



## **DANGEROUS GOODS PANEL (DGP)**

### **TWENTY-NINTH MEETING**

**Montréal, 13 to 17 November 2023**

**Agenda Item 5: Clarifying State oversight responsibilities in Annex 18 (Ref: Job Card DGP.005.04)**

### **PROPOSED AMENDMENT TO ANNEX 18 TO CLARIFY STATES' RESPONSIBILITIES WITH RESPECT TO THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR**

(Presented by the Rapporteur of the DGP Working Group on Annex 18)

#### **SUMMARY**

This working paper contains a draft amendment to Annex 18 developed by the DGP Working Group on Annex 18. The amendment aims to clarify States' responsibilities with respect to the safe transport of dangerous goods by air and the relationship between Annex 18 and other Annexes that have an impact on dangerous goods.

**Action by the DGP:** Action by the DGP is in paragraph 5.

## **1. INTRODUCTION**

1.1 This working paper contains a draft amendment to Annex 18 developed by the DGP Working Group on Annex 18 (DGP-WG/Annex 18). The amendment aims to clarify States' responsibilities with respect to the safe transport of dangerous goods by air and the relationship between Annex 18 and other Annexes that have an impact on dangerous goods.

## **2. BACKGROUND**

2.1 DGP-WG/Annex 18 was established to progress the work on ANC Job Card DGP.005 — Clarifying State oversight responsibilities in Annex 18. The job card was developed after deficiencies were identified through work on aligning Annex 18 reporting and oversight requirements in Annex 18 with Annex 19 (ANC Job Card DGP.002.01). That work revealed a lack of clarity and sufficient detail in Annex 18 to effectively outline States' responsibilities with respect to the safe transport of dangerous goods by air and the interrelationship of State responsibilities between dangerous goods and other aviation

activities. It was also identified that although notes to clarify that the scope of an operator's safety management system included the carriage of dangerous goods, nothing was introduced to clarify that States' dangerous goods activities were an integral part of its State safety programme (SSP). It was concluded that establishing a relationship between State oversight of the safe transport of dangerous goods by air with the State safety management responsibilities and critical elements of a system that enables a State to discharge its responsibilities for safety oversight contained in Annex 19 was necessary.

### 3. PROGRESSION OF WORK

3.1 DGP-WG/Annex 18 conducted its work virtually and through several face-to-face meetings following a brief one day "kick-off" meeting after DGP/26 (Montréal, 16 – 27 October 2017). The output from these virtual and face-to-face meetings was provided to the twenty-seventh meeting of the DGP (DGP/27, 16 to 20 September 2019) (see paragraph 4.1 of the DGP/27 Report) and to the twenty-eighth meeting of the DGP (DGP/28, 15 to 19 November 2021 (see paragraph 5.1 of the DGP/28 Report). DGP-WG/Annex 18 has held weekly virtual and the following face-to-face meetings since DGP/28:

- a) 7 to 11 March 2022 at the Emirates Aviation College in Dubai;
- b) 25 to 29 July 2022 at the International Air Transport Association (IATA) in Singapore;
- c) 14 to 18 November 2022 at ICAO Headquarters in Montreal;
- d) 8 to 10 May 2023 in Rio de Janeiro, Brazil; and
- e) 27 to 31 August 2023 in Doha, Qatar.

3.2 This work has cumulated into the draft amendment provided in Appendix A. A clean version of the amendment, without redline and strikeout, is provided in Appendix B.

### 4. OVERVIEW OF AMENDMENT TO ANNEX 18

4.1 Below is a brief description of each chapter in the proposed amendment to Annex 18.

#### 4.2 Foreword

4.2.1 DGP-WG/Annex 18 developed amendments to better describe:

- a) the relationship between Annex 18 and the Technical Instructions;
- b) the status of the Technical Instructions;
- c) amendments to the Annex versus the Technical Instructions including the need for this amendment; and
- d) available guidance material.

### 4.3 Chapter 1. Definitions

4.3.1 Chapter 1 continues to contain the definitions. Amendments proposed include:

- a) A new definition for “supply chain” was developed. DGP-WG/Annex 18 considered it necessary since the term is referred to in the Standards and Recommended Practices (SARPs) in Annex 6 — *Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes*, Chapter 15 that requires operators to take the safety of the supply chain into account when conducting their required safety risk assessment on the carriage of items in the cargo compartment. The definition applies to dangerous goods in cargo and mail and is intended to include all entities involved in the dangerous goods shipment process from origin to destination including the operator. The operator is considered an integral part of the supply chain because it encompasses the shipment process from origin to destination, and several operators may be involved between these points. A new chapter on the supply chain was also developed (see paragraph 5 below).
- b) New definitions for misdeclared and undeclared dangerous goods were developed to address on-going queries from States and industry on what is meant by the terms.
- c) Definitions for several terms referenced in the Annex were added that are already defined in other Annexes or documents, i.e.:
  - 1) Cargo (defined in the Technical Instructions and in Annex 9 — *Facilitation* (although slightly differently in Annex 9 whereby cargo does not apply to stores but does in the Technical Instructions));
  - 2) Civil aviation authority (CAA) (defined in the *Safety Oversight Manual* (Doc 9734); and
  - 3) Remote-pilot-in-command (defined in Annex 1 — *Personnel Licensing* and proposed for inclusion in new Part IV to Annex 6 — *Operation of Aircraft — International Operations — Remotely Piloted Aircraft Systems*).

### 4.4 Chapter 2. General

4.4.1 A new chapter was developed to merge some general principles currently contained in several chapters and to provide a framework for how transporting dangerous goods by air are regulated. It contains the following sections:

- a) Objectives. A new SARP describing the objective of the Annex as being the safety of the aircraft, its occupants, ground personnel, the general public and the environment was developed. The group debated whether an objective was necessary. It concluded that it was important to emphasize this particularly for the benefit of entities outside of the aviation system whose primary objective when using aviation to transport dangerous goods is not typically the safety of the aircraft and its occupants.
- b) Applicability. The SARP currently contained in Annex 18 in 2.1.1 applies the Annex to all international operations of civil aircraft. DGP-WG/Annex 18 has broadened its scope by making the Annex applicable to international civil aviation to ensure entities

other than the operator that contribute to the safe carriage of dangerous goods are covered. The Recommendation currently in 2.3 for Contracting States to take necessary measures to achieve compliance with the Annex and the Technical Instructions for domestic civil aircraft operations was modified to align with the revised applicability SARP and moved after it. The existing exception for articles and substances classified as dangerous goods but which are required to be aboard the aircraft in accordance with airworthiness requirements and operating regulations was moved to this section. A note explaining that the exception did not apply to replacements for these articles and substances was added under the SARP and the Standard requiring those intended as replacements or removed for replacement to be transported in accordance with the Annex currently in 2.4.2 was moved to Chapter 6, Operator responsibilities.

- c) Detailed Instructions. The current heading for the SARP making the Technical Instructions binding on States in 2.2 was modified from “Dangerous Goods Technical Instructions” to “Detailed Instructions” to make the intent of the provision easier to understand. A reference to “entities in the supply chain” was added to make who needs to comply with the Instructions clear. The recommendation for States to inform ICAO of difficulties encountered in the application of the Technical Instructions in 2.2.2 was moved to a new Chapter 3 on Provision of Information to ICAO so that all SARPs related to providing ICAO with information are contained in one place.
- d) Multimodal transport. The heading for the recommendation that States should make provisions to enable dangerous goods intended for air transport to be accepted for surface transport to or from aerodromes in 2.6 was modified from “Surface transport” to “Multimodal transport” to make the intent of the provision easier to understand.
- e) Limitations on the transport of dangerous goods by air, which is currently contained in Chapter 4, was moved to this chapter as they are part of the general framework for States to regulate dangerous goods. The SARP specifying what is permitted for transport by air was modified to specify dangerous goods *as cargo and mail*. Limitations for passengers and crew were moved from the current Exceptions section to this section, because DGP-WG/Annex 18 did not consider dangerous goods carried by passengers and crew to be excepted from the Annex. They are forbidden unless specifically permitted by the Technical Instructions.
- f) The heading of current 4.2 refers to dangerous goods forbidden for transport by air unless exempted, but the SARP refers also to an approval. The heading was modified to include approval and provisions for approvals and exemptions were moved from the general applicability section to this section.

The current SARP for dangerous goods forbidden for transport under any circumstances simply refers to the Technical Instructions. DGP-WG/Annex 18 concluded that more was needed to make the intent clear to States. It therefore copied the text contained in Part 1;2.1 of the Technical Instructions to the Annex. It created a new SARP prohibiting States from granting approvals or exemptions for these dangerous goods.

#### 4.5 **Chapter 3. Provision of information to ICAO**

4.5.1 A new chapter capturing all current SARPs that require various types of information be provided to ICAO was added. It includes:

- a) the requirement for each State to specify an appropriate authority within its administration responsible for ensuring compliance with Annex 18 (2.7 of current Annex 18);
- b) the requirement for States to notify ICAO of variations from the Technical Instructions (2.5.1 of current Annex 18); and
- c) the recommendation for States to inform ICAO of difficulties encountered in the application of the Technical Instructions (2.2.2 of current Annex 18).

DGP-WG/Annex 18 proposes removing the recommendation for the State of the Operator to take measures to ensure that operators notify ICAO when they adopt more restrictive requirements than the Technical Instructions. Few were reported to ICAO, and updates to already-reported variations were not always provided. DGP-WG/Annex 18 considered the recommendation to be of little value, since users of the Technical Instructions could not depend on them.

#### 4.6 **Chapter 4. State safety management responsibilities**

4.6.1 A new chapter on State safety management responsibilities specific to dangerous goods is proposed with the aim of ensuring all entities involved with the safe transport of dangerous goods are working towards the level of safety expected in aviation. Having a common understanding of safety presents challenges unique to dangerous goods transport because of the many entities involved, including regulatory authorities and industries outside the aviation system. The chapter is intended to make it clear that transporting dangerous goods is an integral part of the State safety programme required by Annex 19 and to ensure activities necessary to achieve targeted levels of safety specific to dangerous goods that go beyond what Annex 19 requires are covered. The structure of the chapter is based on the components of an SSP so that there are four sections, one for each component.

#### 4.7 **Chapter 5. Safety of the supply chain**

4.7.1 A new chapter on the safety of the supply chain was added. It outlines the expectations upon States more clearly. Current Annex 18 has three separate chapters that address responsibilities of entities involved with preparing and offering dangerous goods for transport. These are: Chapter 3, Classification; Chapter 5, Packing; Chapter 6: Labelling and marking; Chapter 7: Shipper's responsibilities. All of them point to the provisions of the Technical Instructions, with some provisions from the Technical Instructions repeated in the Annex. They do not directly state what is required of the State, and there does not appear to be any rationale for determining what should be repeated and what should simply be referred to. This new chapter clearly defines what is expected of the State, which is to have primary aviation legislation and specific operating regulations in place that are directed at entities in the supply chain preparing, offering, causing to offer, and accepting dangerous goods for transport by air. The new chapter lists the functions for which regulations are needed and refers to the applicable parts of the Technical Instructions where the detailed Instructions are found. Listing the functions provides the added benefit of an overview of how the Technical Instructions mitigate risk. Terminology to capture entities such as freight forwarders who may offer general cargo that contains undeclared dangerous goods was added (e.g. "Each

Contracting State shall adopt regulations to require, at a minimum, that a person does not offer or cause to be offered for transport ...”).

