Revise 2.2.3 as shown:

2.2.3 In addition to dangerous goods training for cargo acceptance and passenger check-in staff as shown in Table 1.5.A or Table 1.5.B, as applicable, those staff and cargo reservations and sales staff and passenger reservations and sales staff must be provided with information. This information, as appropriate, must be readily available to such staff on:

(a) general descriptions that are often used for items in cargo or in passengers' baggage which may contain dangerous goods;

(b) other indications that dangerous goods may be present (e.g. labels, markings); and

(c) those dangerous goods which may be carried by passengers in accordance with 2.3.

Add the following into 2.3.0 – General:

2.3.0.3 Paragraphs 2.3.2 to 2.3.4 address dangerous goods that are permitted in passenger and crew baggage only when the operator(s) concerned approve such carriage. It is recommended that operators have documented procedures that identify the approval process and any company specific requirements that may apply to items that are approved for carriage. More detail on the recommended practice is set out in 9.5.2.2.

Revise 2.3.4.1 as shown:

2.3.4.1 Medical Oxygen

Gaseous oxygen or air cylinders required for medical use. Each cylinder must not exceed 5 kg gross weight. Cylinders, valves and regulators, where fitted, must be protected from damage that could cause inadvertent release of the contents. This provision also applies where the cylinders are being carried by medically trained persons. The pilot-in-command must be informed of the number of oxygen or air cylinders loaded on board the aircraft and their loading location(s).

Note:
Personal medical oxygen devices that utilise liquid oxygen are forbidden on the person, in checked and carry-on baggage.

Revise 2.3.4.2 as follows:

2.3.4.2 Non-flammable Gas Cylinder fitted into a Life Jacket

Not more than two small cylinders, containing carbon dioxide or other suitable gas in Division 2.2, per person fitted into a self-inflating life jacket for inflation purposes plus not more than two spare cylinders.

Note:
Small gas cartridges containing gas with a capacity not exceeding 50 mL, containing no constituents subject to these Regulations other than a Division 2.2 gas, are not subject to these Regulations. ***See SP A98***

Revise 2.3.5.6 as shown:

2.3.5.6 Safety Matches or Cigarette Lighter

One small packet of safety matches or a cigarette lighter that does not contain unabsorbed liquid fuel, other than liquefied gas, intended for use by an individual when carried on the person. Matches and lighters are not permitted in checked or carry-on baggage. Lighter fuel and lighter refills are not permitted on one's person nor in checked or carry-on baggage.

Notes:

1. "Strike anywhere" matches are forbidden for air transport.

2. "Blue Flame" or "Cigar" lighters are not permitted on one's person, carry-on or checked baggage.

3. Cigarette lighters should have two independent actions by the user to activate ignition.

Revise 2.3.5.9 as follows (subject to discussion at ICAO DGP-WG/11 and possible modification):

2.3.5.9 Portable Electronic Devices containing ~~Lithium Metal or Lithium Ion Cells or~~ Batteries

2.3.5.9.1 Portable electronic devices (watches, calculating machines, cameras, cellular phones, lap-top computers, camcorders, etc.) containing ~~lithium metal or lithium ion cells or~~ batteries when carried by passengers or crew for personal use, which should be carried in carry-on baggage. Spare batteries must be individually protected to prevent short circuits by placement in the original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch, and carried in carry-on baggage only. In addition, for lithium batteries, each installed or spare battery must not exceed the following:

(a) for lithium metal or lithium alloy batteries, a lithium content of not more than 2 g; or

(b) for lithium ion batteries, a watt-hour rating of not more than 100 Wh.

Modify Table 2.3.A as follows:

YES	NO	YES	NO	NO	All spare batteries, including lithium metal or lithium ion cells or batteries, for such portable electronic devices ~~may~~ must be carried in carry-on baggage only. These batteries must be individually protected to prevent short circuits.

Revise 2.6.5.2 as follows:

2.6.5.2 A package containing dangerous goods in excepted quantities must not contain other dangerous goods that require a Shipper's Declaration.

Note:

When a package containing dangerous goods in excepted quantities is packed with UN 1845 Carbon dioxide, solid (dry ice), the requirements in Packing Instruction 954 must be met.

Revise 2.7.5 as follows (Note: text for new 2.7.5.6 replaces that currently in 5.0.3.2):

2.7.5.1 The general packing requirements of 5.0.2 through 5.0.4 applicable to passenger aircraft must be met except that the requirements of 5.0.2.3, 5.0.2.5, 5.0.2.11~~(f), 5.0.2.11(g)~~ and 5.0.2.14.2 do not apply.

