<table>
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<th>Comment No.</th>
<th>Para No.</th>
<th>Proposed Change/new regulatory text</th>
<th>Discussion/Reason</th>
<th>Recommendation/Reason for modification/rejection</th>
<th>WG resolution</th>
</tr>
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<tbody>
<tr>
<td>6 E/1.00/1</td>
<td>530</td>
<td>Modify SSR-6 to establish clearer that the UN number to be selected and used in markings, placardings and transport documents shall be that corresponding to the radioactive material content no to the type of package design used. Modify the TS-G-1-1. in accordance with the modifications in SSR-6 and to clarify more the issue. Text revisions: 530. For each package or overpack, the UN number and proper shipping name shall be determined according to the actual radioactive material content carried in the package or overpack (see Table 1). In all cases of international transport of packages requiring competent authority approval of design or shipment, for which different approval types apply in the different countries concerned by the shipment, the UN number, proper shipping name, categorization, labelling and marking shall be in accordance with the certificate of the country of origin of design. 838. Each certificate of approval of the design of a package issued by a competent authority shall include the following information:... …(l) A specification of the authorized radioactive contents, including any restrictions on the radioactive contents that may be followed that the UN to be assigned to the consignment should be that corresponding to the material transported and so corresponding to the type of package finally prepared. However, sometimes the meaning of the UN number derived from the classification of the content of the package doesn’t correspond with the identification mark of the type of package used for the transport of that material (for example, if we use a type B package to transport a material that could be transported in a type A package). This apparently discrepancy on the packages marks (UN and type of package) and also respect to the vehicle placarding (UN) often generates confusion to the authorities or participants along a transport. This problem is more evident in the case of packages subjected to approval that are authorized for different contents which may be classified according to different UN number. For example, a package with an approval certificate E/nnn/B/(U)F-96 that permits two different</td>
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<td>From the para. 530 of SSR-6 may be followed that the UN to be assigned to the consignment should be that corresponding to the material transported and so corresponding to the type of package finally prepared. However, sometimes the meaning of the UN number derived from the classification of the content of the package doesn’t correspond with the identification mark of the type of package used for the transport of that material (for example, if we use a type B package to transport a material that could be transported in a type A package). This apparently discrepancy on the packages marks (UN and type of package) and also respect to the vehicle placarding (UN) often generates confusion to the authorities or participants along a transport. This problem is more evident in the case of packages subjected to approval that are authorized for different contents which may be classified according to different UN number. For example, a package with an approval certificate E/nnn/B/(U)F-96 that permits two different</td>
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<td>See comments 18(D/1.00/8), 42 (F/1.00/19), 52 (WNTI/1.00/5), 53 (WNTI/1.00/6), 54 (WNTI/1.00/7)</td>
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**CLASSIFICATION, SIGNALIZATION AND DOCUMENTATION (To be led by Fernando Zamora (Spain))**

**NOTE:** These proposals will be discussed in WG-3 during TRANSSC-28

**TRANSSC 27 Working Group 1 (WG1) discussion:** It was generally agreed that the issue warranted further discussion, perhaps in a working group.
might not be obvious from the nature of the packaging. This shall include the physical and chemical forms, the activities involved (including those of the various isotopes, if appropriate), the mass in grams (for fissile material, the total mass of fissile nuclides or the mass for each fissile nuclide, when appropriate) and whether special form radioactive material, low dispersible radioactive material or fissile material excepted under para. 417(f), if applicable. In case there are several authorized contents corresponding to different UN numbers, the certificate shall define for each content the UN number to be considered during the transport operations.

530.1. The implementation of the 1996 Edition of the Transport Regulations could lead to multiple labelling and marking as a consequence of divergence between approvals issued by different competent authorities. Known cases are Type B(U) versus Type B(M); approved package design versus special arrangement; and Type A, fissile versus Type IP, fissile. To avoid having to change the marking and labelling at border crossings, only one United Nations number (UN number), determined in accordance with para. 530, should be applied. The UN number and proper shipping name should be assigned according to the actual radioactive material content carried in the package, that is, according to the final package prepared, independently of the type of the package design that is used to transport the material.

contents:
- The first content would imply to classify the package as B(U)F
- For the second one would be enough to classified the package as A(F)

If we transport the second content, the UN corresponding to the consignment should be: UN 3327 RADIOACTIVE MATERIAL, TYPE A PACKAGE, FISSILE. This will be marked in the package, included in the transport documents and the UN number included in the placards of the vehicle. However, we will also find in the transport documents and in the package marking the identification mark of the package design approval: E/mn/B(U)F-96, which connects with a different consignment classification: UN 3328 RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE.