#### 4.8 Chapter 6. Operator’s responsibilities

4.8.1 Chapter 6 replaces existing Chapter 8 on Operator’s responsibilities. It summarizes details in the Instructions to create greater visibility to States. It specifies that operators must develop and implement procedures and distinguishes between operators with and without specific approval to transport dangerous goods as cargo. Amendments include:

- a) A new note is added specifying that the State is required to recognize an air operator certificate issued by another Contracting State as valid in accordance with the provisions for the surveillance of operations by a foreign operator in Parts I, III — *International Operations — Helicopters* and IV of Annex 6 (surveillance of a foreign operator). This note is in addition to the two existing notes that refer to safety management systems (SMS) provisions in Annex 19 and the fact that dangerous goods are included in the scope of the operator’s SMS. A third note that explains that the Annex is not intended to require an operator to transport a particular article or substance or prevent the operator from adopting special requirements is moved from Chapter 2.
- b) A new section is added specifying that dangerous goods cannot be transported as cargo unless specifically approved to do so by the State in accordance with the applicable provisions of Annex 6, that an operator holding a specific approval to carry dangerous goods as cargo issued by the State can only do so in accordance with the specific approval, and that operators authorized to carry radioactive material must implement and maintain a radiation protection programme as specified in the Instructions.
- c) A new section that identifies information that must be provided in the Operations Manual or another appropriate manual is added. It includes dangerous goods-related SARPs currently in Annex 6, Part I, Chapter 14 and Part III, Chapter 12. DGP-WG/Annex 18 identified errors in the Annex 6 provisions. This resulted in a recommendation to remove detailed dangerous goods provisions from Annex 6, Part I, Chapter 14, Attachment J and similar provisions in Part III and proposed Part IV while maintaining the distinction between operators with and without a specific approval to transport dangerous goods as cargo with references to the relevant parts of Annex 18 for each type of operator (see DGP/29-WP/7). This would eliminate redundancy and reduce the risk of errors in Annex 6. The amendment to Annex 18 distinguishes between responsibilities applicable to all operators and the additional responsibilities applicable to operators with a specific approval to transport dangerous goods as cargo.
- d) Operator responsibilities related to providing information that are currently contained in Chapter 9 — Provision of information are moved to this chapter with the goal of keeping all operator responsibilities in one location.

#### 4.9 Chapter 7. Passenger Provisions

4.9.1 A new chapter devoted to passenger provisions is added. It focuses on the need for States to adopt regulations prohibiting passengers and crew from carrying dangerous goods unless permitted in accordance with the Technical Instructions and includes the SARP currently in Chapter 9 — Provision of

information that requires airport operators to promulgate information to warn passengers of the types of dangerous goods they are forbidden to carry. It includes a note referring to the similar requirement for the operator that is moved from Chapter 9 to Chapter 6 — Operator responsibilities.

#### 4.10 Chapter 8. Transport of dangerous goods by post

4.10.1 A new chapter on the transport of dangerous goods by post was created to merge into one the training provisions currently contained in 10.2.2 and the SARP in 11.4 requiring the civil aviation authority to approve the designated postal operator's procedures for controlling the introduction of dangerous goods in airmail. It distinguishes between responsibilities applicable only to designated postal operators with a policy to allow dangerous goods in mail and responsibilities that are applicable to all designated postal operators. A new Standard is added to require the Contracting State's designated postal operators accepting mail in another State to ensure procedures and training are in place in that State. The SARP is intended to address challenges with respect to Extraterritorial Offices of Exchange (ETOE's).

#### 4.11 Chapter 9. Training programmes

4.11.1 DGP-WG/Annex 18 proposes to include many of the dangerous goods training provisions currently in the Technical Instructions in Annex 18. Keeping the provisions in the Annex creates more visibility to the State and ensures they are consulted when amendments are proposed. This is considered important because of the State's obligation to approve the dangerous goods training programme of the operator and the designated postal operator. Additional amendments include:

- a) "Assessment" was added to the chapter title to reflect the critical role it plays in ensuring personnel are competent to perform their dangerous goods functions.
- b) A new SARP establishing for who a dangerous goods training programme is required is added. Who requires a dangerous goods training programme is currently established in the Technical Instructions, and there have been extensive discussions on the Dangerous Goods Panel on whether training programmes can be required for entities not intending to handle dangerous goods by air. Some States do not have oversight authority over entities not performing functions described in the Technical Instructions, so a mandatory training requirement is not feasible in these States. However, entities performing functions described in Annex 18 and the Technical Instructions are required to be trained in these States regardless of whether they knowingly or unknowingly perform them. The amendment is intended to capture this concept by stating that training programmes are required by any entity that offers, handles or transports dangerous goods by air or *causes* to offer, handle, ore transport dangerous goods by air.
- c) The need for recurrent training and assessment within 24 months of previous training and assessment is moved from the Technical Instruction. Twenty-four months was established to reflect the fact that the regulations are modified at least once every two years through the biennial editions of the Technical Instructions. It implies that training once every two years is sufficient to ensure competency is maintained. The provision is revised to focus on the need for supplemental training to ensure competency is maintained while still maintaining the minimum requirement of recurrent training and assessment within 24 months of previous training and assessment.

#### 4.12 Chapter 10. Dangerous goods safety intelligence

4.12.1 Chapter 9 replaces reporting and investigation provisions currently contained in Chapter 12. The revised provisions, which were developed by DGP-WG/Reporting, are based on Annex 19.

#### 4.13 Chapter 11. Dangerous goods security provisions

4.13.1 Chapter 11 is modified to include physical and cyber security of data provisions with respect to the processing of exemptions for the transport of high consequence dangerous goods and a requirement for security personnel to receive dangerous goods training.

### 5. ACTION BY THE DGP

5.1 DGP-WG/Annex 18 planned to recommend that the panel agree to the proposed amendment to Annex 18 so that a recommendation that it be sent for State consultation could be developed for the Air Navigation Commission and included in the DGP/29 Report. DGP-WG/Annex 18 believes the amendment will result in an Annex 18 framework that clearly outlines States' dangerous goods safety management responsibilities as it was directed to do through ANC job card DGP.005. However, more time is needed for coordination with other relevant sectors and to ensure the amendment is mature enough for State consultation. The Secretariat has advised that the preliminary review of the amendment by the ANC will not be scheduled until later in 2024. DGP is therefore invited to:

- a) provide comments on the draft amendments to Annex 18 contained in Appendix A to this working paper;
- b) allow DGP-WG/Annex 18 to fine-tune the amendments based on comments received and the coordination process; and
- c) agree to convene a virtual DGP meeting during the second quarter of 2024 to formally agree to the amendment and recommendation in an addendum to the DGP/29 Report.

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## APPENDIX A

### PROPOSED AMENDMENT TO ANNEX 18 — *THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR*

#### NOTES ON THE PRESENTATION OF THE PROPOSED AMENDMENT

The text of the amendment is arranged to show revisions as shown below:

<del>Text to be deleted is shown in blue with a blue line through it.</del> (strikeout text)	text to be deleted
<u>New text to be inserted is shown in red with red underline</u> (redline text)	new text to be inserted
<del>Text to be deleted is shown in blue with a blue line through it</del> (strikeout text) <u>followed by the replacement text which is shown in red with red underline</u> (redline text).	new text to replace existing text
<div style="border: 1px solid black; background-color: #f8d7da; padding: 5px;">Text moved from a different location is identified with a reference to the location it is moved from in a light-red shaded box immediately before the redline text in the new location.</div>	text moved from a different location
<div style="border: 1px solid black; background-color: #d1ecf1; padding: 5px;">Text that is moved to a different location is identified with a reference to the location it is moved to in a light-blue shaded box immediately before the strikeout text in the original location.</div>	text moved to a different location

## FOREWORD

### Historical background

The provisions of Annex 18 govern the international transport of dangerous goods by air. The material in this Annex was developed by the Air Navigation Commission in response to a need expressed by Contracting States for an internationally agreed set of provisions governing the safe transport of dangerous goods by air. They were adopted by Council on 26 June 1981 and became applicable on 1 January 1984.

### Relationship with the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284)

Annex 18 specifies the broad Standards and Recommended Practices to be followed to enable dangerous goods to be carried safely. The broad provisions are amplified by the detailed specifications of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284) (Technical Instructions). In order to assist in achieving compatibility with the regulations covering the transport of dangerous goods by other modes of transport, the provisions of this Annex the Technical Instructions are based on the Recommendations of the on the transport of dangerous goods for all modes of transport developed by the United Nations Committee of Experts on the Transport of Dangerous Goods Economic and Social Council's Committee of Experts on the Transport of Dangerous Goods and the Regulations for the Safe Transport of Radioactive Materials of the International Atomic Energy Agency. The intent of using this common base by all modes of transport is to allow cargo to be transferred safely and smoothly between air, sea, rail, and road modes. Modifications from these recommendations are made in the Technical to address specific aviation needs while keeping in the mind the need to ensure modal compatibility.

### Relationship with Status of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284)

The provisions of Annex 18 govern the international transport of dangerous goods by air. The broad provisions of this Annex are amplified by the detailed specifications of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284). The detailed requirements of the Technical Instructions are considered binding on a State by virtue of 2.3.1.1 of this Annex unless it has notified a difference to this provision under Article 38 of the Convention.

### Amendments to Annex 18 and the Technical Instructions

Annex 18 is intended to contain stable material requiring only minor amendments using the normal Annex amendment process. The Technical Instructions require more substantial and frequent amendments to keep up with day-to-day operational use. The significant growth and complexity in air cargo operations since Annex 18 was first adopted necessitates the implementation of the same proactive strategy to improve safety performance needed in other aviation sectors through the State safety programme (SSP). Provisions aimed at ensuring States integrate dangerous goods operations within their SSP were adopted by Council on ... 2025 through Amendment 13. The provisions provide clarity and sufficient detail to effectively outline States' responsibilities with respect to the safe transport of dangerous goods by air and the interrelationship of responsibilities between dangerous goods and other aviation

activities. In order that a comprehensive document may be available to States for implementation of the dangerous goods provisions prescribed by this Annex, an Attachment hereto describes the interrelationships between Annex 18 and other Annexes bearing on the safe transport of dangerous goods by air.

The Air Navigation established the Dangerous Goods Panel (DGP) and tasked it with maintaining the Technical Instructions. The DGP meets periodically to review comments received from States and interested international organizations, to consider any changed recommendations of the United Nations Committee or the IAEA, to address safety and facilitation issues specific to air transport and to prepare revised editions of the Technical Instructions. Amendments recommended by the DGP are published in panel meeting reports and made available on [www.icao.int/safety/DangerousGoods](http://www.icao.int/safety/DangerousGoods).

Amendments recommended by the DGP are reviewed by the Air Navigation Commission and approved, issued and amended by the Council. Action taken by the Air Navigation Commission or the Council on the recommendations is published in the Supplement to DGP meeting reports and made available on [www.icao.int/safety/DangerousGoods/](http://www.icao.int/safety/DangerousGoods/).

A new edition of the Technical Instructions is published every two years. Amendments to the Technical Instructions during the specific period of applicability of an edition of the document may also be published if deemed necessary. Amendments during the specific period of applicability are made available on [www.icao.int/safety/dangerous\\_goods](http://www.icao.int/safety/dangerous_goods).

### Guidance

Guidance to States on the implementation of Annex 18 is contained in *Oversight and Management of the Safe Transport of Dangerous Goods by Air Manual (Doc xxxxx)*.