2.7.5.5 Inner packagings must meet the requirements of Subsection 6.1. Outer packagings must be so designed that they meet the construction requirements in ~~Sub-section~~ Subsection 6.2 which apply to the type of outer packaging to be used for the article or substance

2.7.5.6 ~~For different dangerous goods in Limited Quantities in one package, see 5.0.3.2~~. An outer packaging may contain more than one item of dangerous goods or other goods provided that:

(a) the dangerous goods do not react dangerously with each other and cause:

- combustion and/or evolution of considerable heat,
- evolution of flammable, toxic or asphyxiant gases,
- the formation of corrosive substances, or
- the formation of unstable substances;

(b) the dangerous goods do not require segregation according to Table 9.3.A, except as otherwise provided for in these Regulations;

(c) the inner packaging used for each item of dangerous goods and the quantity contained therein complies with the relevant part of the packing instruction applicable to that item;

(d) the outer packagings used are permitted by all the packing instructions applicable to each item of dangerous goods;

(e) for classes other than Classes 2 (except UN 2037) and 9, the total net quantity per package does not exceed the value of 1, where "Q" is calculated using the formula:

$$Q = \frac{n_1}{M_1} + \frac{n_2}{M_2} + \frac{n_3}{M_3} \cdots$$

where n_1, n_2 etc. are the net quantities per package of the different dangerous goods and M_1, M_2 etc. are the maximum net quantities per package for these different dangerous goods according to Subsection 4.2 – List of Dangerous Goods, for the relevant "Y" Packing Instructions; and

(f) for Classes 2 (except UN 2037) and 9:

- when packed together without goods of other classes, the gross weight of the package must not exceed 30 kg; or
- when packed together with goods of other classes, the gross weight of the package must not exceed 30 kg and the total net quantity in the package of goods other than in Classes 2 (except UN 2037) or 9 does not exceed the value of 1 when calculated according to the "Q" formula above;

(g) carbon dioxide, solid (dry ice), UN 1845 may be packed together with goods of other classes, provided that the gross mass of the package does not exceed 30 kg. The quantity of dry ice does not need to be taken into account in the calculation of the "Q" value.

However, the packaging containing the carbon dioxide, solid (dry ice) and the outer packaging must permit the release of carbon dioxide gas;

(h) for different dangerous goods in one outer packaging consisting only those with the same UN number, packing group and physical state (i.e. solid or liquid), the calculation of the "Q" value is not required. However, the total net quantity in the package must not exceed the maximum net quantity according to Column H of Subsection 4.2 – List of Dangerous Goods.

Note:
The calculated "Q" valued must be rounded up to the first decimal place and entered on the Shipper's Declaration (see 8.1.6.9.2(g)).

Revise A44 as shown:

A44 The entry chemical kits or first aid kits is intended to apply to boxes, cases, etc. containing small quantities of ~~one or more compatible items of~~ various dangerous goods which are used for example for medical, analytical or testing or repair purposes. Components must not react dangerously (see 5.0.2.11(a)). The packing group assigned to the kit as a whole must be the most stringent packing group assigned to any individual substance in the kit. The assigned packing group must be shown on the Shipper's Declaration. The only dangerous goods, which are permitted in the kits, are substances which may be transported as:

- excepted quantities as specified in Column F of Table 4.2, providing the inner packagings and quantities are as prescribed in Table 2.6.A and 2.6.5.1(a); or
- limited quantities under 2.7.2.1.

Note:
If the chemical kit and/or first aid kit contains only substances and/or articles to which no packing group is assigned, e.g. aerosols, no packing group is required on the Shipper's Declaration.

Add new SPs as shown:

A802 Notwithstanding the absence of a packing group in column E, substances and articles assigned to these entries must be packed in UN Specification packagings that meet packing group II performance standards. This does not apply when aerosols are shipped using the limited quantity provisions.

Assign A802 against all applicable entries in Class 1, UN1950, UN 2037, UN 2794, UN 2795, UN 3028, UN 1057, UN 3150, UN 3473 (fuel cell cartridge entry only), UN 3476 (fuel cell cartridge entry only), UN 3477 (fuel cell cartridge entry only), UN 3478 (fuel cell cartridge entry only), UN 3479 (fuel cell cartridge entry only), UN 3167, UN 3168, UN 3169, UN 3103, UN 3104, UN 3105, UN 3106, UN 3107, UN 3108, UN 3109, UN 3110, UN 3223, UN 3224, UN 3225, UN 3226, UN 3227, UN 3228, UN 3229, UN 3230,

A803 Notwithstanding the assignment of a packing group III in column E, substances assigned to these entries must be packed in UN Specification packagings that meet packing group II performance standards. This does not apply when the substances are prepared in accordance with the limited quantity provisions.

Assign A803 against Class 8 liquids and solids that have a PG III listing

A804 Notwithstanding the assignment of a packing group III in column E, substances assigned to these entries must be packed in UN Specification packagings that meet packing group I performance standards.

Assign A804 against UN 2803, Gallium and UN 2809, Mercury

Revise 5.0.3 as follows:

5.0.3 Limited Quantities

~~OPERATOR VARIATIONS: DL-04~~

5.0.3.1 Dangerous goods being shipped under the provisions for Limited Quantities must be packed in accordance with 2.7.5 and 5.0.2 to 5.0.4 except 5.0.2.3, 5.0.2.5, 5.0.2.11(f), 5.0.2.11(g) and 5.0.2.14.2.

Delete all of 5.0.3.2 to 5.0.3.4.

Modify the existing outer packaging table in PIs 216, 375, 496, 874, 967 and 970 as follows:

OUTER PACKAGINGS — Strong outer packagings, such as:																	
Type	Drums							Jerricans			Boxes						
Desc.	Steel	Alumin-ium	Ply-wood	Fibre	Plastic	Other Metal	Steel	Alumin-ium	Plastic	Steel	Alumin-ium	Wood	Plywood	Recon-stituted wood	Fibre-board	Plastic	

Revise PI 953 as follows:

PACKING INSTRUCTION 953

This instruction applies to UN 2807, Magnetized material on passenger aircraft and Cargo Aircraft Only.