Problem: it seems there is a contradiction which may conduct to confusion and to a different understanding of Regulations.

As examples of the potential confusion:
532.1. The UN number marked on the package and indicated in the documents is important information in the event of incidents and accidents. The UN number gives the information about the actual radioactive material content carried in the package that is needed for emergency management. Additionally, each overpack should be marked with the word "OVERPACK" and the UN marking unless all the package markings are clearly visible.

New 838.2.

A certificate of approval may refer to several authorized contents corresponding to different UN numbers. In that case, the identification mark of the certificate of approval will correspond with the content of maximum risk. However, independently of the type of package indicated in the identification mark, the UN number to be assigned during the transport shall be according to the actual radioactive material content carried in the package (See para. 530 of Regulations). Then, the certificate shall define for each content the UN number to be considered in the marking, placarding and transport documents.

- The SSR-6 says in the para 530:

530. For each package or overpack, the UN number and proper shipping name shall be determined (see Table 1). In all cases of international transport of packages requiring competent authority approval of design or shipment, for which different approval types apply in the different countries concerned by the shipment, the UN number, proper shipping name, categorization, labelling and marking shall be in accordance with the certificate of the country of origin of design.

- The TS-G-1.1. (DS 425 Draft 0.5) says in the para. 532.1.:

532.1. The UN number marked on the package and indicated in the documents is important information in the event of incidents and accidents. The UN number corresponding to the approval certificate issued by the competent authority of the country of origin of design gives the information about package type that is needed for emergency management...
|   | 18 | 537 | Add a new para under the headline “Marking” (after para 537) with the clear statement, that any marking, that do not relate to the current consignment shall be removed or covered like it is stated under para 538 for “Labelling”. Text revisions (SSR-6): Para 537bis: Any marking of the package that do not relate to the current consignment shall be removed or covered. | It is considered that Regulations (SSR-6) is not enough clear on this matter as well as the TS-G-1.1, and some modification should be carry out on both documents to solve it. | This issue should be resolved by the revision cycle by detailed discussion at a TM on the meaning of ‘any marking’ as it could be limited to any UN number and proper shipping name. |
|---|---|---|---|---|
|   | D/1.00/8 Germany |   | The question which has often been discussed concerns the visibility of package specification markings resulting from previous transport: Are the package specification markings allowed to be visible or is it required to make them invisible? Clarification within SSR-6 seems to be useful. | See comments 42 (F/1.00/19) and 54 (WNTI/1.00/7) |
|   | 3.1 MIXED PACKING OF SPECIAL FORM AND NON-SPECIAL FORM IN A TYPE A PACKAGE No provision exists in SSR-6 or in TS-G-1.1 to solve the situation where two UN numbers and proper shipping names may apply, as it is the case for special form and non-special form radioactive material in a same Type A package, as allowed in para. 430. Paragraph 401 specifies that |   |   |
|   | 42 | F/1.00/19 France | This issue should be defined as an ongoing issue. It should be examined by a working group of representatives from CA and from industry. | See comments 6 (E/1.00/1), 18(D/1.00/8), 52 (WNTI/1.00/5), 53 (WNTI/1.00/6), 54 (WNTI/1.00/7), (This is a major change (conceptual) and should be resolved by the revision cycle through discussion at a TM and/or CS. |

WG 1 Discussion: there was general agreement that the issue should be
radioactive material shall be assigned to one of the UN numbers specified in Table 1.

In Table 1, there are different UN numbers to use depending on whether the material is a special form radioactive material or not:
- UN2915: non special form, non fissile or fissile excepted in a Type A
- UN3332: SPECIAL FORM, non fissile or fissile excepted in a Type A
- UN3327: non special form, FISSILE in a Type A
- UN3333: SPECIAL FORM, FISSILE in a Type A

Combinations of UN2915 + UN3332, or UN3327 + UN3333, should be clearly allowed, with clear marking and labeling rules.

3.2 MIXED PACKING OF LSA AND/OR SCO IN THE SAME INDUSTRIAL PACKAGE

No provision exists in the regulations to allow LSA and SCO, packed in separated inner packagings and requiring the same type of package, to be carried together in a same outer packaging.