The Technical Instructions are supported by the *Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284)*. The Supplement contains guidance to assist States when considering authorizations to transport dangerous goods by air that the Technical Instructions forbid under normal circumstances through approvals or exemptions.

### **Action by Contracting States**

*Notification of differences.* The attention of Contracting States is drawn to the obligation imposed by Article 38 of the Convention by which Contracting States are required to notify the Organization of any differences between their national regulations and practices and the International Standards contained in this Annex and any amendments thereto. Contracting States are invited to extend such notification to any differences from the Recommended Practices contained in this Annex, and any amendments thereto, when the notification of such differences is important for the safety of air navigation. Further, Contracting States are invited to keep the Organization currently informed of any differences which may subsequently occur, or of the withdrawal of any differences previously notified. A specific request for notification of differences will be sent to Contracting States immediately after the adoption of each amendment to this Annex.

The attention of States is also drawn to the provisions of Annex 15 related to the publication of differences between their national regulations and practices and the related ICAO Standards and Recommended Practices through the Aeronautical Information Service, in addition to the obligation of States under Article 38 of the Convention.

In the specific case of 2.2.1 of this Annex, it should be noted that States are expected to file a difference only if they are unable to accept the binding nature of the Technical Instructions. Variations from the detailed provisions of the Technical Instructions are to be reported to ICAO for publication in that document as required by 2.5 of this Annex.

Such detailed variations from the Technical Instructions will not be published with any other differences in a Supplement to this Annex and are not expected to be published under the provisions of Annex 15.

*Promulgation of information.* The establishment and withdrawal of any changes to facilities, services and procedures affecting aircraft operations provided in accordance with the Standards specified in this Annex should be notified and take effect in accordance with the provisions of Annex 15.

### **Status of Annex components**

An Annex is made up of the following component parts, not all of which, however, are necessarily found in every Annex; they have the status indicated:

1.— *Material comprising the Annex proper:*

- a) *Standards and Recommended Practices* adopted by the Council under the provisions of the Convention. They are defined as follows:

*Standard:* Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation and to which Contracting States will conform in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory under Article 38.

*Recommended Practice:* Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as desirable in the interest of safety, regularity or efficiency of international air navigation, and to which Contracting States will endeavour to conform in accordance with the Convention.

- b) *Appendices* comprising material grouped separately for convenience but forming part of the Standards and Recommended Practices adopted by the Council.
- c) *Definitions* of terms used in the Standards and Recommended Practices which are not self-explanatory in that they do not have accepted dictionary meanings. A definition does not have independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.
- d) *Tables and Figures* which add to or illustrate a Standard or Recommended Practice and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

2.— *Material approved by the Council for publication in association with the Standards and Recommended Practices:*

- a) *Forewords* comprising historical and explanatory material based on the action of the Council and including an explanation of the obligations of States with regard to the application of the Standards and Recommended Practices ensuing from the Convention and the Resolution of Adoption.
- b) *Introductions* comprising explanatory material introduced at the beginning of parts, chapters or sections of the Annex to assist in the understanding of the application of the text.

- c) *Notes* included in the text, where appropriate, to give factual information or references bearing on the Standards or Recommended Practices in question, but not constituting part of the Standards or Recommended Practices.
- d) *Attachments* comprising material supplementary to the Standards and Recommended Practices, or included as a guide to their application.

### Selection of language

This Annex has been adopted in six languages — English, Arabic, Chinese, French, Russian and Spanish. Each Contracting State is requested to select one of those texts for the purpose of national implementation and for other effects provided for in the Convention, either through direct use or through translation into its own national language, and to notify the Organization accordingly.

### Editorial practices

The following practice has been adhered to in order to indicate at a glance the status of each statement: *Standards* have been printed in light face roman; *Recommended Practices* have been printed in light face italics, the status being indicated by the prefix **Recommendation**; *Notes* have been printed in light face italics, the status being indicated by the prefix *Note*.

It will be noted that in the English text the following practice has been adhered to when writing the specifications: Standards employ the operative verb “shall” while Recommended Practices employ the operative verb “should”.

Any reference to a portion of this document, which is identified by a number and/or title, includes all subdivisions of that portion.

Table A. Amendments to Annex 18

<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted/approved Effective Applicable</i>
1st Edition	Air Navigation Commission Study		26 June 1981 1 January 1983 1 January 1984
1	Sixth Meeting of the Dangerous Goods Panel	Miscellaneous amendments for alignment with Recommendations of the UN Committee of Experts and IAEA.	26 November 1982 26 March 1983 1 January 1984
2	Fifth, Sixth and Seventh Meetings of the Dangerous Goods Panel	Improved definitions for overpack and unit load device. Definitions of package and packaging aligned with Recommendations of the UN Committee of Experts. Addition of a paragraph covering surface transport to or from aerodromes. The requirement to provide information to the pilot-in-command revised to indicate when this information should be given.	1 June 1983 1 October 1983 1 January 1984
3	Eighth Meeting of the Dangerous Goods Panel	Clarification of the circumstances when exemptions may be granted. Clarification of the segregation requirements of poisons or infectious substances from animals or foodstuffs.	25 March 1985 29 July 1985 1 January 1986

<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted/approved Effective Applicable</i>
4 (2nd Edition)	Eleventh Meeting of the Dangerous Goods Panel	General simplification of the provisions of Annex 18 through the removal of technical detail. Miscellaneous amendments to various provisions.	24 February 1989 23 July 1989 16 November 1989
5	Fourteenth and Sixteenth Meetings of the Dangerous Goods Panel	Clarification of the responsibility of States to achieve compliance with any amendment to the <i>Technical Instructions for the Safe Transport of Dangerous Goods by Air</i> (Doc 9284). Clarification of the exceptions to dangerous goods carried by passengers and crew members.	10 March 1999 19 July 1999 4 November 1999
6 (3rd Edition)	Seventeenth Meeting of the Dangerous Goods Panel and Amendment 25 to Annex 6, Part I	<ul style="list-style-type: none"> <li>a) revised definitions of dangerous goods, crew member, flight crew member and pilot-in-command;</li> <li>b) revision of the provisions to grant exemptions in special circumstances by the States of Overflight to facilitate the movement of dangerous goods in an aircraft overflying its territory;</li> <li>c) alignment of provisions regarding packaging with the Technical Instructions;</li> <li>d) introduction of provisions to cover the requirement to load and stow dangerous goods in accordance with the Technical Instructions;</li> <li>e) revision of the provisions to place the overall responsibility with States to provide information to passengers;</li> <li>f) revision of the provisions to ensure that emergency response personnel are informed without delay, after an accident or incident, about the dangerous goods carried as cargo on board the aircraft;</li> <li>g) revision of the provisions to enhance cooperation between States in taking action against shippers who wilfully violate the dangerous goods transport regulations; and</li> <li>h) revision of the provisions of the pilot to provide information on dangerous goods on board in the event of an emergency.</li> </ul>	7 March 2001 16 July 2001 1 November 2001
7	Eighteenth Meeting of the Dangerous Goods Panel	<ul style="list-style-type: none"> <li>a) notification to ICAO of appropriate national authorities responsible for dangerous goods; and</li> <li>b) provision of emergency response information regarding dangerous goods.</li> </ul>	24 February 2003 14 July 2003 27 November 2003
8	Nineteenth Meeting of the Dangerous Goods Panel	<ul style="list-style-type: none"> <li>a) a refinement of paragraph 9.6.1 to make it clear that the presence of dangerous goods needs to be reported only in the case of a serious incident in which the dangerous goods were likely to have been involved; and</li> <li>b) introduction of a new Chapter 13 requiring States to establish dangerous goods security measures.</li> </ul>	16 February 2005 11 July 2005 24 November 2005
9	Twentieth Meeting of the Dangerous Goods Panel	The extension of the provisions in Chapter 12 relating to the investigation of dangerous goods accidents and incidents to include cases of misdeclared and undeclared dangerous goods.	19 February 2007 16 July 2007 20 November 2008

<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted/approved Effective Applicable</i>
10 (4th Edition)	Twenty-first and twenty-second meetings of the Dangerous Goods Panel (DGP/21 and 22)	a) loading of dangerous goods on cargo only aircraft; and b) requirements for the issuance of exemptions and approvals in Chapter 2 and to certain definitions in Chapter 1.	4 March 2011 18 July 2011 17 November 2011
11	Twenty-third meeting of the Dangerous Goods Panel (DGP/23)	Requirements for State inspection systems in Chapter 11 and to certain definitions in Chapter 1.	27 February 2013 15 July 2013 14 November 2013
12	Twenty-fourth meeting of the Dangerous Goods Panel (DGP/24)	Amendment concerning: a) safety management systems (SMS); b) dangerous goods in the mail; and c) dangerous goods training programmes.	2 March 2015 13 July 2015 12 November 2015

## INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES

### CHAPTER 1. DEFINITIONS

When the following terms are used in this Annex, they have the following meanings:

**Approval.** An authorization granted by an appropriate national authority for:

- a) the transport of dangerous goods forbidden on passenger and/or cargo aircraft where the Technical Instructions state that such goods may be carried with an approval; or
- b) other purposes as provided for in the Technical Instructions.

*Note.— In the absence of a specific reference in the Technical Instructions allowing the granting of an approval, an exemption may be sought.*

[Cargo. Any property carried on an aircraft other than mail and accompanied or mishandled baggage.](#)

*Note.— This definition differs from the definition of “cargo” given in Annex 9 — Facilitation.*

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The term is referred to in Annex 18. The definition is replicated from the Technical Instructions.

**Cargo aircraft.** Any aircraft, other than a passenger aircraft, which is carrying goods or property.

[Civil aviation authority \(CAA\). The governmental entity or entities, however titled, that are directly responsible for the regulation of all aspects of civil air transport, technical \(i.e. air navigation and aviation safety\) and economic \(i.e. the commercial aspects of air transport\).](#)

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The term is referred to in Annex 18. The definition is replicated from the <i>Safety Oversight Manual</i> (Doc 9734).

**Consignment.** One or more packages of dangerous goods accepted by an operator from one shipper at one time and at one address, received for in one lot and moving to one consignee at one destination address.

**Crew member.** A person assigned by an operator to duty on an aircraft during a flight duty period.

**Dangerous goods.** Articles or substances which are capable of posing a [risk/hazard](#) to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions or which are classified according to those Instructions.

Justification: The need was identified during work on harmonizing provisions of the Technical Instructions with the UN Recommendations on the Transport of Dangerous Goods for incorporation in the 2019-2020 Edition. The amendment corrected inaccurate use of the term “risk”. The definition in the Technical Instructions already aligns with the UN Model Regulations. The ANC conducted a final review of the amendment following State consultation. It was pointed out, and recognized by the Commission, that the amendment proposal was administrative in nature

and, as such, should be consolidated with other Annex 18 amendment proposals which could imply a later applicability date than the currently indicated 7 November 2019. (AN Min 209-2).

**Dangerous goods accident.** An occurrence associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in fatal or serious injury to a person or major property or environmental damage.