Magnetized materials with field strengths causing a compass deflection of more than 2 degrees at a distance of 2.1 m but not more than 2 degrees at a distance of 4.6 m (equivalent to 0.418 A/m or 0.00525 Gauss measured at a distance of 4.6 m) are not subject to any other requirements in these Regulations except for the following:

(a) the shipper must make prior arrangements with the operator identifying the magnetized material. A Shipper's Declaration for Dangerous Goods is not required provided ~~alternative written or electronic documentation includes~~ the words "magnetized material" ~~in association with the description of the goods~~ are shown in the "Nature and Quantity of Goods" box on the air waybill when used, or in the appropriate location on alternate transport documentation. Where an agreement exists with the operator, the shipper may provide the information by EDP or EDI techniques;

(b) the package must bear the magnetized material handling label;

(c) the operator must stow the packaged magnetized material in accordance with 9.3.11; and:

(d) the incident reporting requirements of 9.6 must be met.

Magnetized material with field strength sufficient to cause a compass deflection of more than 2 degrees at a distance of 4.6 m may only be transported with the prior approval of the appropriate authority of the State of origin and the State of the operator.

Revise Packing Instruction 954 as shown:

In packages:

(a) must be in packaging designed and constructed to permit the release of carbon dioxide gas and to prevent a build-up of pressure that could rupture the packaging;

(b) the shipper must make arrangements with the operator(s) for each shipment, to ensure ventilation safety procedures are followed;

(c) the Shipper's Declaration requirements of Subsections 8.1 and 10.8.1 are only applicable when the Carbon dioxide, solid (dry ice) is used as a refrigerant for dangerous goods that require a Shipper's Declaration;

(d) when a Shipper's Declaration is not required, the following information, as required by 8.2.3 for the Carbon dioxide, solid (dry ice), must be contained in the "Nature and Quantity of Goods" box on the air waybill when used, or in the appropriate location on alternate transport documentation. Where an agreement exists with the operator, the shipper may provide the information by EDP or EDI techniques. The information should be shown in the following order:

- UN 1845;
- proper shipping name (Dry ice or Carbon dioxide, solid);
- the number of packages; and
- the net weight of dry ice in each package.

(e) the net weight of the Carbon dioxide, solid (dry ice) must be marked on the outside of each package.

Dry ice used as a refrigerant for other than dangerous goods:

(a) may be shipped in a unit load device or other type of pallet prepared by a single shipper provided that the shipper has made prior arrangements with the operator, and the following information must be contained in the "Nature and Quantity of Goods" box on the air waybill when used, or in the appropriate location on alternate transport documentation.. Where an agreement exists with the operator, the shipper may provide the information by EDP or EDI techniques. The information should be shown in the following order;

- UN1845;
- Proper shipping name (Dry ice or Carbon dioxide, solid);
- The number of packages and the net weight of dry ice in each package if the ULD includes the packages contain dry ice; or
- The identification number of the ULD and the net quantity of dry ice in each ULD if the dry ice is placed in the dry ice bunker of the ULD or loose in the ULD.

(b) the unit load device, or other type of pallet must allow the venting of the carbon dioxide gas to prevent a dangerous build up of pressure (the marking and labelling requirements of Section 7 do not apply to the unit load device);

~~(c) the shipper must provide the operator with written documentation or where agreed with the operator, information by EDP or EDI techniques, stating the total weight of the dry ice contained in the unit load device or other type of pallet.~~

Revise PI 960 as shown:

PACKING INSTRUCTION 960

This instruction applies to UN 3316 on passenger aircraft and Cargo Aircraft Only.

The description "Chemical Kit" and/or "First Aid Kit" is intended to apply to boxes, cases, etc., containing small amounts of ~~one or more compatible items of~~ various dangerous goods which are used for example for medical, analytical or testing or repair purposes. Components must not react dangerously (see 5.0.2.11(a)).

The General Packing Requirements of Subsection 5.0.2 must be met, except that the requirements of 5.0.2.11(b) through 5.0.2.11(h) and 5.0.2.14 do not apply.

…

Revise PI 965 as follows:

…

General Requirements

The following requirements apply to all lithium ion or lithium polymer cells and batteries:

a) each cell and battery is of the type proven to meet the requirements of each test in the UN *Manual of Tests and Criteria*, Part III, subsection 38.3;
Note:
Batteries, including those which have been refurbished or otherwise altered, are subject to these tests irrespective of whether the cells of which they are composed have been so tested.

b) cells and batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport (e.g. those being returned to the manufacturer for safety reasons);

c) waste lithium batteries and lithium batteries being shipped for recycling or disposal are prohibited from air transport unless approved by the appropriate national authority of the State of origin and the State of the operator;

d) cells and batteries must be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit.

…

Section II – Excepted Lithium Ion Cells and Batteries

Lithium ion cells and batteries ~~offered for transport~~ meeting the requirements in this section are not subject to other additional requirements of these Regulations except for:

(a) dangerous goods in passenger and crew baggage (Subsection 2,3). Only those lithium ion batteries as specifically permitted may be carried in carry-on baggage;

(b) dangerous goods in air mail (Subsection 2.4);

(c) reporting of dangerous goods accidents, incidents and other occurrences (9.6.1 and 9.6.2).