Especially when using large
freight containers as type IP-2 (or IP-1, or IP-3) package, the possibility to mix LSA of different categories, and SCO of different categories could reduce the number of packages to be carried and the number of transports to be performed without reducing the safety.

3.3 PACKAGE TYPE DECLASSIFICATION

Difficulties often occur when a consignor wants to carry radioactive material in a package when quantities or activities are much smaller than authorised in that package, offering the possibility to use a lower category of package type, and more appropriate UN number and proper shipping name. Some examples of such situations are:

- How to carry less than 1 A2 or 1 A1 in a packaging approved as a Type B(U) package when containing greater activities of the same material?
  - Either use UN number and proper shipping name for Type A, but this requires to have the mark “Type A” on the package.
  - Replace “Type B(U)”
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<tr>
<td>mark by “Type A” =&gt; Is it acceptable to change the permanent</td>
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<td>markings on a packaging which may be used as an approved</td>
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<td>package type? =&gt; difficult and costly some times</td>
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<td>• Add “Type A” without deleting “Type B(U)”: but some CAs do</td>
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<td>not accept both marks at the same time on the package;</td>
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<td>• Is it acceptable to keep other marks related to Type B(U)</td>
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<td>(design identification mark, trefoil symbol)?</td>
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<tr>
<td>o Or use UN number and proper shipping name for Type B(U).</td>
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<td>But this creates unnecessary constraints for transport,</td>
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<td>and may lead emergency response teams to take</td>
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<td>inappropriate protective measures in case of accident.</td>
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<td>• How to carry fissile-exception or non-fissile uranium</td>
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<td>hexafluoride in a packaging qualified to carry FISSILE uranium</td>
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<td>hexafluoride?</td>
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<td>o Either use UN number</td>
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CLASSIFICATION, SIGNALIZATION AND DOCUMENTATION (To be led by Fernando Zamora (Spain))

NOTE: These proposals will be discussed in WG-3 during TRANSSC-28
NOTE: These proposals will be discussed in WG-3 during TRANSSC-28
| 46 | ICAO/1.00/1 | At the last Working Group in April ICAO has adopted as an interim solution some notes to clarify the current situation and to try to facilitate the transport of these packages. Recognizing that the transport of these empty Type B (U) or Type B (M) packages does not pose any safety issue, the IAEA is requested to develop an easier solution and to perhaps consider these empty Type B (U) or Type B (M) packages an extension to the provisions for excepted packages of radioactive materials. |

| | | Guidance for classification of Empty Packaging other than UN 2908 should be included in a schedule of SSG-26 taking into account that specific case of packaging as integral part of their structure. |

| | | Empty Type B(U) or Type B(M) containers must very often be returned by air. Regularly shipments of these containers are not accepted and are refused by airlines, integrators and/ or by their handling agent as currently these containers are transported under different conditions which lead to confusion and as a consequence results in a non-acceptance of the shipment. |

| | | Although the regulations for the transport of radioactive materials foresee that empty packages which have contained radioactive material may be classified as "excepted packages of radioactive material" unfortunately these containers can in several cases not be transported as "Radioactive material, excepted package – empty package" (UN 2908). One of the conditions in order to |

| | | See if para 107(a) can be adapted. |

| | | See comments 3-4 (IR/1.00/1, IR/1.00/2,) |

| | | General Discussion: general agreement that this should be discussed further; a note to ICAO TI will further inform the discussion. |

NOTE: These proposals will be discussed in WG-3 during TRANSSC-28
be able to classify a package of radioactive material as an “excepted package of radioactive material” is that the radiation level at the external surface at any point may not exceed 5 µSv/h. (Para. 516 of SSR-6) Due to the presence of depleted Uranium in the shielding material of a Type B(U) or Type B(M) package a lot of these containers when shipped empty have a radiation level at surface which exceeds 5 µSv/h and as a consequence these empty containers are not allowed to be transported as UN 2908.

As these empty packages cannot be shipped under UN 2908, shippers are using different methods and different solutions to transport these packages. This creates a lot of confusion for the airline’s or handling agent’s staff and which often results in refusal of the shipment. Some shippers choose to classify these packages as Low Specific Material (LSA-I) due to the presence of depleted uranium and the absence of any other radionuclide that needs to be fully classified. Other shippers prefer to classify these packages still as Type B (U) or Type B (M) package. Both solutions may

| CLASSIFICATION, SIGNALIZATION AND DOCUMENTATION (To be led by Fernando Zamora (Spain)) |
| NOTE: These proposals will be discussed in WG-3 during TRANSSC-28 |
create some misunderstanding which results in a non-acceptance of the shipment.

