DANGEROUS GOODS PANEL (DGP)

MEETING OF THE WORKING GROUP OF THE WHOLE

Abu Dhabi, 4 to 8 October 2004

Agenda Item 6: Resolution, where possible, of the non-recurrent work items identified by the Commission or the panel
6.2: Reformatting of the packing instructions;

PACKING INSTRUCTION TERMS OF REFERENCE AND COMMENTS

(Presented by R. Richard)

1. INTRODUCTION

Since the original proposal to reformat the packing instructions was submitted there have been a number of decisions taken that have changed the initial intentions of the reformatting exercise. A number of the initial terms of reference have changed or are no longer valid. The project is complex and has far reaching implications. Prior to continuing with the work, it is necessary to revaluate the objectives and obtain consensus on a number of issues from the Dangerous Goods Panel (DGP).

The ultimate goal of the reformatting project should be to enhance safety. This can be achieved by minimizing the potential for errors when using the packing instructions and by applying a rationalized approach to the assignment of packaging requirements. A conservative approach that does not deviate extensively from the current requirements appears to be what the DGP prefers. In order to develop packing instructions that are based on a rationalized approach some minor adjustments to the maximum quantities per inner packaging, the types of inner packagings authorized and additional requirements to prevent dangerous goods from being released in air transport (requiring intermediate packaging and mandatory use of absorbent material) will need to be introduced.

Reducing the number of packing instructions should not be a driving factor in the reformatting exercise. The number of packing instructions should be the minimum number that provides the most user friendly result. The primary goal should be to enhance user friendliness and minimize to the greatest extent the potential for human errors. The previous goal to reduce the number of packing instructions should no longer be included as an objective of the packing instruction reformatting project. In addition some of the proposed packing instruction that address multiple packing groups and both cargo and passenger provisions should also be split to reduce the likelihood for errors and the need for PPRs.

The following are proposed revised objectives that the DGP should consider in completing the packing instruction reformatting project:

The primary goal should be to enhance user friendliness and minimize to the greatest extent the potential for human errors;

Improve the presentation of requirements to enhance user friendliness and reduce the potential for errors;

The PAX and CAO instructions should be separated to enhance the acceptance check process and reduce the likelihood of errors (e.g. using single packagings when they are not authorized for PAX). This is currently not applied consistently in the TI.

The number of packing instructions should be commensurate with the number required to minimize user errors and enhance the acceptance checklist procedures (e.g. PAX and CAO instruction should generally be split except for certain packing instructions where the differences are minimal or where no differences exist such as aircraft hydraulic power unit fuel tanks);

A rationalized approach should be used for determining the quantities, types and additional requirements assigned for substances; The rationalized approach should be applied using a conservative safety approach.

Some of the proposed packing instructions that address multiple packing groups should be split to reduce the likelihood for errors and the need for PPRs.

Remove unnecessary or unjustifiable packaging restrictions (e.g. bags not allowed in fibreboard boxes but allowed in fibre drums, plastic inner packing prohibited while plastic single packagings are authorized, etc.);

Improve the grouping of substances assigned to specific packing instructions by applying a rationalized approach;

Minimize the number of PPRs especially those that apply to a long list of UN numbers;

Improve harmonization with the UN packing instructions; and

Intergrate decisions to combine certain inner packaging codes (e.g. IP.8 (glass ampoules and IP.1 (glass and earthenware)).

The PPR numbers should not change each time they appear in another packing instruction. This is not very user friendly. We would prefer a short list of standard PPR numbers.

The comments provided in the Annex of this paper highlight our concerns with the draft packing instructions. We will attempt to prepare at least one Class (Class 3) of packing instructions in accordance with the above terms of reference for the working group to consider, if time permits.

COMMENTS ON NEW PACKING INSTRUCTIONS FOR CLASS 3

PI Y312 (New Y302) In the narrative under "INNER" add "(see 4;1.1.7)" for consistency with PI 312.