Lithium ion cells and batteries offered for transport must meet the General Requirements of this packing instruction and:

1. for cells, the Watt-hour rating is not more than 20 Wh;
2. for batteries, Watt-hour rating is not more than 100 Wh. The Watt-hour rating must be marked on the outside of the battery case except those manufactured before 1 January 2009;

Revise PI 966 as follows:

…

General Requirements

The following requirements apply to all lithium ion or lithium polymer cells and batteries:

a) each cell and battery is of the type proven to meet the requirements of each test in the UN *Manual of Tests and Criteria*, Part III, subsection 38.3;
Note:
Batteries, including those which have been refurbished or otherwise altered, are subject to these tests irrespective of whether the cells of which they are composed have been so tested.

b) cells and batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport (e.g. those being returned to the manufacturer for safety reasons);

c) cells and batteries must be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit.

…

Section II – Excepted Lithium Ion Cells and Batteries

Lithium ion cells and batteries ~~offered for transport~~ meeting the requirements in this section are not subject to other additional requirements of these Regulations except for:

(a) dangerous goods in passenger and crew baggage (Subsection 2,3). Only those lithium ion batteries as specifically permitted may be carried in carry-on baggage;

(b) dangerous goods in air mail (Subsection 2.4);

(c) reporting of dangerous goods accidents, incidents and other occurrences (9.6.1 and 9.6.2).

Lithium ion cells and batteries offered for transport must meet the General Requirements of this packing instruction and:

1. for cells, the Watt-hour rating is not more than 20 Wh;

2. for batteries, Watt-hour rating is not more than 100 Wh. The Watt-hour rating must be marked on the outside of the battery case except those manufactured before 1 January 2009.

Cells and batteries must be packed in strong outer packagings that conform to 5.0.2.4, 5.0.2.6.1 and 5.0.2.12.1.

Revise PI 967 as follows:

…

General Requirements

The following requirements apply to all lithium ion or lithium polymer cells and batteries:

a) each cell and battery is of the type proven to meet the requirements of each test in the UN *Manual of Tests and Criteria*, Part III, subsection 38.3;
Note:
Batteries, including those which have been refurbished or otherwise altered, are subject to these tests irrespective of whether the cells of which they are composed have been so tested.

b) cells and batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport (e.g. those being returned to the manufacturer for safety reasons);

c) cells and batteries must be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit;

d) equipment must be equipped with an effective means of preventing accidental activation;

e) equipment containing batteries must be packed in strong outer packagings that conform to 5.0.2.4, 5.0.2.6.1 and 5.0.2.12.1;

f) the equipment containing the cells or batteries must be secured against movement within the outer packaging and be packed so as to prevent accidental operation during air transport;.

…

Section II – Excepted Lithium Ion Cells and Batteries

Lithium ion cells and batteries ~~offered for transport~~ meeting the requirements in this section are not subject to other additional requirements of these Regulations except for:

(a) dangerous goods in passenger and crew baggage (Subsection 2,3). Only those lithium ion batteries as specifically permitted may be in checked or carry-on baggage;

(b) dangerous goods in air mail (Subsection 2.4);

(c) reporting of dangerous goods accidents, incidents and other occurrences (9.6.1 and 9.6.2).

Lithium ion cells and batteries offered for transport must meet the General Requirements of this packing instruction and:

1. for cells, the Watt-hour rating is not more than 20 Wh;

2. for batteries, Watt-hour rating is not more than 100 Wh. The Watt-hour rating must be marked on the outside of the battery case except those manufactured before 1 January 2009.

…

Additional Requirements – Section II

The equipment must be packed in strong outer packagings constructed of suitable material of adequate strength and design in relation to the packaging's capacity and its intended use unless the cell or battery is afforded equivalent protection by the equipment in which it is contained.

Each package containing more than four cells or more than two batteries installed in equipment must be labelled with a lithium battery handling label (Figure 7.4.I), except for button cell batteries installed in equipment (including circuit boards);

Each consignment with packages bearing the lithium battery handling label must be accompanied with a document with an indication that:

- the package contains lithium ion cells or batteries;
- the package must be handled with care and that a flammability hazard exists if the package is damaged;
- special procedures must be followed in the event the package is damaged, to include inspection and repacking if necessary; and
- a telephone number for additional information.

A Shipper's Declaration for Dangerous Goods is not required.

Where a consignment includes packages bearing the lithium battery handling label, the words "Lithium ion batteries", "not restricted" and "PI 967" must be included on the air waybill, when an air waybill is used. The information should be shown in the "Nature and Quantity of Goods" box of the air waybill.

Any person preparing or offering cells or batteries for transport must receive adequate instruction on these requirements commensurate with their responsibilities.

…

Revise PI 968 as follows:

…

General Requirements

The following requirements apply to all lithium metal or lithium alloy cells and batteries:

a) each cell and battery is of the type proven to meet the requirements of each test in the UN *Manual of Tests and Criteria*, Part III, subsection 38.3;
Note:
Batteries, including those which have been refurbished or otherwise altered, are subject to these tests irrespective of whether the cells of which they are composed have been so tested.

b) cells and batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport (e.g. those being returned to the manufacturer for safety reasons);

c) waste lithium batteries and lithium batteries being shipped for recycling or disposal are prohibited from air transport unless approved by the appropriate national authority of the State of origin and the State of the operator;

d) cells and batteries must be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit.