In case the shipment is declared as LSA-I the type B (U) container may be declared as an Industrial package Type IP-1 in which case the shipment does not require anymore a “Type B package design approval certificate” but the package must bear the appropriate markings for Industrial packages and the Type B (U) or Type B (M) specification markings as applicable should be obliterated. Airline and handling agent's staff may not understand why a container which looks as a Type B (U) or Type B (M) may be declared as an IP-1 package and shippers may forget to obliterate the Type B (U) or Type B (M) specification markings.

In the event the shipper continues to declare the package as a Type B (U) or Type B(M), the radionuclide contained in the shielding material and its chemical and physical form will be declared on the dangerous goods transport document e.g. "U-dep, solid, metal oxide". This may lead to confusion as the Type B package design certificate indicates the radionuclides authorized for the

| CLASSIFICATION, SIGNALIZATION AND DOCUMENTATION (To be led by Fernando Zamora (Spain)) |
| NOTE: These proposals will be discussed in WG-3 during TRANSSC-28 |
It is proposed to include in section V “mixed packing” provisions as already stated in para. 5.1.4 of 17th edition of the UN Model regulations, and to add appropriate provisions in para. 428.

Text revisions (SSR-6):

401. Except when the use of different UN numbers and proper shipping names is allowed by 5xx, radioactive material shall be assigned to one of the UN numbers specified in Table 1 in accordance with paras 408–434.

…

428. Packages containing radioactive material may be classified as Type A packages provided that the conditions of paras 429 and 430 are met. When para 430 applies, UN numbers and proper’s shipping names shall be determined as specified in para 5xx.

…

430. For mixtures of radionuclides whose identities and respective activities are known, the following condition shall apply to the radioactive contents of a Type A package:

\[
\sum \frac{B(i)}{A_1(i)} + \sum \frac{C(j)}{A_2(j)} \leq 1
\]

where

\( B(i) \) is the activity of radionuclide i as special form radioactive material.

\( A_1(i) \) is the A1 value for radionuclide i.

\( C(j) \) is the activity of radionuclide j as other than special form radioactive material.

No provision exists in SSR-6 or in TS-G-1.1 regarding marking and labeling of packages, on the one hand, and transport documents, on the other hand, when two UN numbers and proper shipping names apply, as it is the case for special form and non-special form radioactive material in a same Type A package, as allowed in para. 430.

Paragraph 430 allows mixed packing of special form radioactive material together with no-special form radioactive material in the same Type A package.

In Table 1, there are different UN numbers to use depending on whether the material is a special form radioactive material or not:

- UN2915: non special form, non-fissile or fissile excepted in a Type A
- UN3332: SPECIAL FORM, non-fissile or fissile excepted in a Type A
- UN3327: non special form, FISSILE in a Type A
- UN3333: SPECIAL FORM, FISSILE in a Type A

This is a major change (conceptual) and should be resolved by the revision cycle through discussion at a TM and/or CS.

See comments 6 (E/1.00/1), 42(F/1.00/19), 18(D/1.00/8), 53(WNTI/1.00/6), 54(WNTI/1.00/7)

WG 1 Discussion: further discussion in future TM/Working group setting.
### A2(j) is the A2 value for radionuclide j.

New sub-section to be introduced in section V after par 504-506 (TRANSPORT OF OTHER GOODS) or 507 (OTHER DANGEROUS PROPERTIES OF THE CONTENTS):

**MIXED PACKING**

5xx. When radionuclides as special form radioactive material and as non special form are packed within the same Type A package, the package shall be marked as required for each radioactive material. Transport document of the package shall mention UN numbers and proper shipping names as marked on the package.

