Comments by ICAO on Information Paper 19 — WNTI Proposal for review of pressure differential requirements applicable to packages containing radioactive material transported by air

Following consultation with the ICAO Dangerous Goods Panel, ICAO would like to offer the following comments:

1) In general, there was no support for the proposal as presently written although there was limited backing for a graded approach on the basis it was for radioactive material in solid form transported under certain conditions. However, many requested more background and more detailed technical explanations to be provided in order to substantiate the need to change the regulations. It was suggested further meeting(s) with technical experts in attendance would be required prior to approval by TRANSSC.

2) Specific comments were offered on the actual 95kPa pressure differential requirement. It was noted that for these types of package a leakage rate is not specified by design, the principle being that the pressure differential may only be momentary, provided any leak of pressure does not result in any loss or dispersal of radioactive material. The requirement is for the package, not the outer packaging, to withstand the pressure differential without loss. It does not require the outer package to be leak tight, nor even the inners, provided there is no loss.

3) The following specific comments were offered by the member nominated by the International Federation of Airline Pilots Associations (IFALPA) on possible misconceptions of how aircraft might be operated in certain types of emergencies:

   Commercial aircraft cruise at altitudes to 43,000 ft, and depressurization events are not very uncommon. Therefore, basing safety regulations on ambient pressures that exist at 10,000 or 30,000 feet does not provide for an adequate safety margin. Additionally, the cabin pressure in unpressurized flight is usually lower than ambient pressure due to the venturi effect.

   During an emergency descent, descent rates can greatly exceed 2,500 feet per minute so using that as a benchmark for a rapid depressurization emergency descent is not realistic in all cases.

   It should be noted that descent to 10,000 ft is not always possible in case of an emergency. On some routes, aircraft cannot descend to low altitudes following an emergency because of terrain considerations. Minimum safe altitudes in some areas are above 25,000 ft, and are commonly above 15,000 ft. There are many routes over mountainous areas, so a descent to 10,000 ft cannot be assumed in an emergency.
Likewise, Extended Operations fuel planning does not assume a descent below 30,000 in the event of an emergency that requires a diversion. The altitude is determined by aircraft capability. Therefore, aircraft flying in remote areas cannot descend to 10,000 in the event of an emergency on many of today’s routes because of fuel considerations. The authors compare the regulations for radioactive material and other types of dangerous goods (and non-dangerous goods). The dangers posed by the various materials vary and the comparison is not necessarily appropriate. Radioactive material is fundamentally different than many other types of dangerous goods. If ethanol escapes from a container and spreads throughout an aircraft, it does not necessarily pose the same danger as radioactive material. In fact, materials exhibiting certain inhalation hazards are prohibited from air transport because of the dangers they pose. In any case, if there are deficiencies in other parts of the regulations they should be corrected, not used as a justification to reduce safety margins for radioactive materials.

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