…

Section II – Excepted Lithium Metal and Lithium Alloy Cells and Batteries

Lithium metal or lithium alloy cells and batteries ~~offered for transport~~ meeting the requirements in this section are not subject to other additional requirements of these Regulations except for:

(a) dangerous goods in passenger and crew baggage (Subsection 2,3). Only those lithium metal batteries as specifically permitted may be carried in carry-on baggage;

(b) dangerous goods in air mail (Subsection 2.4);

(c) reporting of dangerous goods accidents, incidents and other occurrences (9.6.1 and 9.6.2).

Lithium metal or lithium alloy cells and batteries offered for transport must meet the General Requirements of this packing instruction and:

1. a lithium metal or lithium alloy cell, the lithium content is not more than 1 g;

2. a lithium metal or lithium alloy battery, the aggregate lithium content is not more than 2 g;

Revise PI 969 as follows:

…

General Requirements

The following requirements apply to all lithium metal or lithium alloy cells and batteries:

a) each cell and battery is of the type proven to meet the requirements of each test in the UN *Manual of Tests and Criteria*, Part III, subsection 38.3;
Note:
Batteries, including those which have been refurbished or otherwise altered, are subject to these tests irrespective of whether the cells of which they are composed have been so tested.

b) cells and batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport (e.g. those being returned to the manufacturer for safety reasons);

c) cells and batteries must be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit.

…

Section II – Excepted Lithium Metal or Lithium Alloy and Batteries

Lithium metal or lithium alloy cells and batteries ~~offered for transport~~ meeting the requirements in this section are not subject to other additional requirements of these Regulations except for:

(a) dangerous goods in passenger and crew baggage (Subsection 2,3). Only those lithium metal batteries as specifically permitted may be carried in carry-on baggage;

(b) dangerous goods in air mail (Subsection 2.4);

(c) reporting of dangerous goods accidents, incidents and other occurrences (9.6.1 and 9.6.2).

Lithium metal or lithium alloy cells and batteries offered for transport must meet the General Requirements of this packing instruction and:

1. a lithium metal or lithium alloy cell, the lithium content is not more than 1 g;

2. a lithium metal or lithium alloy battery, the aggregate lithium content is not more than 2 g;

Cells and batteries must be packed in strong outer packagings that conform to 5.0.2.4, 5.0.2.6.1 and 5.0.2.12.1.

Revise PI 970 as follows:

…

General Requirements

The following requirements apply to all lithium metal or lithium alloy cells and batteries:

a) each cell and battery is of the type proven to meet the requirements of each test in the UN *Manual of Tests and Criteria*, Part III, subsection 38.3;
Note:
Batteries, including those which have been refurbished or otherwise altered, are subject to these tests irrespective of whether the cells of which they are composed have been so tested.

b) cells and batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport (e.g. those being returned to the manufacturer for safety reasons);

c) cells and batteries must be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit;

d) equipment must be equipped with an effective means of preventing accidental activation;

e) equipment containing batteries must be packed in strong outer packagings that conform to 5.0.2.4, 5.0.2.6.1 and 5.0.2.12.1;

f) the equipment containing the cells or batteries must be secured against movement within the outer packaging and be packed so as to prevent accidental operation during air transport;.

…

Section II – Excepted Lithium Metal or Lithium Alloy Cells and Batteries

Lithium metal or lithium alloy cells and batteries ~~offered for transport~~ meeting the requirements in this section are not subject to other additional requirements of these Regulations except for:

(a) dangerous goods in passenger and crew baggage (Subsection 2,3). Only those lithium metal batteries as specifically permitted may be in checked or carry-on baggage;

(b) dangerous goods in air mail (Subsection 2.4);

(c) reporting of dangerous goods accidents, incidents and other occurrences (9.6.1 and 9.6.2).

Lithium metal or lithium alloy cells and batteries offered for transport must meet the General Requirements of this packing instruction and:

1. a lithium metal or lithium alloy cell, the lithium content is not more than 1 g;

2. a lithium metal or lithium alloy battery, the aggregate lithium content is not more than 2 g;

…

Additional Requirements – Section II

The equipment must be packed in strong outer packagings constructed of suitable material of adequate strength and design in relation to the packaging's capacity and its intended use unless the cell or battery is afforded equivalent protection by the equipment in which it is contained.

Each package containing more than four cells or more than two batteries installed in equipment must be labelled with a lithium battery handling label (Figure 7.4.I), except for button cell batteries installed in equipment (including circuit boards);

Each consignment with packages bearing the lithium battery handling label must be accompanied with a document with an indication that:

- the package contains lithium ion cells or batteries;
- the package must be handled with care and that a flammability hazard exists if the package is damaged;
- special procedures must be followed in the event the package is damaged, to include inspection and repacking if necessary; and
- a telephone number for additional information.

A Shipper's Declaration for Dangerous Goods is not required.

Where a consignment includes packages bearing the lithium battery handling label, the words “Lithium metal batteries”, “not restricted” and “PI 970” must be included on the air waybill, when an air waybill is used. The information should be shown in the “Nature and Quantity of Goods” box of the air waybill.

Any person preparing or offering cells or batteries for transport must receive adequate instruction on these requirements commensurate with their responsibilities.