Note.— A dangerous goods accident may also constitute an aircraft accident as defined in Annex 13— Aircraft Accident and Incident Investigation.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Clarification that a dangerous goods accident is not restricted to an accident associated with the operation of an aircraft. The wording aligns with text in the definition for dangerous goods incident. It is important to capture accidents not associated with the operation of an aircraft because they could indicate a safety deficiency that might have resulted in an aircraft accident if the dangerous goods had been loaded on the aircraft. (see DGP/26 Report and DGP/26-IP/6)

**Dangerous goods incident.** An occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, ~~which results in injury to where:~~

- a) ~~a person; is injured;~~
- b) ~~there is~~ property or environmental damage;
- c) ~~there is~~ fire, breakage, spillage, leakage of ~~fluid~~contents or radiation or ~~there is~~ other evidence that the integrity of the packaging has not been maintained. ~~Any; or~~
- d) ~~occurrence relating to the transport of dangerous goods which seriously jeopardizes the safety of the aircraft or its occupants is also deemed to constitute a is jeopardized.~~

Note.— A dangerous goods incident may also constitute an aircraft incident as defined in Annex 13 — Aircraft Accident and Incident Investigation.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<ul style="list-style-type: none"> <li>— Editorial amendments to improve readability (see DGP/26 Report and DGP/26-IP/6).</li> <li>— “fluid” is replaced with “contents” to include solids.</li> <li>— Note added to establish relationship between a dangerous goods incident and an aircraft incident under Annex 13. It is similar to the one added under “Dangerous goods accident”.</li> </ul>

**Designated postal operator.** Any governmental or non-governmental entity officially designated by a Universal Postal Union (UPU) member country to operate postal services and to fulfil the related obligations arising from the acts of the UPU Convention on its territory.

**Exception.** A provision in this Annex which excludes a specific item of dangerous goods from the requirements normally applicable to that item.

**Exemption.** An authorization, other than an approval, granted by an appropriate national authority providing relief from the provisions of the Technical Instructions.

**Flight crew member.** A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

Misdeclared dangerous goods. Dangerous goods offered for transport by air that are identified to not be in accordance with the information provided on the dangerous goods transport document or other documentation, when applicable.

Note.— Dangerous goods identified by the operator during the acceptance check as not being in compliance with the applicable provisions of the Technical Instructions are not included in this definition.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The term is referred to in Annex 18.

**Operator.** A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

**Overpack.** An enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage.

*Note.— A unit load device is not included in this definition.*

**Package.** The complete product of the packing operation consisting of the packaging and its contents prepared for transport.

**Packaging.** ~~Receptacles~~ One or more receptacles and any other components or materials necessary for the ~~receptacles~~ receptacles to perform ~~its~~ their containment ~~function~~ and other safety functions.

*Note.— For radioactive material, see Part 2, paragraph 7.21.3 of the Technical Instructions.*

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Recommended by DGP/27 (Recommendation 1/1). Harmonizes the definition with the one contained in the UN Recommendations on the Transport of Dangerous Goods and corrects an out-of-date reference in the note. The definition is also contained in the Technical Instructions and already aligns with the UN Model Regulations. The Air Navigation Commission made a preliminary review of Recommendation 1/1 and, noting the amendment was editorial in nature, agreed that it should be referred for comments to Contracting States and appropriate international organizations, together with the Commission's own comments and proposals thereon, only as part of a more substantive amendment to Annex 18.

**Passenger aircraft.** An aircraft that carries any person other than a crew member, an operator's employee in an official capacity, an authorized representative of an appropriate national authority or a person accompanying a consignment or other cargo.

**Pilot-in-command.** The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

Remote pilot-in-command. The remote pilot designated by the operator as being in command and charged with the safe conduct of a flight.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The term is referred to in Annex 18.

**Safety management system (SMS).** A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

**Serious injury.** An injury which is sustained by a person in an accident and which:

- a) requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
- b) results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
- c) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
- d) involves injury to any internal organ; or
- e) involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or
- f) involves verified exposure to infectious substances or injurious radiation.

**State of Destination.** The State in the territory of which the consignment is finally to be unloaded from an aircraft.

**State of Origin.** The State in the territory of which the consignment is first to be loaded on an aircraft.

**State of the Operator.** The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

Supply chain. Includes any entity that:

- a) offers, handles or transports; or
- b) causes to offer, handle or transport;

dangerous goods in cargo or mail.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Proposed amendment introduces new provisions for safety of the supply chain. The definition scopes the term.

**Technical Instructions.** The *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284), approved and issued periodically in accordance with the procedure established by the ICAO Council.

**Undeclared dangerous goods.** Dangerous goods offered for transport by air where there is no dangerous goods transport document or other documentation, when permitted, describing the contents as containing dangerous goods or the package is not marked to identify the contents as containing dangerous goods, as required by the Technical Instructions.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The term is referred to in Annex 18.

**UN number.** The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals to identify an article or substance or a particular group of articles or substances.

**Unit load device.** Any type of freight container, aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.

*Note 1.— An overpack is not included in this definition.*

Note 2.— A freight container for radioactive material is not included in this definition.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The definition has been in the Annex since its first edition. It is also contained in the Technical Instructions. Note 2 was added to the ... Edition of the Technical Instructions but not to the Annex. It was added to differentiate a freight container for radioactive material from a ULD because the former has specific characteristics that do not necessarily apply to a ULD. The amendment will ensure this concept is clear and ensure alignment between the two documents.

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## CHAPTER 2. APPLICABILITY GENERAL

### 2.1 Objectives

Each Contracting State shall have as a primary objective in the transport of dangerous goods by air the safety of the aircraft, its occupants, ground personnel, the general public and the environment.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The safe transport of dangerous goods by air is dependent on the diligence of entities both within and outside the aviation system. The primary objective when using aviation to transport or carry dangerous goods for those outside the aviation system is not typically the safety of the aircraft and its occupants. It is therefore important to make this the primary objective when it comes to the safe transport of dangerous goods by air in addition to those entities that could be impacted by dangerous goods by other modes (i.e. ground personnel, the general public and the environment). This SARP is based on 2.1.1 of Annex 17 — <i>Security</i> , another Annex that deals with entities outside the aviation system.

### 2.1.2.2 General Applicability

2.1.2.2.1 The Standards and Recommended Practices of this Annex shall be applicable to ~~all~~ international ~~operations of~~ civil ~~aircraft~~ aviation.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<ul style="list-style-type: none"> <li>a) “General” is removed for the sake of consistency with other Annexes.</li> <li>b) Applying the Annex to aviation rather than to the operation of the aircraft is intended to ensure that entities other than the operator that contribute to the safe transport of dangerous goods are covered by this Annex.</li> </ul>

The following is moved from 2.3:

**Recommendation.**— ~~*In the interests of safety and of minimizing interruptions to the international transport of dangerous goods, Each Contracting States should also take the necessary measures to achieve compliance with apply the Standards and Recommended Practices contained in this Annex and the Technical Instructions for to domestic civil aircraft operations*~~ aviation.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<ul style="list-style-type: none"> <li>a) The provision relates to the applicability of the Annex and the Technical Instructions to domestic civil aircraft operations. There is a current recommendation to take the necessary measures to achieve compliance with the Annex and the Technical Instructions to domestic transport, but it is currently located outside of the applicability section of Chapter 2 (2.3). It is therefore proposed to move the recommended practice under the international applicability SARP.</li> <li>b) “Each” is added before “Contracting State” for the sake of consistency.</li> </ul>

	<p>c) The current recommendation refers to the Annex and the Technical Instruction. Removing the reference to the Technical Instructions is proposed as it is considered redundant, given that Annex 18 makes the document binding on a State.</p> <p>d) It is proposed to replace “to achieve compliance” with “apply” for the sake of clarity and consistency.</p> <p>e) Text referring to “the interests of safety and minimizing interruptions to the international transport of dangerous goods” is considered more appropriate as guidance material. It is therefore proposed to remove it from the recommended practice and to elaborate on the concept in a new guidance document to support the implementation of Annex 18 (<i>Oversight and Management of the Safe Transport of Dangerous Goods by Air Manual (Doc xxxxx)</i>).</p> <p>f) “to domestic aircraft operations” is replaced with “to domestic civil aviation” to align with the revision to the previous SARP for the same reason, i.e. to ensure that entities other than the operator that contribute to the safe transport of dangerous goods are covered.</p>
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The following is moved from 2.4.1:

2.4.1.2.2 Articles and substances which would otherwise be ~~classed~~ classified as dangerous goods but which are required to be aboard the aircraft in accordance with the pertinent airworthiness requirements and operating regulations, or for those specialized purposes identified in the Technical Instructions, shall be excepted from the provisions of this Annex.

The following is moved from 2.4.2:

2.4.2—*Note.*—~~Where See Chapter 6 for the requirements applicable to the transport of~~ articles and substances intended as replacements for those described in ~~2.4.1~~ 2.2.3 or which have been removed for replacement ~~are when~~ carried on an aircraft, ~~they shall be transported in accordance with the provisions of this Annex except as permitted in the Technical Instructions.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<p>a) The provision in current 2.4.1 relates to the applicability of the Annex and the Technical Instructions, but it is currently located outside of the applicability section of Chapter 2. It is therefore proposed to move the Standard to this section, i.e. the applicability section.</p> <p>b) The current Standard in 2.4.2 requiring articles and substances classified as dangerous goods which are intended as replacements for those described in 2.4.1 and those removed for replacement to be transported in accordance with the Annex is proposed for deletion from this chapter because it is proposed to be captured in Chapter 6 — Operator Responsibilities. Chapter 6 is intended to outline the dangerous goods elements the State of the Operator needs to consider when authorizing an operator to conduct air transport operations. How an operator ensures that articles and substances classified as dangerous goods needing to be replaced or intended as replacements for those described in new 2.2.3 are transported safely is one of those elements. Addressing this in Chapter 6 instead of this chapter allows for a comprehensive list of elements to be considered. The note under 2.2.2 referring to the provision in Chapter 6 is proposed to emphasize that there are limits to the exception in 2.2.2.</p>

The following is moved to new 2.4.2.1:

~~— 2.1.2 — Where specifically provided for in the Technical Instructions, the States concerned may grant an approval provided that in such instances an overall level of safety in transport which is equivalent to the level of safety provided for in the Technical Instructions is achieved.~~

The following is moved to new 2.4.2.2:

~~— 2.1.3 — In instances:~~

~~— a) — of extreme urgency; or~~

~~— b) — when other forms of transport are inappropriate; or~~

~~— c) — when full compliance with the prescribed requirements is contrary to the public interest;~~

~~the States concerned may grant an exemption from the provisions of the Technical Instructions provided that in such instances every effort shall be made to achieve an overall level of safety in transport which is equivalent to the level of safety provided for in the Technical Instructions.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	It is proposed to move the approval and exemption provisions from the applicability section to the limitation on the transport of dangerous goods by air section because they are more associated with the latter than with applicability. Approvals and exemptions are already mentioned in that section, so keeping all the relevant SARPs together makes them more comprehensive.

~~— 2.1.4 — For the State of Overflight, if none of the criteria for granting an exemption are relevant, an exemption may be granted based solely on whether it is believed that an equivalent level of safety in air transport has been achieved.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The Standard in 2.1.4 is proposed for deletion as it is considered more appropriate to address its intent, which is not clear by the wording, in guidance material. The intent of the SARP is to address challenges faced by the State of Overflight when considering whether to grant an exemption when the criteria for granting it are not applicable to that State. The challenges faced by the State of overflight are transferred to applicants, who are often unable to acquire an exemption. Addressing the issue through guidance will allow for more comprehensive assistance to States on the subject.

