10	Delete the first two lines of the second column in the row relating to “Overpack containing only excepted packages.”	Correction of a typographical error.	CS-143: accepted.
S/120D/14.	Table 10 after paragraph 530	For the entry “ <i>Overpack containing only excepted packages</i> (other than <i>consignments</i> accepted for international movement by post)”, the text in the right column (<u>UN marking</u>) should be amended. The first phrase is repeated in the second sentence. The text should read: UN number, preceded by the letters “UN” for each applicable UN number in the <i>overpack</i> .		CS-143: accepted

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
TIC/120D/01	Table 2	<p>Ra-226 Activity concentration limit for exempt material: $1 \times 10^{+0}$ (b)</p> <p>Ra-228 Activity concentration limit for exempt material: $1 \times 10^{+0}$ (b)</p>	While recognizing that the values in Table 2 will be based on the ongoing revision of the BSS, it is noted that the Ra-226/228 activity concentration limit for exempt material is an order of magnitude greater than that for the parent U-238/Th-232 respectively (<i>i.e.</i> 1×10^0). Also in the 'NORM CRP' the doses arising from material containing Ra-226/228 sub-chains without the parents, were found to be a limiting scenario and suggest the Ra-226/228 values should be the same as for their parent nuclides.	CS-143: accepted
TIC/120D/01	Table 2	<p>Th-nat Activity concentration limit for exempt material: $\pm 3 \times 10^0$ (b)</p> <p>U-nat Activity concentration limit for exempt material: $\pm 3 \times 10^0$ (b)</p>	The Canadian study of the 'NORM CRP' demonstrated, with the most conservative global transport scenario of tantalum raw materials, that transport of exempt materials up to 30 Bq g^{-1} would be safe and still allow for exposure to other unregulated sources of radiation. Changing the activity concentration limits for Th-nat and U-nat to 3 Bq g^{-1} , coupled with para. 107(e), would allow NORM the appropriate exemption level of 30 Bq g^{-1} . (The alternative to changing the values in Table 2 is to change the factor in 107(e) from 10 to 30, however this latter alternative would have a broader application.)	CS-143: accepted
USA/120D/12	TABLE 2	<p>Create footnote (h) to Table 2 and apply it to "Activity limit for an exempt consignment" entry for T(H-3), Kr-85, Th-228 and Th-232.</p> <p>(h)bis Competent Authority may determine and approve alternative activity limits for an exempt consignment of instruments and articles. Alternative value is subject to multilateral approval.</p>	<p>Assessment of the Radiological Impact of the Transport and Disposal of Light Bulbs Containing Tritium, Krypton-85 and Radioisotopes of Thorium (HPA-CRCE-008) concludes (report provided with this comment sheet):</p> <p>"The dose criteria on which the exemption limits are based would be met by consignments of lamps containing activities of 3H, 85Kr and thorium, greater than the limits on</p>	<p>Refer to TRANSSC for further discussion</p> <p>TRANSSC 21: The footnote (h)bis to Table 2 by USA proposal US/120D/12 is accepted. USA to provide administrative guidance for safety report Red text in para 403 is accepted.</p>

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
			<p>activity concentration and activity for consignments recommended by the IAEA by factors of 2 trit, 4000 kr and 60 thor respectively.” (232Th and 228Th)</p> <p>Since TS-R-1 (paras 402 and 403) does not authorize determination of alternative basic radionuclide values for radionuclides in Table 2, Competent Authorities which agree with this conclusion need the authority to approve alternative exempt consignment values for instruments and articles (light bulbs) containing tritium, krypton and thorium.</p>	
GB/120D/22	Table 9	Reword footnote (c) to “Where the loaded freight container is neither a package nor an overpack <u>the TI is limited</u> to 50.”	Current wording is ambiguous.	CS-143: Accepted CS-29: (c) was merged with (b)
WNTI/120D/18	Table 9 Footnotes c and d	<p>Where the loaded freight container is neither a package nor an overpack the limit is 50.</p> <p>^d If a package or an overpack requiring exclusive use shipment is contained in a large freight container, the conveyance which carries the large freight container shall also does not need to be under exclusive use.</p>	<p>1) The purpose of Table 9 is not to assign limits for TI, but to determine the category taking into account the actual TI. Then the footnote “c” is confusing and inappropriate. It is proposed to delete this footnote.</p> <p>2) Footnote “d” means that a large freight container could no more be considered as a transport unit (conveyance) as it has always been the case by the past and as it is the case for the other dangerous goods. Furthermore, it is inconsistent with the definition of “exclusive use” given in para. 221. It is proposed, at the contrary, to indicate that when a large freight container is used to contain packages or overpacks under exclusive use shipment, then the conveyance does not need to be also under exclusive use.</p> <p>3) Add space between “use”</p>	CS-143: See RUS/120D/02 TRANSSC 21 delete footnote (d) CS-29: The meeting decided to clarify how exclusive use is applied when dealing with freight containers in the advisory material (TS-G-1.1)