Text revisions (TS-G-1.1):

401.1. The UN numbers, each of which is associated with a corresponding proper shipping name, have the function of identifying dangerous goods, either as single entries for well-defined substances or articles or in as generic entries for well-defined groups of substances or articles. The UN numbers for radioactive material were agreed through joint international cooperation between the United Nations Committee of Experts on the Transport of Dangerous Goods and the IAEA. The system of identification by means of numbers is preferable to other forms of identification using symbols or language due to their relative simplicity in terms of international recognition. This identification can be used for many purposes. UN numbers which are harmonized with other

| Provisions to implement in case of combinations of UN2915 + UN3332, or UN2915 + UN3333, or UN3327 + UN3333, or UN3327 + UN3332 should be defined. |  |
dangerous goods permit rapid and appropriate identification of radioactive goods within the broader transport environment of dangerous goods in general. Another example is the use of the UN numbers as a unique identification for emergency response operations. Each UN number can be associated with a unique emergency response advice table which permits first responders to refer to general advice in the unavoidable absence of a specialist. During the first stages of an emergency, this prepared information can be more easily accessible to a wide group of non-specialist emergency responders (see also paras 546.1–546.5).

430.1. The formula given in para 430 allows to pack in the same Type A package special form and non-special form radioactive materials. It can be used for mixtures of radionuclides and also for separate radionuclides (special form from one side and non-special form from the other side) contained in a single Type A package (see also para. 1.86).

5xx.1 As already regulated in UN Model Regulations and in Modal Regulations, in the specific case where two separate materials or objects requiring each a different UN number and proper shipping name are packed in the same outer package as allowed by the regulations, then this is considered as being “mixed packing”. In this case both UN numbers and proper shipping names apply. It is recommended that each

| CLASSIFICATION, SIGNALIZATION AND DOCUMENTATION (To be led by Fernando Zamora (Spain)) |
| NOTE: These proposals will be discussed in WG-3 during TRANSSC-28 |
### CLASSIFICATION, SIGNALIZATION AND DOCUMENTATION (To be led by Fernando Zamora (Spain))

**NOTE:** These proposals will be discussed in WG-3 during TRANSSC-28

| WNTI (WNTI/1.00/6) | 401, 517, 522 | The proposal extends the proposal WNTI-05 made to solve the case of special form and non-special form radioactive material packed in a same Type A package to that of LSA and SCO of various kinds in a same industrial package. It is proposed to include in section V “mixed packing” dispositions as already stated in para. 5.1.4 of 17th edition of the UN Model regulations, allowing to solve both cases (special and non-special form radioactive material in a type A and LSA and SCO from various kinds in a same industrial package), and to add appropriate provisions in sub-section relative to REQUIREMENTS AND CONTROLS FOR TRANSPORT OF LSA MATERIAL AND SCO IN INDUSTRIAL PACKAGES. Text revisions (SSR-6): 401. Except when the use of different UN numbers and proper shipping names is allowed by 5xx, radioactive material shall be assigned to one of the UN numbers specified in Table 1 in accordance with paras 408–434. … New sub-section to be introduced after par 504-506 (TRANSPORT OF OTHER GOODS) or 507 (OTHER DANGEROUS PROPERTIES OF THE CONTENTS): MIXED PACKING 5xx. When different radioactive materials, No provision exists in the Regulations to allow the carriage of LSA and SCO, packed in separated inner packagings and requiring the same type of package, to be carried together in a same outer packaging. Especially in the case of use of large freight containers as IP-2 (or IP-1, or IP-3), the possibility to mix LSA of different categories, and SCO of different categories could reduce the number of packages to be carried, without reducing safety. This is a major change (conceptual) and should be resolved by the revision cycle through discussion at a TM and/or CS See comments 6 (E/1.00/1), 42(F/1.00/19), 18(D/1.00/8), 52(WNTI/1.00/5), 54(WNTI/1.00/7) WG 1 Discussion: General agreement that further discussion in future TM/Working group setting.
to which different UN numbers apply, are packed within the same package as allowed in sections IV or V, the package shall be marked as required for each radioactive material. Transport document of the package shall mention UN numbers and proper shipping names as marked on the package.

517. The quantity of LSA material and SCO in a single Type IP-1, Type IP-2, Type IP-3 package, or object or collection of objects, whichever is appropriate, shall be so restricted that the external radiation level at 3 m from the unshielded material or object or collection of objects does not exceed 10 mSv/h.

New paragraph to be introduced after para. 521:

521bis. LSA material and/or SCO from different groups may be packed together in the same Type IP-1, Type IP-2 or Type IP-3 package, provided each LSA or SCO is separated from each other, and the package type as specified in table 5 is suitable for each LSA or SCO. The different contents of the package shall not mix during routine conditions of transport, and normal conditions of transport when applicable. In that case, provisions in para 5xx for mixed packing apply.