Note 1 is moved to under 2.4.2.1 and Notes 2 and 3 are moved to under 2.4.2.2:

~~— Note 1. — For the purpose of approvals, “States concerned” are the States of Origin and the Operator, unless otherwise specified in the Technical Instructions.~~

~~— Note 2. — For the purpose of exemptions, “States concerned” are the States of Origin, Operator, Transit, Overflight and Destination.~~

~~— Note 3. — Guidance for the processing of exemptions, including examples of extreme urgency, may be found in the Supplement to the Technical Instructions (Part S-1, Chapter 1, 1.2 and 1.3).~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Note 1 is specific to approvals and Notes 2 and 3 are specific to the exemptions. It is proposed to move Note 1 under the provision for approvals (now 2.4.2.1) and Notes 2 and 3 under the provision for exemptions (now 2.4.2.2) to improve clarity.

~~— Note 4. — Refer to 4.3 for dangerous goods forbidden for transport by air under any circumstances.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The note is necessary in the current Annex because the provisions for approvals and exemptions and the provisions for dangerous goods forbidden under any circumstance are in different sections of this chapter. This is no longer necessary, since all of these provisions are proposed for inclusion in the same location, i.e. the limitation on the transport of dangerous goods section.

Note 5 is moved to under the title of Chapter 6 (Operator’s Responsibilities) as Note 4:

~~— Note 5. — It is not intended that this Annex be interpreted as requiring an operator to transport a particular article or substance or as preventing an operator from adopting special requirements on the transport of a particular article or substance.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The note is moved to Chapter 6: Operator responsibilities as Note 4. The note is currently under the provisions for approvals and exemptions, but its application goes beyond these. Moving the note to Chapter 6 makes the provisions for operators more comprehensive.

### 2.2.3 Detailed instructions

#### 2.3.1 Dangerous Goods Technical Instructions

~~2.2.1.2.3.1.1~~ Each Contracting State shall take ~~the necessary~~ measures ~~to~~ aimed at ensuring entities in the supply chain, passengers, and crew members achieve compliance with the detailed provisions contained in the Technical Instructions.

2.3.1.2 Each Contracting State shall also take the necessary measures to achieve compliance with any amendment to the Technical Instructions which may be published during the specified period of applicability of an edition of the Technical Instructions.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<ul style="list-style-type: none"> <li>a) The addition of a new heading in 2.3 is proposed to describe the intent of the Technical Instructions.</li> <li>b) The current Standard could incorrectly be interpreted to imply that the State needs to comply with the detailed provisions contained in the Technical Instructions. It is the</li> </ul>

	<p>entities performing functions related to the transport of dangerous goods by air that need to achieve compliance. The proposed amendment makes who needs to comply with the Technical Instructions clear.</p> <p>c) Current 2.2.1 contains two Standards. Editorial amendment to separate it into two.</p>
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The following is moved to 4.3:

~~2.2.2 Recommendation.— Each Contracting State should inform ICAO of difficulties encountered in the application of the Technical Instructions and of any amendments which it would be desirable to make to them.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	It is proposed to move the requirement for States to inform ICAO of difficulties applying the Technical Instructions to a proposed new Chapter 3: Provision of information to ICAO. The new chapter is intended to contain all requirements related to providing ICAO with information in one place.

~~2.2.3.1.2 Recommendation.— Although an amendment to the Technical Instructions with an immediate applicability for reasons of safety may not yet have been implemented in a Contracting State, such State should, nevertheless, facilitate the movement of dangerous goods in its territory which are consigned from another Contracting State in accordance with that amendment, providing the goods comply in total with the revised requirements.~~

The following is moved from 2.6:

#### ~~2.6.2.3.1.3~~ Surface transport Multimodal transport

~~Recommendation.— States Each Contracting State should ~~make provisions~~ take measures to enable dangerous goods intended for air transport and prepared in accordance with the ~~ICAO~~ Technical Instructions to be accepted for ~~surface~~ transport by other modes of transport to or from aerodromes.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<p>a) The amendment to the heading is proposed because multimodal transport is a common term in the dangerous goods world and makes the intent of the provision easier to understand.</p> <p>b) Editorial revisions are proposed for the sake of clarity and consistency.</p> <p>b) The references to “ICAO” is unnecessary as there is now a definition for “Technical Instructions”.</p> <p>b) It is proposed to move the recommendation from its current location to this location so that all provisions related to the Technical Instructions are in one place.</p>

**2.4 Limitation on the transport of dangerous goods by air**

The following is moved from 4.1:

**4.12.4.1 Dangerous goods permitted for transport by air**

2.4.1.1 Each Contracting State shall only permit ~~the~~ transport of dangerous goods as cargo or mail by air ~~shall be forbidden except~~ as established in this Annex and the detailed ~~specifications and procedures provided in provisions of~~ the Technical Instructions.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<ul style="list-style-type: none"><li>a) Moved from Chapter 4 (Limitation on the transport of dangerous goods by air) to keep the general regulatory framework for transport of dangerous goods by air in one place.</li><li>b) Editorial revisions to the Standard are proposed to improve clarity by aligning the wording with the header.</li><li>c) “Each Contracting State” is added to reflect the fact that the SARP is directed at the State.</li><li>d) The addition of a reference to cargo or mail is proposed to differentiate from passenger baggage in the next SARP (2.4.1.2).</li><li>e) “specifications and procedures” is replaced with “provisions” for the sake of consistency with other parts of the Annex.</li></ul>

2.4.1.2 Each Contracting State shall only permit the carriage of dangerous goods by passengers or crew members when specifically permitted in accordance with Part 8 of the Technical Instructions.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<ul style="list-style-type: none"><li>a) New Standard which replaces the exception from the Annex of specific articles and substances carried by passengers or crew members currently contained in 2.4.3 because dangerous goods carried by passengers and crew are not excepted from the Annex. They are forbidden unless specifically permitted in the Technical Instructions, and there are criteria for allowing them there.</li><li>b) Having the provision here clarifies the distinction between dangerous goods carried as cargo and dangerous good carried by passengers and crew and the fact that they are both covered by the Annex</li></ul>

The following heading and Standard are moved from 4.2:

**4.22.4.2 Dangerous goods forbidden for transport by air unless approved or exempted**

~~The dangerous goods described hereunder shall be forbidden on aircraft unless exempted by the States concerned under the provisions of 2.1 or~~ Each Contracting State shall not permit the transport of dangerous goods identified in the Technical Instructions as being forbidden for transport in normal circumstances unless the provisions of the Technical Instructions indicate they may be transported under an approval granted by the ~~State of Origin.~~ States concerned in accordance with 2.4.2.1 or an exemption granted by the States concerned in accordance with 2.4.2.2.

~~— a) dangerous goods that are identified in the Technical Instructions as being forbidden for transport in normal circumstances; and~~

~~— b) infected live animals.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<ul style="list-style-type: none"> <li>a) Moved from Chapter 4 (Limitation on the transport of dangerous goods by air) to keep the general regulatory framework for transport of dangerous goods by air in one place.</li> <li>b) The addition of “ approved” in the heading is proposed because the SARP refers to both approvals and exemptions.</li> <li>c) “Each Contracting State shall not permit ...” added to reflect the fact that the SARP is directed at the State.</li> <li>d) Editorial amendments to clarify intent.</li> <li>e) The references to exemption and approval provisions have changed because it is proposed to move these provisions from the general applicability section this section.</li> <li>f) Reference to only State of Origin for an approval is inconsistent with what is currently in the general applicability section which includes the State of the Operator as part of the approval process. “States concerned” is explained under the specific provisions for approvals (2.4.2.1) and exemptions (2.4.2.2) below.</li> <li>g) Deleted “infected live animals” because this is covered by the Technical Instructions.</li> </ul>

#### 2.4.2.1 Approvals

The following Standard is moved from 2.1.2:

2.1.2—Where specifically provided for in the Technical Instructions, the States concerned may grant an approval provided that in such instances an overall level of safety in transport which is equivalent to the level of safety provided for in the Technical Instructions is achieved.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<ul style="list-style-type: none"> <li>a) Moved from the current general applicability section in 2.1.2 as it relates more to the limitation provisions than to applicability provisions.</li> <li>b) Addition of heading for the sake of clarity.</li> </ul>

The following noted is moved from 2.1 (below 2.1.4):

*Note 1.*— For the purpose of approvals, “States concerned” are the States of Origin and the Operator, unless otherwise specified in the Technical Instructions.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The note applies to the States concerned when issuing an approval. It is moved from under 2.1.4 (Note 1) so that it is directly below the approval provision.

#### 2.4.2.2 Exemptions

The following Standard is moved from 2.1.3:

2.1.3—In instances:

- a) of extreme urgency; or
- b) when other forms of transport are inappropriate; or

- c) when full compliance with the prescribed requirements is contrary to the public interest,

the States concerned may grant an exemption from the provisions of the Technical Instructions provided that in such instances every effort shall be made to achieve an overall level of safety in transport which is equivalent to the level of safety provided for in the Technical Instructions.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	a) Moved from the current general applicability section in 2.1.3 as it relates more to the limitation provisions than to applicability provisions. b) Addition of heading for the sake of clarity.

The following note is moved from 2.1 (below 2.1.4):

*Note 2.1.*— For the purpose of exemptions, “States concerned” are the States of Origin, Operator, Transit, Overflight and Destination.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The note applies to the States concerned when issuing an exemption. It is moved from under 2.1.4 (Note 2) so that it is directly below the exemption provision.

The following note is moved from 2.1 (below 2.1.4):

*Note 3.*— Guidance for the processing of exemptions, including examples of extreme urgency, may be found in the [Supplement to the Technical Instructions \(Part S-1, Chapter 1, 1.2 and 1.3\) Oversight and Management of the Safe Transport of Dangerous Goods by Air Manual \(Doc xxxxx\), Chapter yy.](#)

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The guidance for processing of exemptions is currently contained in the Supplement to the Technical Instructions, but it is proposed to move all guidance specific to States from the Supplement to a new manual so that all guidance is consolidated in one place. The note is updated accordingly.

The following heading and Standard are moved from 4.3:

#### **4.32.4.3 Dangerous goods forbidden for transport by air under any circumstances**

[Articles and substances that are specifically identified by name or by generic description in the Technical Instructions as being forbidden for transport by air under any circumstances shall not be carried on any aircraft.](#)

[2.4.3.1 Each Contracting State shall forbid any article or substance to be transported by air under any circumstance if, as presented for transport, it is liable to explode, dangerously react, produce a flame or dangerous evolution of heat or dangerous emission of toxic, corrosive or flammable gases or vapours under conditions normally encountered in transport.](#)

[2.4.3.2 Each Contracting State shall not grant approvals or exemptions for articles and substances identified in 2.4.3.1.](#)

[Note.](#)— *Guidance on dangerous goods forbidden for transport under any circumstance is provided in Doc xxxx, Chapter yy.*

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<p>a) Moved from Chapter 4 (Limitation on the transport of dangerous goods by air) to keep the general regulatory framework for transport of dangerous goods by air in one place.</p> <p>b) The current SARP in 4.3 refers to articles or substances specifically identified by name or by generic description in the Technical Instructions as being forbidden for transport under and circumstance. The Technical Instructions make it clear that it is not possible to list all dangerous goods that should be forbidden under any circumstance. It is therefore proposed to include an explanation of what cannot be safely transported on an aircraft in the SARP and to include guidance for determining this in the new document referred to in the note.</p> <p>c) States should not grant approvals or exemptions to transport such articles or substances. New 2.4.3.2 makes this clear.</p>

The following is moved to 2.2:

### **2.3—Domestic civil aircraft operations**

~~— **Recommendation.** *In the interests of safety and of minimizing interruptions to the international transport of dangerous goods, Contracting States should also take the necessary measures to achieve compliance with the Annex and the Technical Instructions for domestic civil aircraft operations.*~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The recommendation relates to the applicability of the Annex and the Technical Instructions to domestic civil aircraft operations. It is therefore proposed to move the recommended practice to the applicability section of this chapter (2.2.2).