New PI 303 (3X1) (Current– 306/308)

This packing instruction needs to be split so that passenger and cargo aircraft requirements are not included in the same packing instruction. The primary goal should be to enhance user friendliness and minimize to

the greatest extent the potential for errors. The previous goal to reduce the number of packing instructions should no longer be included as an objective of the packing instruction reformatting project. Separate PAX and CAO instructions will enhance the acceptance check process and reduce the likelihood of errors (e.g. a shipper mistakenly thinking single packagings are authorized for PAX). The split will also eliminate the need for PPRs that apply to multiple UN numbers.

For the PAX PI there should be one PI for PG I and II and a separate PI for PG III. The PG III PI would show that single packagings are allowed and the types. While the PG I and II PIs would clearly indicate "Single packagings not allowed."

There are a number of PG III substances that have a Class 8 sub risk. These are required to be transported in PG II packagings. There are 14 substances assigned to PI 303 that are PG III with a Class 8 sub-risk. We have two options: 1) include a statement just like the current statement in P309 "***If the substance has a subsidiary corrosive risk, all of these packagings must meet Packing Group II performance requirements***"; or 2) create a separate PI for this group of substances. The latter alternative may be more user friendly.

PPR 1 should be moved to the Supplement since UN 3079 is F/F.

The units of measure (L) are missing for PG I PAX.

New PI 304 (3X2) (current 304, 306 and 308)

This packing instruction needs to be split so that passenger and cargo aircraft requirements are not included in the same packing instruction.

For the PAX PI there should be one PI for PG I and II and a separate PI for PG III. The PG III PI would show that single packagings are allowed and the types. While the PG I and II PIs would clearly indicate "Single packagings not allowed."

Currently in 306 and 308 current PPR 5 is assigned to only some of the substances. In the proposed PI 304 it is assigned to many more substances because it is an additional requirement (Additional requirement 2). Only 9 of the 26 substances in the PI previously were assigned PPR 5. This either needs to be a PPR or these substances should be handled in a separate packing instruction.

We are content with applying additional requirement 1 (current PPR 2 and 13) to all of the substances assigned to this packing instruction. However, the Panel needs to ensure that the implications of this are clearly elaborated so that affected parties will have the opportunity to comment. The paper presented at DGP 19 removed the comments that were presented in the previous revision that identified the implications of proposed amendments. These comments should remain in future drafts up until the revised PIs are actually incorporated into the TI.

PPR 2 is confusing, if UN 1302, Vinyl Ethyl Ether can only be transported in cylinders we should assign it to P200 or we should develop a separate packing instruction that can be used for substances that are only permitted in cylinders. The requirements for liquids and solids that are transported in cylinders that the UN is considering should be applied to these substances on the requirements have been agreed.

-For UN 1167, 1302, 1280 and 2371 plastic composite packagings are authorized where previously they were forbidden. As a general rule plastic packagings should not be allowed for PG I flammable liquids.

The reference to cylinders needs to be aligned with whatever the UN decides on the basis of 2004/55 (UK paper).

New PI 305 (3X3) (current 304/306/308)

This packing instruction needs to be split so that passenger and cargo aircraft requirements are not included in the same packing instruction.

This packing instruction applies to 7 substances. 3 are PG I with no sub risk and 4 are PG II with a Class 8 sub-risk. It would also be more user friendly to divide this packing instruction into two separate instructions. The PG I substances and nitroglycerin solution in alcohol and the PG II substances with Class 8 sub risks should be in separate instructions. The PG II substances with Class 8 sub-risks currently would be assigned o their own PI. This would minimize the potential for a shipper inadvertently using plastic inners for PG I substances. 3 of the 7 substances assigned to this PI have corrosive subsidiary risks (UN 1196 Ethyltrichlorosilane, UN 1298 Trichloromethylsilane and Allyl Iodide) . These 3 substances have corrosive subsisdiary risks.

Plastic composite packagings should not be allowed for the PG I substances. UN 1921, UN 2356, and UN 2456 are not currently allowed in plastic packagings.

Delete sentence at the beginning of PI 305: Combination packagings with inner plastic packagings and single outer plastic packagings are not permitted for PG I liquids. This is already indicated in PI

If we remove the authorization for plastic packagings for the PG I substances then PPR 4 is unnecessary. UN 1204 should not have been assigned PPR4 because it is a PG II substance and plastic inners (IP.2) are currently allowed.