522. The total activity in a single hold or compartment of an inland waterway craft, or in another conveyance, for carriage of LSA material and SCO in a Type IP-1, Type IP-2, Type IP-3 package or unpackaged, shall not...
Text revisions (TS-G-1.1):
401.1. The UN numbers, each of which is associated with a corresponding proper shipping name, have the function of identifying dangerous goods, either as single entries for well-defined substances or articles or in as generic entries for well-defined groups of substances or articles. The UN numbers for radioactive material were agreed through joint international cooperation between the United Nations Committee of Experts on the Transport of Dangerous Goods and the IAEA. The system of identification by means of numbers is preferable to other forms of identification using symbols or language due to their relative simplicity in terms of international recognition. This identification can be used for many purposes. UN numbers which are harmonized with other dangerous goods permit rapid and appropriate identification of radioactive goods within the broader transport environment of dangerous goods in general. Another example is the use of the UN numbers as a unique identification for emergency response operations. Each UN number can be associated with a unique emergency response advice table which permits first responders to refer to general advice in the unavoidable absence of a specialist. During the first stages of an emergency, this prepared information can be more easily accessible to a wide group of non-specialist emergency responders (see
also paras 546.1–546.5).

401.2. For “mixed packing” see 5xx.1

5xx.1 As already regulated in UN Model Regulations and in Modal Regulations, in the specific case where two separate materials or objects requiring each a different UN number and proper shipping name are packed in the same outer package as allowed by the regulations, then this is considered as being “mixed packing”. In this case both UN numbers and proper shipping names apply. It is recommended that each kind of material should be packed in separated inner packagings.

5xx.2. This is applicable when, for example, special form and non-special form radioactive material are packed together in the same Type A package as allowed in para. 430, or when different kinds of LSA or SCO are packed together in the same Type IP package as allowed in para 521bis.

521bis.1. Different kinds of LSA or SCO may be packed in the same industrial package, especially when, large freight containers are used as IP-2 or IP-3 package. The different kinds of material or objects shall be separated from each other by packing them in separated inner packagings or wrapping material. The inner packagings should be stowed in the outer packaging by use of adequate bracing, and/or wedging, making mixture of those objects or material impossible in routine and normal conditions.
### Two solutions exist to solve this problem with the existing rules:

- Either change the permanent mark of the package => difficult and costly for industry
- Or use the UN number and proper shipping name corresponding to the permanent mark of the package => unnecessary overclassification leading to unnecessary precautions in case of accident.

Introduction of a hierarchy of package types in section V of the regulation, allowing, when carrying smaller quantities or smaller activities than allowed in the package design of origin, the use of a more appropriate UN number and associated proper shipping name, without having to change the mark corresponding to the package type.

This can be useful in terms of safety (effectively, more the UN number and the proper shipping name are appropriate, more emergency accident response will be appropriate in case of accident) and will simplify the implementation of the Regulation (no need to change a permanent mark on a package, if existing mark is that of a more robust package type).

Such a system exists already for portable tanks and other tanks in modal regulations and in UN model regulations (see para 4.2.5.2.5 of 17th edition of UN model regulations on transport when applicable.)

Difficulties often occur when a consignor wants to carry radioactive material in a package when quantities or activities are much smaller than authorised in that package, offering the possibility to use a lower category of package type, and more appropriate UN number and proper shipping name. Some examples of such situations are:

- How to carry less than 1A2 or 1A1 in a packaging qualified as Type B(U) for a greater activity of that material?
  - Either use UN number and proper shipping name for Type A, but this requires to have the mark “Type A” on the package
    - Replace “Type B(U)” mark by “Type A” => is it acceptable to change the permanent markings on a packaging which may be used as an approved package type? => difficult and costly sometimes;
    - Add “Type A”

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<th>WNTI/1.00/7</th>
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| WNTI | Two solutions exist to solve this problem with the existing rules: | Difficulties often occur when a consignor wants to carry radioactive material in a package when quantities or activities are much smaller than authorised in that package, offering the possibility to use a lower category of package type, and more appropriate UN number and proper shipping name. Some examples of such situations are:
| | • Either change the permanent mark of the package => difficult and costly for industry | • How to carry less than 1A2 or 1A1 in a packaging qualified as Type B(U) for a greater activity of that material?
| | • Or use the UN number and proper shipping name corresponding to the permanent mark of the package => unnecessary overclassification leading to unnecessary precautions in case of accident. |  - Either use UN number and proper shipping name for Type A, but this requires to have the mark “Type A” on the package
| | |  - Replace “Type B(U)” mark by “Type A” => is it acceptable to change the permanent markings on a packaging which may be used as an approved package type? => difficult and costly sometimes;
| | |  - Add “Type A”