The following is moved to 2.2.3:

### **2.4—Exceptions**

~~— 2.4.1—Articles and substances which would otherwise be classed as dangerous goods but which are required to be aboard the aircraft in accordance with the pertinent airworthiness requirements and operating regulations, or for those specialized purposes identified in the Technical Instructions, shall be excepted from the provisions of this Annex.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The SARP relates to the applicability of the Annex and the Technical Instructions. It is therefore proposed to move it to the applicability section of this chapter (2.2.3).

The following is moved to Chapter 6:

~~— 2.4.2—Where articles and substances intended as replacements for those described in 2.4.1 or which have been removed for replacement are carried on an aircraft, they shall be transported in accordance with the provisions of this Annex except as permitted in the Technical Instructions.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	This SARP is proposed to be captured in Chapter 6 — Operator Responsibilities. Chapter 6 is intended to outline the dangerous goods elements the State of the Operator needs to consider when authorizing an operator to conduct air transport operations. How an operator ensures that articles and substances classified as dangerous goods which are intended as replacements is one of those elements. Addressing this in Chapter 6 instead of this chapter allows for a comprehensive list of elements to be considered.

~~— 2.4.3 Specific articles and substances carried by passengers or crew members shall be excepted from the provisions of this Annex to the extent specified in the Technical Instructions.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The exception for dangerous goods carried by passengers and crew is proposed for deletion because they are not excepted from the Annex. They are forbidden unless specifically permitted in the Technical Instructions, and there are criteria for allowing them there. A new SARP related to dangerous goods carried by passengers and crew is proposed for inclusion under Dangerous goods permitted for transport by air (see proposed 2.4.1) and a new chapter devoted to dangerous goods permitted for carriage by passengers and crew (Chapter 7).

The is moved to 3.2:

## **2.5 Notification of variations from the Technical Instructions**

~~— 2.5.1 Where a Contracting State adopts different provisions from those specified in the Technical Instructions, it shall notify ICAO promptly of such State variations for publication in the Technical Instructions.~~

~~— Note. Contracting States are expected to notify a difference to the provisions of 2.2.1 under Article 38 of the Convention only if they are unable to accept the binding nature of the Technical Instructions. Where States have adopted different provisions from those specified in the Technical Instructions, they are expected to be reported only under the provisions of 2.5.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The requirement for States to inform ICAO of State variations is proposed to be moved to a new Chapter 3: Provision of information to ICAO. The new chapter is proposed so that all requirements related to providing ICAO with information is in one place.

~~— 2.5.2 Recommendation. The State of the Operator should take the necessary measures to ensure that when an operator adopts more restrictive requirements than those specified in the Technical Instructions, the notification of such operator variations is made to ICAO for publication in the Technical Instructions.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Few operator variations are reported to ICAO, and updates to already reported variations are not always provided. Users of the Technical Instructions cannot depend on these variations. Operator variations are more reliably reported to industry and included in industry regulations. It is therefore proposed that the recommendation be deleted.

The following is moved to 2.3.1.3:

**~~2.6—Surface transport~~**

~~—**Recommendation.**—States should make provisions to enable dangerous goods intended for air transport and prepared in accordance with the ICAO Technical Instructions to be accepted for surface transport to or from aerodromes.~~

The following is moved to Chapter 4.1:

**~~2.7—National authority~~**

~~Each Contracting State shall designate and specify to ICAO an appropriate authority within its administration to be responsible for ensuring compliance with this Annex.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The requirement for States to designate and specify to ICAO an appropriate authority within its administration to be responsible for ensuring compliance with this Annex is proposed to be moved to a new Chapter 3: Provision of information to ICAO. The new chapter is proposed so that all requirements related to providing ICAO with information is in one place.

### ~~CHAPTER 3. CLASSIFICATION~~

~~The classification of an article or substance shall be in accordance with the provisions of the Technical Instructions.~~

~~— Note. — The detailed definitions of the classes of dangerous goods are contained in the Technical Instructions. These classes identify the potential risks associated with the transport of dangerous goods by air and are those recommended by the United Nations Committee of Experts on the Transport of Dangerous Goods.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The intent of this Standard is to ensure anyone preparing a package containing dangerous goods for transport classifies the hazards associated with the dangerous goods in accordance with the Technical Instructions. However, the Standard does not make this clear nor does it make the obligation the Standard places on a State clear. A new Chapter 5 on the safety of the supply chain is proposed which captures the intent and State obligation of this SARP and similar SARPs in current Chapters 5 (Packing), 6 (Labelling and marking) and 7 (Shipper's responsibilities).

## CHAPTER 3. PROVISION OF INFORMATION TO ICAO

The following is moved from 2.7:

### 2.7.3.1 National authority

Each Contracting State shall designate and specify to ICAO an appropriate authority within its administration to be responsible for ensuring compliance with this Annex.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	a) Proposed to be moved from Chapter 2 to this chapter so that all SARPs related to providing information to ICAO are in one place. b) Some States have more than one authority responsible for ensuring compliance with this Annex, so “an appropriate authority” is replaced with “the authorities”.

The following is moved from 2.5:

### 2.5.3.2 Notification of variations from the Technical Instructions

2.5.1—Where a Contracting State adopts different provisions from those specified in the Technical Instructions, it shall notify ICAO promptly of such State variations for publication in the Technical Instructions.

*Note.*— Each Contracting State ~~are~~ is expected to notify a difference to the provisions of ~~2.2.1~~ 2.3.1.1 under Article 38 of the Convention only if they are unable to accept the binding nature of the Technical Instructions. Where States have adopted different provisions from those specified in the Technical Instructions, they are expected to be reported only under the provisions of ~~2.5~~ 3.2.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Proposed to be moved from Chapter 2 to this chapter so that all SARPs related to providing information to ICAO are in one place.

### 3.3 Difficulties encountered in the application of the Technical Instructions

The following is moved from 2.2.2:

2.2.2—**Recommendation.**— *Each Contracting State should inform ICAO of difficulties encountered in the application of the Technical Instructions and of any amendments which it would be desirable to make to them.*

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	a) Heading added to differentiate between other sections of this chapter b) Proposed to be moved from Chapter 2 to this chapter so that all SARPs related to providing information to ICAO are in one place.

## ~~CHAPTER 4. LIMITATION ON THE TRANSPORT OF DANGEROUS GOODS BY AIR~~

The following is moved to 2.4.1:

### ~~4.1—Dangerous goods permitted for transport by air~~

~~The transport of dangerous goods by air shall be forbidden except as established in this Annex and the detailed specifications and procedures provided in the Technical Instructions.~~

The following is moved to 2.4.2:

### ~~4.2—Dangerous goods forbidden for transport by air unless exempted~~

~~The dangerous goods described hereunder shall be forbidden on aircraft unless exempted by the States concerned under the provisions of 2.1 or unless the provisions of the Technical Instructions indicate they may be transported under an approval granted by the State of Origin:~~

- ~~— a) dangerous goods that are identified in the Technical Instructions as being forbidden for transport in normal circumstances; and~~
- ~~— b) infected live animals.~~

The following is moved to 2.4.3:

### ~~4.3—Dangerous goods forbidden for transport by air under any circumstances~~

~~Articles and substances that are specifically identified by name or by generic description in the Technical Instructions as being forbidden for transport by air under any circumstances shall not be carried on any aircraft.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<p>The SARPs currently in Chapter 4 for the limitation on the transport of dangerous goods are moved to Chapter 2 to keep the general regulatory framework for transport of dangerous goods by air in one place.</p> <p>It is proposed that Chapter 4 contain safety management provisions specific to dangerous goods.</p>

## CHAPTER 4. STATE SAFETY MANAGEMENT RESPONSIBILITIES

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	A new chapter on State safety management responsibilities specific to dangerous goods is proposed with the aim of ensuring all entities involved with the safe transport of dangerous goods are working towards the level of safety expected in aviation. Having a common understanding of safety presents challenges unique to dangerous goods transport because of the many entities involved, including regulatory authorities and industries outside the aviation system. The chapter is intended to make the fact that transporting dangerous goods is an integral part of the State safety programme required by Annex 19 and to ensure activities necessary to achieve targeted levels of safety specific to dangerous goods that go beyond what Annex 19 requires are covered. The structure of the chapter is based on the components of an SSP so that there are four sections, one for each component.

*Note 1.— The provisions for a State Safety Programme contained in Chapter 3 to Annex 19 are applicable to this Annex. This chapter of Annex 18 contains specific State safety management responsibilities relevant to the safe transport of dangerous goods by air.*

*Note 2.— Guidance on an SSP is contained in the Safety Management Manual (SMM) (Doc 9859).*

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Authorities involved with the safe transport of dangerous goods by air may not all be part of the aviation sector in some States. The notes are intended to ensure all are aware of the requirements for a State safety programme and the fact that the transport of dangerous goods by air is an integral part of it.

### 4.1 State safety policy, objectives and resources

*Note 1.— See 5.1 for primary aviation legislation specific to the safe transport of dangerous goods by air.*

*Note 2.— See 5.2 and 8.1 for specific operating regulations specific to the safe transport of dangerous goods by air.*

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	SARPs related to primary aviation legislation and specific operator regulations specific to dangerous goods are proposed for inclusion in Chapter 5. References to these sections in Notes 1 and 2 are proposed for the sake of comprehensiveness.

*Note 3.— Guidance on the establishment of authorities or government agencies supported by sufficient and qualified personnel and provided with adequate financial resources for the management of safety specific to dangerous goods is contained in Doc xxxx, Chapter yy.*

*Note 4.— Guidance on staffing, minimum qualification requirements and training for dangerous goods technical personnel involved in the regulation and oversight of transport of dangerous goods by air is contained in Doc xxxx, yyyy.*

Note 5.— Guidance on coordination between the civil aviation authority and other appropriate national authorities that could have an impact on the transport of dangerous goods by air is contained in Doc xxxx, yyyy.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The SSP elements highlighted by Notes 3 to 4 are covered by the existing SARPs in Annex 19, so there is no need for SARPs specific to dangerous goods. However, they highlight areas that have been identified as needing to be strengthened through safety oversight audits. The notes refer to guidance on how these elements apply to dangerous goods and how they can be established.

## 4.2 State safety risk management

### 4.2.1 Exemption and approval obligations

Each Contracting State shall implement documented processes and procedures to ensure that individuals and organizations performing activities related to the transport of dangerous goods, meet the established requirements before they are allowed to exercise the privileges of an exemption or approval to conduct the relevant dangerous goods activity.

Note.— Guidance on the establishment of documented processes and procedures related to the granting of exemption and approval obligations is contained in Doc xxxx, Chapter yyyy.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29 DGP/27	This Standard is aimed at ensuring States meet their responsibilities with respect to the granting of exemptions and approvals related to the transport of dangerous goods by air. The DGP has identified a need for additional guidance on the issuance of approvals and exemptions, particularly with respect to which entities the approval or exemption should be issued to and the relationship between the shipper, the operator and the State authorities processing them. Ensuring each Contracting State has documented process and procedures and providing guidance to assist them in developing them will help ensure States meet their exemption and approval obligations under Critical element 6.

### 4.2.2 Safety management system obligations

Note 1.— The transport of dangerous goods is included in the scope of the operator's safety management system (SMS).