Additional requirement 1 is applied to all of the substances assigned to this PI. Additional requirement combines the requirements for the current PPR 2 and 13. Some of the substances are PG I and are not allowed in plastic inners so it does not make sense and may be confusing to have an additional requirement that refers to plastic inner packaging. Otherwise we support the collective application of the current PPR 2, 13 requirements to this group of substances. However, the implications need to be noted so that industry will have the ability to comment. UN 1196 and 1204 previously were not assigned PPR 2 or 13. UN 1921, 1298, 2356 and 2456 previously were assigned PPR 13 but not PPR 2 (because they are all PG I and plastic is not allowed). If we divide the PI into two separate PIs on the basis of PG as discussed above this problem could be solved.

New PI 306 (3X4) (current 303 and 304)

This is a cargo aircraft only PI

The types of composites should be aligned with those currently in PI 303 and 304.

The additional requirement for absorbent material and intermediate packaging for glass aligns with the current PPR13. While we agree with applying this requirement for all the substances in this PI (they are all PG I specials) the implications need to be noted so that industry will have the ability to comment.

New PI 307 (3X5) (old 304/308 specials)

-Single packagings: Why is 3A1 not allowed? Old PI did allow 3A1 (except for UN 2983) Proposal: add 3A1 to the table

COMMENTS ON NEW PACKING INSTRUCTIONS FOR CLASS 4

New 401 (4X1) (old 416: PAX and old 412: CAO)

1. Single packagings: CAO PG I: single packagings should read 1A1 and not LA1
2. Why are boxes added as single packagings, Old PI 412 and PI 416 do not mention these types of packagings. UN packing instructions only allow boxes to be used as single packagings for certain products and under condition a water resistant inner bag, plastic film lining or water resistant coating has been added.

3. Additional Requirement 4: Why do we need absorbent material for solids

4. Additional Requirements 1 and 2 are only applicable to following UN numbers:
   1310/1320/1321/1322/1336/1337/1344/1348/1349/1354/1355/1356/1357/1517/1571/
   2852/3317/3364/3365/3366/3367/3368/3369/3370/
   In the past only glass and plastic inner packagings allowed for all these products.

5. Why do we allow for certain products now single packagings while in the past single packagings were forbidden even on a CAO (e.g. UN 1310 and UN 2852)

6. For UN 1392/ 1420/ 1422 the UN recommendations only allow some types of packagings. (see UN PI 402). Why do we allow also other types?

7. PPR 9 should also be applicable to UN 2852

New PI 402 (4X2) Parts of old PI 411/415/416/417/418/420/421/422/426

1. Single packagings must be forbidden on passenger aircraft for the 3 packing groups: the old PI's concerned 415/416/419/422/426 did no allow the use of single packagings. Indicate in table for single packagings for passenger aircraft 3 times the word forbidden.

2. Additional requirement 1: should be clarified that this is only required if these packagings are used as single packagings.

3. For UN 1378 and UN 1362 single packagings should not be allowed on CAO

4. PPR 19: indicate that plastic bags (IP5) are not allowed similar to PPR 15

5. PPR 17: UN requirement but not identical. UN PI 403 requires that inner packagings shall be hermetically sealed (e.g. by taping or by threaded closures). Would prefer to have identical wording. This PPR should also be added to new PI 401 as this is applicable to all 4.3 PG I substances.

6. UN 2000 should not be added to new PI 402 as this substance does not require UN packagings.

New PI 403 (4X5) (old PI 416 and 418)

1. The additional requirements 1; 2 and 3 of new PI 401 must also be added to this PI.
2. Additional requirement 1 (modified as suggested) of PI 402 must also be added.
3. Quantities for plastic bags on passenger aircraft should read "1kg" and not 0.1 kg

New PI 404: at this moment combines 4X7 (solids) and 4X8 (liquids)