…

Add new note under 6.2.6.2 as shown:

6.2.6.2 The packaging must be manufactured from suitable plastic material and be of adequate strength in relation to its capacity and intended use. Except for recycled plastic material as defined in Appendix A, no used material other than production residues or regrind from the same manufacturing process may be used. The packaging must be adequately resistant to ageing and to degradation caused either by the substance contained or by ultra-violet radiation. Any permeation of the substance contained must not constitute a danger under normal conditions of transport.

Note:
As specified in 5.0.2.15, unless otherwise approved by the appropriate national authority, the period of use permitted for plastic drums and jerricans is not more than 5 years from the date of manufacture of the receptacle.

Revise 7.1.4.1 as follows:

7.1.4.1 Unless all markings ~~required by 7.1.51 for~~ representative of all dangerous goods in the overpack are clearly visible, the overpack must be marked with:

- the word “overpack”;
- the required markings of 7.1.5.1 (a),(b),(e) through (i)
- the required marking of 7.1.5.4;
- the required markings of 7.1.6.1, 7.1.6.2 and 7.1.6.3;
- any special handling instructions appearing on packages inside the overpack.

Package specification marking must not be reproduced on the overpack as the word “Overpack” indicates that packages contained within, comply with the prescribed specifications. For an overpack containing packages of radioactive material, see 10.7.1.4.

[…]

Add a new paragraph (7.2.6.2.4) and renumber as follows:

7.2.6.2 Label Location

7.2.6.2.1 When the package dimensions are adequate, labels must be located on the same surface of the package near the Proper Shipping Name marking.

7.2.6.2.2 Labels should be affixed adjacent to the shipper's or consignee's address appearing on the package.

7.2.6.2.3 When labels identifying the primary and subsidiary risk are required, they must be affixed adjacent to each other.

7.2.6.2.4 When different items of dangerous goods are packed in the same outer packaging and require multiple hazard labels, they must be affixed adjacent to each other.

7.2.6.2.45 Unless the package dimensions are inadequate hazard labels must be affixed at an angle of 45° (diamond shaped).

Revise Figure 7.3.F as shown:

FIGURE 7.3.F

Class 2 — Gases: Non-flammable, non-toxic (Division 2.2)

Name: Non-flammable, non-toxic Gas
Cargo IMP Code: RNG or RCL (cryogenic liquid subject to Packing Instruction 202)**, as applicable**
Minimum dimensions: 100 × 100 mm
Symbol (gas cylinder): Black or White
Background: Green (Pantone Colour No. 335U)

Revise Figure 7.3.V as shown:

FIGURE 7.3.V

Class 9 — Miscellaneous Dangerous Goods

Name: Miscellaneous
Cargo IMP Code: RMD, RSB (polymeric beads and plastics moulding compound subject to Packing Instruction 957)**, ICE, as applicable**
Minimum dimensions: 100 × 100 mm
Symbol (seven vertical stripes in upper half): Black
Background: White

Revise 8.1.1.1 as shown:

8.1.1.1 Format and Language

Pre-printed ~~The~~ declaration forms must be printed in the same format, except as provided hereafter, and show the same wording in English, as one of the specimen declaration forms referred to in 8.1.7. Additionally, if required, the wording in English may be supplemented by an accurate printed translation in another language. The spacing of columns and boxes, if any, appearing in the “Nature and Quantity of Dangerous Goods” box and delineated by dotted lines may be changed to accommodate shipper's requirements.

Completed Shipper’s Declaration forms generated by a computer system must conform in format to the requirements of this section as described and must contain the information required for the shipment type and aircraft limitation.

Revise paragraph 8.1.6.5 as follows:

8.1.6.5 Aircraft Limitations

On pre-printed Shipper's Declaration forms the shipper must delete either "Passenger and Cargo Aircraft" or "Cargo Aircraft Only" to indicate whether the shipment is packed to comply with the limitations prescribed for passenger and cargo aircraft or the limitations for cargo aircraft only. Where the Shipper's Declaration is generated from a computer system it is sufficient if just the applicable aircraft type is shown, i.e. only print "Passenger and Cargo Aircraft" or "Cargo Aircraft Only", as applicable.

Where the packing instruction number and the permitted quantity per package are identical for passenger and cargo aircraft, the "Cargo Aircraft Only" limitation should not be used. The "Cargo Aircraft Only" label must not be used for packages packed according to Passenger Aircraft limitations (Subsection 4.2, Columns G and H and/or I and J) even when included on a Shipper's Declaration marked "Cargo Aircraft Only" because of other packages in the shipment.

Revise 8.1.6.6 and 8.1.6.7 with the addition of the following note:

Note:
This information is optional and may be left blank.

Revise paragraph 8.1.6.8 as follows:

8.1.6.8 Shipment Type

On pre-printed Shipper's Declaration forms the shipper must delete "Radioactive" to indicate the shipment does not contain radioactive material. Where the Shipper's Declaration is generated from a computer system it is sufficient if just "Non-radioactive" is shown. Radioactive material must not be included on the same declaration form as other dangerous goods except for Carbon dioxide, solid (dry ice) when used as a refrigerant.