Note 2.— See Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, Chapter 15 and Part IV — International Operations — Remotely Piloted Aircraft Systems, Chapter 15 for SARPs concerning hazards associated with the transport of items in the cargo compartment, the conduct of a specific safety risk assessment, and the responsibilities for the transport of dangerous goods.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29 DGP/27	The notes are aimed at ensuring the State is aware of safety management system obligations specific to dangerous goods. A new SARP is unnecessary because Note 1 is a statement of fact and Note 2 is covered by the SARPs in Annex 6.

### 4.2.3 Dangerous goods safety investigations

Moved from 12.1 and 12.2:

~~— 12.1 — With the aim of preventing the recurrence of dangerous goods accidents and incidents, each Contracting State shall establish procedures for investigating and compiling information concerning such accidents and incidents which occur in its territory and which involve the transport of dangerous goods originating in or destined for another State. Reports on such accidents and incidents shall be made in accordance with the detailed provisions of the Technical Instructions.~~

~~— 12.2 **Recommendation.** — With the aim of preventing the recurrence of dangerous goods accidents and incidents, each Contracting State should establish procedures for investigating and compiling information concerning such accidents and incidents which occur in its territory other than those described in 12.1. Reports on such accidents and incidents should be made in accordance with the detailed provisions of the Technical Instructions.~~

4.2.3.1 Each Contracting State shall establish a process to investigate dangerous goods accidents and dangerous goods incidents reported in accordance with Chapter 10 in support of the management of safety in the State.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<p>This new Standard replaces the SARPs currently in 12.1 and 12.2 that require each Contracting State to establish procedures for investigating and compiling information concerning dangerous goods accidents and incidents which occur in its territory and involve the transport of dangerous goods originating or destined for another State and to report in accordance with the Technical Instructions and recommends the same when not originating or destined for another State.</p> <p>While accidents and incidents defined in accordance with Annex 13 apply to the operation of an aircraft, dangerous goods accidents and incidents defined in accordance with Annex 18 do not necessarily occur on board an aircraft. This SARP is intended to ensure that dangerous goods accidents or incidents that do not meet the criteria for accidents or incidents defined in Annex 13 are investigated. The investigation of an accident or incidents that did not occur on board an aircraft is valuable because it may reveal safety deficiencies that need to be resolved to prevent another accident or incident and to prevent an incident from leading to an accident.</p> <p>The wording of the Standard is revised to:</p> <ol style="list-style-type: none"> <li>a) align with the wording in Annex 19;</li> <li>b) require the establishment of procedures for all accidents and incidents involving the transport of dangerous goods that are reported to the State regardless of where they occurred;</li> <li>c) remove the reference to compiling information because this is covered in new Chapter 10 which is proposed to contain provisions related to safety intelligence.</li> </ol>

Moved from 12.3:

~~— 12.3 — With the aim of preventing the recurrence of instances of undeclared or misdeclared dangerous goods in cargo, each Contracting State shall establish procedures for investigating and compiling information concerning such occurrences which occur in its territory and which involve the transport of dangerous goods originating in or destined~~

for another State. Reports on such instances shall be made in accordance with the detailed provisions of the Technical Instructions:

~~—12.4 **Recommendation.**— With the aim of preventing the recurrence of instances of undeclared or misdeclared dangerous goods in cargo, each Contracting State should establish procedures for investigating and compiling information concerning such occurrences which occur in its territory other than those described in 12.3. Reports on such instances should be made in accordance with the detailed provisions of the Technical Instructions.~~

4.2.3.2 Each Contracting State shall establish and implement a risk-based process for the investigation of:

- a) occasions when undeclared dangerous goods are discovered in cargo or mail;
- b) occasions when dangerous goods not permitted in passenger or crew baggage are discovered; and
- c) other safety issues

which are reported in accordance with Chapter 10 in support of the management of safety in the State.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	<p>This new Standard replaces the SARPs currently in 12.3 and 12.4 that require each Contracting State to establish procedures for investigating and compiling information concerning occurrences of undeclared or misdeclared dangerous in cargo which occur in its territory and involve the transport of dangerous goods originating or destined for another State and to report in accordance with the Technical Instructions and recommends the same when not originating or destined for another State.</p> <p>The new Standard is revised to:</p> <ul style="list-style-type: none"><li>a) emphasize the need for the process to be risk-based;</li><li>b) require the establishment of the risk-based process for all occurrences of undeclared dangerous goods involving the transport of dangerous goods that are reported to the State regardless of where they occurred;</li><li>c) expand the requirement to dangerous goods discovered in passengers and crew baggage that are not permitted and to other safety issues.</li><li>d) remove the reference to compiling information because this is covered in new Chapter 10 which is proposed to contain provisions related to safety intelligence.</li></ul> <p>The expansion of the requirement to dangerous goods discovered in passengers and crew baggage is made to reflect a long-standing requirement in the Technical Instructions. Prohibited dangerous goods that pose a safety risk are inadvertently carried onboard aircraft by passengers and crew because they are either unaware of or deliberately ignore the requirements. Investigations should be conducted with the aim of reducing the likelihood of prohibited dangerous goods being carried by passengers and crew.</p>

Moved from 11.2:

**Recommendation.**—4.2.3.2 Each Contracting State ~~should~~ shall participate in cooperative efforts with other Contracting States concerning conducting safety investigations, as necessary, with the aim of eliminating violations of dangerous goods regulations, with the aim of eliminating such violations. Cooperative efforts could include coordination of investigations and enforcement actions; exchanging information on a regulated party's compliance

history; joint inspections and other technical liaisons, exchange of technical staff, and joint meetings and conferences. Appropriate information that could be exchanged include safety alerts, bulletins or dangerous goods advisories; proposed and completed regulatory actions; incident reports; documentary and other evidence developed in the investigation of incidents; proposed and final enforcement actions; and educational/outreach materials suitable for public dissemination.

Note 1.— See 10.4 for requirements related to the exchange of information.

Note 2.— Guidance on dangerous goods safety investigations can be found in Doc xxx.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	TBD

**4.2.4 Hazard identification and safety risk assessment**

4.2.4.1 Each Contracting State shall establish and maintain a process to identify the State’s system-level hazards associated with the supply chain from collected safety data.

4.2.4.2 Each Contracting State shall develop and maintain a process to assess safety risks associated with identified hazards introduced within the supply chain.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	TBD

**4.2.5 Management of safety risks**

4.2.5.1 Each Contracting State shall ensure that the mechanism for the resolution of safety issues required by Annex 19 addresses safety issues associated with the supply chain, passengers and crew.

4.2.5.2 Each Contracting State shall include preventing dangerous goods not in compliance with the Technical Instructions from being transported in cargo or mail as part of their safety risk management activities.

4.2.5.3 Each Contracting State shall implement measures with the aim of ensuring that entities within the supply chain have processes and procedures in place to identify dangerous goods in cargo or mail that are not in compliance with the Technical Instructions and to prevent them from being loaded on an aircraft.

4.2.5.4 Each Contracting State shall include preventing passengers and crew from taking dangerous goods on board an aircraft which they are not permitted to carry as part of their safety risk management activities.

4.2.5.5 Each Contracting State shall implement measures with the aim of ensuring that entities handling baggage can recognize dangerous goods not permitted to be carried by passengers and crew and prevent them from being carried on an aircraft when they are discovered.

Note.— Guidance on managing safety risks associated with dangerous goods is contained in Docs 10102 and Doc xxx, Chapter yyyy.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	TBD

### 3.3 State Safety assurance

Moved from 11.1:

#### **11.1— Inspection systems**

~~Each Contracting State shall establish inspection, surveillance and enforcement procedures for all entities performing any function prescribed in its regulations for air transport of dangerous goods with a view to achieving compliance with those regulations.~~

~~— Note 1. — It is envisaged that these procedures would include provisions for:~~

~~— inspecting dangerous goods consignments prepared, offered, accepted or transported by the entities referred to in 11.1;~~

~~— inspecting the practices of the entities referred to in 11.1; and~~

~~— investigating alleged violations (see 11.3).~~

~~— Note 2. — Guidance on dangerous goods inspections and enforcement may be found in the Supplement to the Technical Instructions (Part S-5, Chapter 1 and Part S-7, Chapters 5 and 6).~~

~~Note.— Guidance on surveillance obligations and State safety performance specific to dangerous goods is contained in Doc xxx, Chapter yyyy.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	TBD

### 3.4 State Safety promotion

~~3.4.1 Each Contracting State shall establish and manage safety promotional activities aimed at preventing passengers from carrying dangerous goods forbidden to be carried by passengers on board an aircraft.~~

~~Note.— See Chapter 7 for dangerous goods carried by passengers and crew.~~

~~3.4.2 Each Contracting State shall include preventing the introduction of dangerous goods in cargo and mail which are not in compliance with the provisions of this Annex and the Technical Instructions in the State safety promotion activities required by Annex 19.~~

~~3.4.3 Each Contracting State shall establish measures to improve safety awareness and promote a positive safety culture throughout the supply chain.~~

~~Note.— Guidance related to State safety promotion and a positive safety culture specific to the safe transport of dangerous goods is contained in Doc xxx, Chapter yyy.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	TBD

**CHAPTER 5. PACKING****5.1—General requirements**

~~Dangerous goods shall be packed in accordance with the provisions of this chapter and as provided for in the Technical Instructions.~~

**5.2—Packagings**

~~— 5.2.1—Packagings used for the transport of dangerous goods by air shall be of good quality and shall be constructed and securely closed so as to prevent leakage which might be caused in normal conditions of transport, by changes in temperature, humidity or pressure, or by vibration.~~

~~— 5.2.2—Packagings shall be suitable for the contents. Packagings in direct contact with dangerous goods shall be resistant to any chemical or other action of such goods.~~

~~— 5.2.3—Packagings shall meet the material and construction specifications in the Technical Instructions.~~

~~— 5.2.4—Packagings shall be tested in accordance with the provisions of the Technical Instructions.~~

~~— 5.2.5—Packagings for which retention of a liquid is a basic function, shall be capable of withstanding, without leaking, the pressure stated in the Technical Instructions.~~

~~— 5.2.6—Inner packagings shall be so packed, secured or cushioned as to prevent their breakage or leakage and to control their movement within the outer packaging(s) during normal conditions of air transport. Cushioning and absorbent materials shall not react dangerously with the contents of the packagings.~~

~~— 5.2.7—No packaging shall be reused until it has been inspected and found free from corrosion or other damage. Where a packaging is reused, all necessary measures shall be taken to prevent contamination of subsequent contents.~~

~~— 5.2.8—If, because of the nature of their former contents, uncleaned empty packagings may present a hazard, they shall be tightly closed and treated according to the hazard they constitute.~~

~~— 5.2.9—No harmful quantity of a dangerous substance shall adhere to the outside of packages.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The provisions in this chapter are details contained in the Technical Instructions. The SARPs are therefore redundant. Packing requirements are now covered more generally by the SARP proposed in new Chapter 5, 5.2.1 b) 3).