1. Confusing at the moment: suppose that 4X8 will become as indicated in DGP19/Flimsy 406
2. UN 3241: old PI 434 did allow the use of single packagings also on passenger aircraft. If 1G drums are used an inner plastic liner must be used or they must be siftproof.
3. Some of the old PI's do require Packing Group II performance standards also for PG III substances (e.g. old PI 421/PI 422/ PI 425/PI 414 etc….) : not mentioned in new 4X7 or 4X8 (e.g. of products UN 1313/ UN 3129/UN 1338 etc…)
4. UN 3208 and UN 3209 have always been treated as solid substances. Why are these substances now incorporated in 4X8 (liquids)
5. UN 3207 did not allow the use of single packagings except for PG III on CAO (PI 432) and only compatible cylinders as permitted by PI 200: PPR 22 en 23 need to be reworded.
6. UN 3208: PPR 13 is missing: If the substance is a dispersion in organic liquid, the organic liquid must have a flashpoint above 50°C

New PI 405 (4X15):

1. For UN 1394 and UN 1402 on PAX we have reduced the quantities for IP3 from 2.5 kg till 1 kg. On the other hand we have for CAO the quantities for these UN numbers retained (5 kg) but for UN 1390 and UN 2805 the quantities increased (from 2.5 kg till 5 kg) Why don't we follow the same philosophy in both cases: i.e. reduce on CAO the quantity for IP3 till 2.5 kg.

New PI 409 (4X16):

1. Should be possible to combine this PI with new PI 405. In comparison with old PI's proposed quantities are very restrictive and for UN 1417 the contents of old PPR 9 are missing (see PI 418) . UN has also same PI for all products concerned.

New PI 412 (4X17):

1. General requirements for self-reactive substances of Part 4; 6.1 should be somewhere incorporated in the new PI.
2. Types of inner packagings allowed (IP2 and if applicable IP5) are missing in PI 412.

New Y401 (Y4X1) old Y415/ Y416/ Y419/Y422

1. Same remark as before : Packing instruction numbers are not identical to the equivalent UN packing instruction numbers
2. Old packing instructions Y415/ Y422 / Y416 allow only the use of solid plastic boxes and not expanded plastic boxes.
3. PPR 25: wrong. For UN 1326/ 1352/ 1358/ 1871 plastic bags (IP 5) are allowed.
   Proposal: combine PPR 24 and 25 as follows: For UN 1390/ 1394/ 1402/1409/1417/1437/2624/2805/3182 plastic bags (IP5) are not allowed.

4. PPR 26 must read: UN 1339/1340/1341/1343 and 3208 plastic inner packagings (IP2 and IP5) are not allowed.

COMMENTS ON NEW PACKING INSTRUCTIONS FOR CLASS 5

New PI 520 (5X1) Old PI's 500/502/510/513 – PI for organic peroxides

1. Types of inner packagings are not mentioned (IP2 for liquids and IP2 and IP5 for solids)
2. Change Additional Requirement 1 as follows: Packagings must meet PG II performance standards
3. Add the word "absorbent " to AR 2: Cushioning and Absorbent materials shall not be readily combustible

New PI 501 (5X2) Old PI's 508/511/516/518/509/512/517/519

1. The UN does not allow the use of IP6 inner packagings for PG I substances (see POO2)
2. UN 1495/ 1496/ 3212 must be added to PPR 30
3. All PG III substances require packagings that meet PG II performance standards. New PPR should be added.

New PI 502 (5X3) Old PI's 503/501/505/506/514/515/507

1. All PG III substances require packagings that meet PG II performance standards. New PPR should be added.
2. Old PPR 2 and PPR 13 are missing for UN 1873/ 2014/ 3098/ 3099/ 3139/ 3149. Can possibly be combined.
3. UN requires venting for UN 2014 and UN 3149. As this is not allowed for the air mode sufficient ullage is required. In my personal opinion 10 % is not sufficient. From practical experience I know that most companies who are producing Hydrogen peroxide keep an ullage between 30% and 50%. PPR 31 should be changed accordingly and UN 3149 should also be added.

New PI Y501 (Y5XX)

1. Add UN 1495/1496/3212 to PPR 30

New PI Y502 (Y5XY)

1. Packing instruction for liquids. No distinction needed in table between solids and liquids. Quantity limits are also missing.
2. Same remark as mentioned above for PI 502
3. PPR 31 should be changed as mentioned above.

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