Revise 8.1.6.9.2 (g) as follows:

(g) when two or more different items of dangerous goods are packed in the same outer packaging in accordance with 5.0.2.11 or ~~5.0.3.2~~ 2.7.5.6, the "Q" value rounded up to the first decimal place;

Revise 8.1.6.9.2 Step 7 as shown:

Step 7 When an overpack is used, the wording "Overpack Used" must be inserted on the declaration form immediately after all the relevant entries relating to the packages within each overpack. In such cases, packages within overpacks must be listed first.

- when a consignment consists of multiple overpacks, each overpack must have an identification mark (which may be any alpha-numeric format) and be marked with the total quantity of dangerous goods. This information must also be entered on the Shipper's Declaration. The total quantity shown on the Shipper's Declaration must match the total quantities shown on the overpack.
- multiple overpacks with identical contents shall be identified as follows: "Overpack Used x (number of identical overpacks)", see Figure 8.1.L and Figure 8.1.N, (Examples 8 and 10).

- multiple overpacks with different contents shall be identified by listing them separately, see Figure 8.1.M, (Example 9) for operator requirements when offering multi-overpacks containing different quantities of dangerous goods.

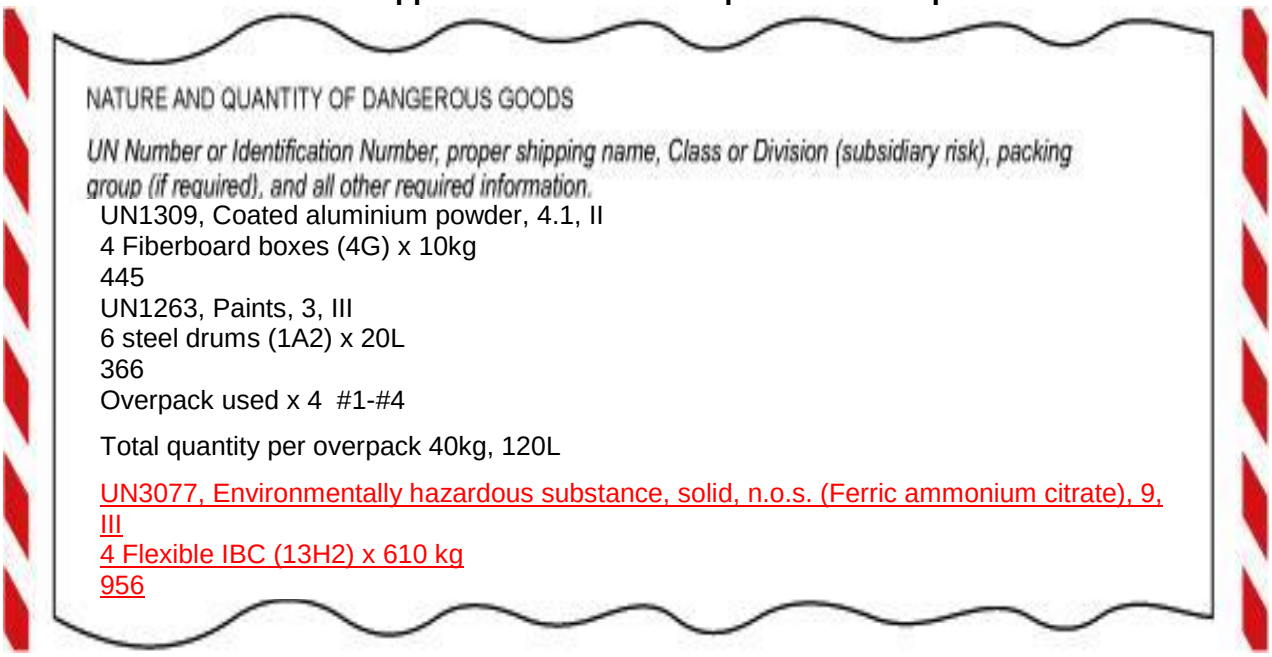
Notes:

1. Where an overpack contains more than one UN number, the total quantity of dangerous goods should be shown by UN number.
2. While the indication of "Overpack Used" will be added at this point in the columnar format Shipper's Declaration, for the open format Shipper's Declaration (see Figure 8.1.A) the wording "Overpack Used" will appear after all of the information associated with the dangerous goods, including the packing instruction number and any applicable authorizations, see Figure 8.1.N.

Editorial note: The IATA Required symbol should be added to the new bullet point

Modify Figure 8.1.E as follows:

FIGURE 8.1.E
Shipper's Declaration Completion – Example 1



Revise 8.2.3 as shown:

8.2.3 Shipper's Declaration Not Required

If a Shipper's Declaration is not required for dangerous goods, the "Nature and Quantity of Goods" box of the Air Waybill must show at least the following information. The sequence of the information is optional, but that shown below is preferred:

•UN or ID number; (Not required for Magnetized Material)

•Proper shipping name;

~~•Class or division number (Not required for UN 1845);~~

•Number of packages (unless these are the only packages within the consignment); and

•Net quantity per package (only required for UN 1845).

Note:

~~For UN 3373, it is only necessary to show the text "BIOLOGICAL SUBSTANCE, CATEGORY B", "UN 3373" and the number of packages.~~ For Radioactive Material - Excepted Packages, see DGR 10.8.8.3.