**NOTE:** These proposals will be discussed in WG-3 during TRANSSC-28
Text revisions (SSR-6):
Add a new sub-section to be introduced after par 514:
PACKAGE HIERARCHY
5xx. With the following conditions:

- the package design of origin of the package complies with these Regulations;
- the contents of the package meets all applicable conditions and limits assigned for the package design of origin of the package,
- the package bears all the required marks, except those relating to UN number and proper shipping name, required for the package design of origin of that package,

(a) A Type C package may be classified as a Type B(U), a Type A, a Type IP-3, a Type IP-2, a Type IP-1 or an excepted package,

(b) A Type B(U) or a Type B(M) package may be classified as a Type A, a Type IP-3, a Type IP-2, a Type IP-1 or an excepted package,

(c) A Type A package may be classified as

without deleting “Type B(U)”; but some CAs do not accept both marks at the same time on the package;

- Is it acceptable to keep other marks related to Type B(U) (design identification mark, trefoil symbol)?
  - Or use UN number and proper shipping name for Type B(U). But this creates unnecessary constraints for transport, and may lead emergency response teams to take inappropriate protective measures in case of accident.

- How to carry fissile-excepted or non fissile uranium hexafluoride in a packaging qualified to carry FISSILE uranium hexafluoride?
  - Either use UN number and proper shipping name for non fissile or fissile excepted uranium hexafluoride, but for this contents an H(U) approval is required:
    - May a IF or AF or
<table>
<thead>
<tr>
<th></th>
<th>a Type IP-3, a Type IP-2, a Type IP-1 or an excepted package</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d)</td>
<td>A Type IP-3 package may be classified as a Type IP-2, a Type IP-1 or an excepted package</td>
</tr>
<tr>
<td>(e)</td>
<td>A Type IP-2 package may be classified as a Type IP-1 or an excepted package</td>
</tr>
<tr>
<td>(f)</td>
<td>A Type IP-1 package may be classified as an excepted package</td>
</tr>
<tr>
<td>(g)</td>
<td>Packages for FISSILE material may be classified for fissile-excepted or non-fissile material.</td>
</tr>
<tr>
<td>(h)</td>
<td>Packages approved for 0.1 kg or more of UF6 may be classified as excepted package for less than 0.1 kg of UF6.</td>
</tr>
</tbody>
</table>

**Text revisions (TS-G-1.1):**

5xx.1 Package hierarchy permits to use packagings as packages from a lower category, without need to change the permanent markings affixed on the packaging as required for their initial use. The principles are that for a given radioactive material, requirements for the design of the package containing the largest quantity or activity includes all those required for the packages containing lower quantities or activities.

5xx.2 As an example a packaging used as B(U)F approval be used as H(U)?

- Certainly, but the answer is not in the Regulations, creating confusion when such approval is listed in the transport document as being equivalent to H(U);

- Some CAs refused this, arguing that, despite the complete compliance of the contents to the requirement of the package approval, it was not conform to the title of the allowed contents ("fissile uranium hexafluoride").

- Or use UN number and proper shipping name for fissile uranium hexafluoride: But this creates unnecessary constraints for transport (CSI and FISSILE label), and may lead emergency response teams to take inappropriate protective measures in case of accident.
Type B(U) may be classified as a Type A provided:

- The Type B(U) package design approval certificate is not expired;
- The packaging fully comply with the Type B(U) package design approval certificate (design, permanent markings, maintenance, ...);
- The contents fully comply with the contents allowed in the Type B(U) package design approval, except that the total activity meets the limit assigned to a Type A package;
- The UN number and proper shipping name may be that of a type A instead of that of a type B(U) package;
- The packaging is marked with the following information:
  - Consignor or consignee or both,
  - Permissible gross mass if in excess of 50 kg
  - UN2915, Radioactive material, type A package,
  - Type B(U)
  - Trefoil symbol resistant to effects of fire and water,
  - Identification mark allocated to the Type B(U) package design by the competent authority (example: A/133/B(U)-96)
  - Serial number of the packaging
- In the transport documents, only the
| | information required for radioactive material in a Type A package is required. | | |