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU												
			and “shipment” in footnote d.													
F/120D/21	Table M	<p>Proposal 1/ Delete the limited use column and delete corresponding footnote c.</p> <p>Alternative proposal</p> <table border="1"> <tr> <td>U235 1.5% or less</td> <td>3200</td> </tr> <tr> <td>U235 5% or less</td> <td>850</td> </tr> <tr> <td>U235 10% or less</td> <td>660</td> </tr> <tr> <td>U235 20% or less</td> <td>330</td> </tr> <tr> <td>U235 100 % or less</td> <td>450</td> </tr> <tr> <td>Other fissile nuclides</td> <td>280</td> </tr> </table>	U235 1.5% or less	3200	U235 5% or less	850	U235 10% or less	660	U235 20% or less	330	U235 100 % or less	450	Other fissile nuclides	280	<p>Package configurations which are safe for water moderation may become unsafe when mixed with materials with hydrogen density greater than in water. Then, it is not acceptable to mix packages whose CSI is obtained from “general use” case and from “limited use” case or to mix packages from “limited use” with non-radioactive packages or transport equipments or materials containing substances having a hydrogen density greater than water. Such substances are frequently encountered in the transport environments (pallets...).</p> <p>According to paragraph 682(c) in current regulations, if fissile material escapes from the containment system, that fissile material should be arranged in the configuration and moderation that results in the maximum neutron multiplication. When the CSI of packages is calculated for a “limited use” case, at least a limit of mass of polyethylene per consignment is necessary. Since many transport equipments are made of HDPE, this control would not be reliable.</p> <p>We propose to reduce the table M to the column “general use”. If this is not accepted, we propose a new unique column with intermediate values based on a safety factor of 85% (except first value) of the critical mass calculated with HDPE moderation. This would still ensure subcriticality for any moderator material.</p>	<p>CS-143: Accepted alternative proposal as compromise with N/120D/03.</p> <p>TRANSSC 21: refer to fissile CS to address one or two columns.</p> <p>Cs-05: accept the proposal and modify Table M</p>
U235 1.5% or less	3200															
U235 5% or less	850															
U235 10% or less	660															
U235 20% or less	330															
U235 100 % or less	450															
Other fissile nuclides	280															
J/120D/17	TABLE M	^c Limited use is only allowed when there is no more than 20 grams g of material with a hydrogen	Editorial	CS-143: rejected: see F/120D/21												

Comment No.	Para/Line No.	Proposed new text	Reason for proposals	Recommendation from CS143 , TRANSSC 21 and TSU
		density greater than water in a <i>package</i> .		
N/120D/03	Table M	Delete the column “general use” and round the values under “limited use” down to one significant digit.	The assumption that the fissile material gets completely moderated and reflected by high density polyethylene under accident conditions is overly conservative. Rounding down the values will add some extra safety margins for highly enriched uranium and other fissile nuclides.	CS-143: See F/120D/21 CS-05: Rejected, regarding rounding down to one significant figure.
S/120D/20.	Table M after paragraph 672	The Z-values (for uranium enriched to certain percentage) overlap each other when the symbol “<” is used without a defined “end”. It would seem appropriate to rephrase the conditions (see next column)”:	Uranium enriched to $0 \% < x \leq 1.5 \% (Z)$ Uranium enriched to $1.5 \% < x \leq 5 \% (Z)$ Uranium enriched to $5 \% < x \leq 10 \% (Z)$ Uranium enriched to $10 \% < x \leq 20 \% (Z)$ Uranium enriched to $20 \% < x \leq 100 \% (Z)$	CS-143: Accepted CS-05: Comment S/120D/20 was reversed.
RA/120D/38	Table M, note c		It is not clear to which material the limit of 20 g refers to: total material in the package, fissile material, or hydrogenated material? It should have an explanation in TS-G-1.1	CS-143: Rejected: see F/120D/21. CS-05: was dismissed since there is no longer a footnote c.