Add new text in 9.2.1 as follows:

9.2.1.1.3 In order to maintain the principle of keeping exposure to radiation as low as reasonably achievable, Category II-Yellow and Category III-Yellow packages, overpacks or freight containers should be separated from persons during temporary storage. Minimum separation distances should be applied as shown in Tables 9.3.D and 9.3.E and greater distances should be used where feasible. These distances are measured from the surface of the packages, over-packs or freight containers, irrespective of the duration of the storage of the radioactive material.

9.2.1.1.4 During acceptance, and handling, exposure to radiation should be kept as low as reasonably achievable.

Revise header for 9.3.14 as shown (also check index entry and add plastics moulding compound, if applicable):

9.3.14 Loading of Expandable Polymeric Beads and Plastics Moulding Compound

Revise 9.5.2 as follows:

9.5.2 Information to Operator Employees

9.5.2.1 An operator must provide, in the operator's operations and/or other appropriate manuals, information to employees so as to enable flight crews and other employees to carry out their responsibilities with regard to dangerous goods. Where applicable, this information must also be provided to ground handling agents. This information must include:

(a) for passenger handling staff and cabin crew the procedures to be followed to alert passengers that certain items of dangerous goods are specifically prohibited from being in checked baggage, e.g. spare lithium batteries (see Subsection 2.3) and must be removed from baggage where items of carry-on baggage cannot be accommodated in the cabin;

(b) the action to be taken in the event of emergencies involving dangerous goods;

(c) details of the location and identification of cargo holds;

(d) the maximum quantity of dry ice permitted in each compartment; and

(e) if radioactive material is to be carried, instructions on the loading of such dangerous goods, based on the requirements of 9.3.10.

9.5.2.2 In addition to the above, it is recommended that the operator's operations and/or other appropriate manuals should contain information specific to dangerous goods permitted in passenger and crew baggage as permitted by Subsection 2.3. The information in the operator's manuals should address:

(a) approval process. It is recommended that a single company policy be set out that identifies the items that have been approved and the person(s) or department(s) responsible for determining how dangerous goods in passenger baggage may be approved;

(b) communication. It is recommended that the operator define how approvals for dangerous goods requiring operator approval are communicated to the airport(s) of departure. It is recommended that operators consider a process where such approval is included in the passenger(s) electronic record;

(c) limitations. The operator manuals should specify any limitations or procedural requirements that may apply to particular commodities, e.g. inspection at check-in by passenger service agents and/or security;

(d) interlining. Where the operator has interline agreements with code share and/or alliance partners the operator should identify what the procedure is for obtaining the approval of the other airline(s) involved, e.g. by advising the passenger that they must obtain approval from the other operator;

(e) awareness. The operator should ensure that all staff who have an interaction with passengers, (i.e. reservations agents, passenger service agents, cabin crew and flight crew) are made aware of the process employed to ensure that the operator approval process remains effective.

Revise the text in 9.5.3.2 to read the following:

9.5.3.2 An operator or the operator's handling agent and the airport operator must ensure that notices warning passengers as to the type of dangerous goods which are forbidden for transport aboard an aircraft are available and:

(a) Must be ~~P~~prominently displayed in sufficient number at each of the places at an airport where:

- tickets are issued,
- passengers checked in,
- in aircraft boarding areas,
- ~~in baggage claim areas;~~ and

(b) Prominently ~~clearly~~ displayed at any other location where passengers are checked in, and

(c) Should be prominently displayed in sufficient number in baggage claim areas.

Revise paragraph 10.8.3.5 as follows:

10.8.3.5 Aircraft Limitations

On pre-printed Shipper's Declaration forms the shipper must delete either "Passenger and Cargo Aircraft" or "Cargo Aircraft Only" to indicate whether the shipment is packed to comply with the limitations prescribed for passenger and cargo aircraft or the limitations for cargo aircraft only. Where the Shipper's Declaration is generated from a computer system it is sufficient if just the applicable aircraft type is shown, i.e. only print "Passenger and Cargo Aircraft" or "Cargo Aircraft Only", as applicable.

Where the packing instruction number and the permitted quantity per package are identical for passenger and cargo aircraft, the "Cargo Aircraft Only" limitation should not be used. The "Cargo Aircraft Only" label must not be used for packages packed according to Passenger Aircraft limitations (Subsection 4.2, Columns G and H and/or I and J) even when included on a Shipper's Declaration marked "Cargo Aircraft Only" because of other packages in the shipment.

Revise paragraph 10.8.3.8 as follows:

10.8.3.8 Shipment Type

On pre-printed Shipper's Declaration forms the shipper must delete "Non-Radioactive" to indicate the shipment contains radioactive material. Where the Shipper's Declaration is generated from a computer system it is sufficient if just "Radioactive" is shown.

Radioactive material must not be included on the same declaration form as other dangerous goods, except for Carbon dioxide, solid (dry ice) when used as a refrigerant or when the other dangerous goods are contained within the same article. When Carbon dioxide, solid (dry ice) is used as a refrigerant for radioactive material or other dangerous goods are contained within the same article, those items must be fully described on the same Shipper's Declaration as the radioactive materials. This does not apply to radioactive material, excepted packages, which do not require a Shipper's Declaration.

Revise Appendix B as shown:

B.2.2.4 IATA Cargo IMP Codes

RCL — Cryogenic Liquid (Packing Instruction 202)

…

RSB — Polymeric Beads / Plastics Moulding Compound (Packing instruction 957)