<i>Origin:</i>  DGP/29	<i>Rationale:</i>  A new chapter on the safety of the supply chain is proposed to more clearly outline the expectations of States. Current Annex 18 has three separate chapters that address responsibilities of entities involved with preparing and offering dangerous goods for transport. These are: Chapter 3, Classification; Chapter 5, Packing; Chapter 6: Labelling and marking; Chapter 7: Shipper's responsibilities. All of them point to the provisions of the Technical Instructions, with some provisions from the Technical Instructions repeated in the Annex. They do not directly state what is required of the State, and there does not appear to be any rationale for determining what should be repeated and what should simply be referred to. This new chapter clearly defines what is expected of the State, which is to adopt regulations directed at entities in the supply chain preparing, offering and transporting dangerous goods for transport by air. The new chapter lists the functions for which regulations are needed and refers to the applicable parts of the Technical Instructions where the detailed Instructions are found. Listing the functions provides the added benefit of an overview of how the Technical Instructions mitigate risk.
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## CHAPTER 5. SAFETY OF THE SUPPLY CHAIN

### 5.1 Primary aviation legislation (CE 1)

5.1.1 Each Contracting State shall promulgate laws that enable the oversight and management of the safety of the supply chain for the transport of dangerous goods by air, the resolution of safety issues and the enforcement of regulations through the relevant authorities established for that purpose.

### 5.2 Specific operating regulations

5.2.1 Each Contracting State shall adopt regulations to require, at a minimum, that:

- a) a person does not offer or cause to be offered for transport:
  - 1) articles or substances which are forbidden for transport in accordance with 2.4.3;
  - 2) articles or substances which are forbidden for transport in accordance with 2.4.2 unless permitted by the States concerned through an approval or exemption;

<i>Origin:</i>  DGP/29	<i>Rationale:</i>  4.1.2 a) and b) replaces part of current 7.1.
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- b) a person does not offer or cause to be offered dangerous goods for transport unless:
  - 1) policies and procedures have been developed and provided to enable them to carry out the function for which they are responsible;

2) associated hazards are identified in accordance with the classification criteria of Part 2 of the Technical Instructions;

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	4.1.2 b) 2) replaces current Chapter 3

3) risks associated with the identified hazards are mitigated at the package level through quantity limitations and packing and packaging requirements in accordance with Parts 3, 4 and 6 of the Technical Instructions;

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	4.1.2 b)3 Replaces part of current 7.1 (Shippers' responsibilities — general requirements) and Chapter 5 (Packing).

4) hazard and handling information are communicated to entities in the supply chain in accordance with the marking, labelling and documentation requirements of Parts 3, 4 and 5 of the Technical Instructions;

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	4.1.2 b) 4) replaces Chapter 6 (Labelling and Marking) and 7.2 (Dangerous goods transport document).

5) documentation is retained in accordance with the Technical Instructions;

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The need for documentation to be retained is required by the detailed provisions of the Technical Instructions. The documentation is evidence of compliance and provides important information for safety investigations.

6) in the case of radioactive material, a radiation protection programme is established and maintained in accordance with Part 1;6 of the Technical Instructions;

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	TBD

c) operators accept, handle and transport dangerous goods in accordance with Chapter 6;

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	TBD

d) dangerous goods accidents, dangerous goods incidents and occasions when undeclared or misdeclared dangerous goods are discovered are reported in accordance with Chapter 10;

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	

e) training and assessment is provided in accordance with Chapter 9; and

f) dangerous goods are not offered, caused to be offered or accepted for transport by mail unless specifically permitted in accordance with Chapter 8.

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## ~~CHAPTER 6. LABELLING AND MARKING~~

### ~~6.1—Labels~~

~~Unless otherwise provided for in the Technical Instructions, each package of dangerous goods shall be labelled with the appropriate labels and in accordance with the provisions set forth in those Instructions.~~

### ~~6.2—Markings~~

~~—6.2.1—Unless otherwise provided for in the Technical Instructions, each package of dangerous goods shall be marked with the proper shipping name of its contents and, when assigned, the UN number and such other markings as may be specified in those Instructions.~~

~~—6.2.2—*Specification markings on packagings.* Unless otherwise provided for in the Technical Instructions, each packaging manufactured to a specification contained in those Instructions shall be so marked in accordance with the appropriate provisions of those Instructions and no packaging shall be marked with a packaging specification marking unless it meets the appropriate packaging specification contained in those Instructions.~~

### ~~6.3—Languages to be used for markings~~

~~—**Recommendation.**—*In addition to the languages required by the State of Origin and pending the development and adoption of a more suitable form of expression for universal use, English should be used for the markings related to dangerous goods.*~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The provisions in this chapter are details contained in the Technical Instructions. The SARPs are therefore redundant. Labelling and marking requirements are now covered more generally by the SARP proposed in new Chapter 5, 5.2.1 b) 4).

Moved from Chapter 8:

## CHAPTER ~~8~~6. OPERATOR'S RESPONSIBILITIES

*Note 1.— Annex 19 includes safety management provisions for air operators. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).*

*Note 2.— The carriage of dangerous goods is included in the scope of the operator's safety management system (SMS).*

Moved from under 2.1.4, Note 5:

*Note ~~5~~3.— It is not intended that this Annex be interpreted as requiring an operator to transport a particular article or substance or as preventing an operator from adopting special requirements on the transport of a particular article or substance.*

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Moved from Chapter 2: Applicability. The note is currently under the provisions for approvals and exemptions, but its application goes beyond these. Moving the note to this chapter makes the provisions for operators more comprehensive.

*Note 3.— The Each Contracting State is required to recognize as valid an air operator certificate issued by another Contracting State in accordance with 4.2.2 of Annex 6, Part I, 2.2.2 of Part III — International Operations — Helicopters and 4.2.3 of Part IV. This includes the specific approval to transport dangerous goods as cargo issued by another Contracting State.*

### 6.1 General

6.1.1 The operator shall not transport dangerous goods as cargo unless specifically approved to do so by the State of the Operator in accordance with the applicable provisions of Annex 6.

6.1.3 The operator with a specific approval to transport dangerous goods as cargo that includes the carriage of radioactive material shall develop, implement and maintain a radiation protection programme in accordance with the Technical Instructions.

### 6.2 Dangerous goods components of the Operations Manual

6.2.1 The operator shall develop and implement procedures in accordance with the Technical Instructions, which shall be documented in the operations or other appropriate manual available to flight crew, cabin crew and other employees, that address, as applicable, the transport of cargo and mail and the carriage of dangerous goods in passenger and crew baggage, aimed at ensuring that:

- a) undeclared and misdeclared dangerous goods are identified and prevented from being transported as cargo or carried by passengers and crew;

*Note.— This includes operator material classified as dangerous goods.*

- b) information on the transport of dangerous goods is displayed at cargo acceptance areas in accordance with the Technical Instructions;
- c) passengers and crew are prevented from carrying dangerous goods either as or in carry-on baggage, as or in checked baggage, or on their person unless the dangerous goods are permitted in accordance with Part 8 of the Technical Instructions;
- d) information is provided to passengers in accordance with Chapter 7;
- e) the reporting requirements of 6.9 are fulfilled;
- f) all personnel, including third-party personnel, involved in the acceptance, handling, loading and unloading of cargo, mail, passenger and crew baggage are informed of the operator's limitations with regard to the transport of dangerous goods;
- g) articles and substances intended as replacements for those described in 2.2.3 or which have been removed for replacement are carried in accordance with this Annex and the detailed provisions of the Technical Instructions by an operator with specific approval to transport dangerous goods as cargo.

6.2.2 An operator with a specific approval to transport dangerous goods as cargo shall in addition:

- a) develop and implement procedures in accordance with the Technical Instructions, which shall be documented in the Operations or other appropriate manuals available to flight crew, cabin crew and other employees, that address, as applicable, the carriage of dangerous goods in cargo, mail, passenger and crew baggage; and
- b) ensure that all personnel, including third-party personnel, involved in the acceptance, handling, loading and unloading of cargo, mail, passenger and crew baggage are informed of the operator's specific approvals [and limitations] with regard to the transport of dangerous goods.

Moved from 8.1:

### **8.16.3 Acceptance for transport**

6.3.1 The operator shall develop and implement procedures aimed at preventing the introduction of undeclared and misdeclared dangerous goods into air transport.

*Note.— See 6.9 concerning the reporting of dangerous goods accidents, dangerous goods incidents and instances where undeclared or misdeclared dangerous goods are identified.*

6.3.2 An operator with a specific approval to transport dangerous goods as cargo shall:

- a) ~~An operator shall develop and implement procedures to ensure that dangerous goods are not accepted dangerous goods~~ for transport by air:
  - a)1) unless the dangerous goods are accompanied by a completed dangerous goods transport document, except where the Technical Instructions indicate that such a document is not required; and
  - b)2) until the package, overpack or freight container containing the dangerous goods has been inspected in accordance with the acceptance procedures contained in the Technical Instructions.

~~Note 1. See Chapter 12 concerning the reporting of dangerous goods accidents and incidents.~~

~~Note 2. Special provisions relating to the acceptance of overpacks are contained in the Technical Instructions.~~

## **8.2 Acceptance checklist**

- b) ~~An operator shall~~ develop and use an acceptance checklist as an aid to compliance with the provisions of ~~8.1~~ 6.3.2 a), except where the Technical Instructions indicate that such an acceptance checklist is not required.

Moved to 6.6:

## **8.3 Loading and stowage**

~~Packages and overpacks containing dangerous goods and freight containers containing radioactive materials shall be loaded and stowed on an aircraft in accordance with the provisions of the Technical Instructions.~~

### **8.46.4 Inspection for damage or leakage**

~~8.4.16.4.1 An operator shall develop and implement procedures to ensure that if evidence of damage or leakage is found, the area where the cargo or unit load device were stowed on the aircraft shall be inspected for damage or contamination by dangerous goods.~~

~~6.4.2 An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that:—~~

- a) ~~P~~packages and overpacks containing dangerous goods and freight containers containing radioactive materials shall be inspected for evidence of leakage or damage before loading on an aircraft or into a unit load device. Leaking or damaged packages, overpacks or freight containers shall not be loaded on an aircraft.

- b) unit load devices containing packages of dangerous goods bearing a hazard label are identified in accordance with the Technical Instructions;

~~8.4.2 c) A unit load device shall be~~ not be loaded aboard an aircraft unless the device has been inspected and found free from any evidence of leakage from, or damage to, any dangerous goods contained therein.

~~8.4.3 d) Where any package of dangerous goods loaded on an aircraft that appears to be damaged or leaking, is the operator shall removed such package from the aircraft, or arrange for~~ its removal by an appropriate authority or organization is arranged, and thereafter shall ensure that the remainder of the consignment is in a proper condition for transport by air and that no other package has been contaminated.

~~8.4.4 e) P~~packages or overpacks containing dangerous goods and freight containers containing radioactive materials ~~shall be~~ are inspected for signs of damage or leakage upon unloading from the aircraft or unit load device. ~~If evidence of damage or leakage is found, the area where the dangerous goods or unit load device were stowed on the aircraft shall be inspected for damage or contamination.~~

Moved from 8.6:

### **8.66.5 Removal of contamination**

8.6.1—~~An operator shall develop and implement procedures to ensure that:~~

a) ~~Any hazardous contamination found on an aircraft as a result of leakage or damage to dangerous goods shall~~ be is removed without delay.

8.6.2—~~b) An aircraft which has been contaminated by radioactive materials shall is immediately be taken out of service and not returned to service until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions.~~

~~Note.— The procedures of an operator without a specific approval to transport dangerous goods as cargo are applicable to contamination from the inadvertent transport of undeclared dangerous goods; and dangerous goods carried by passengers and crew.~~

Moved from 8.3:

### **8.36.6 Loading and stowage**

~~An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that:~~

a) ~~Packages, and overpacks and unit load devices containing dangerous goods and freight containers containing radioactive materials shall be are~~ loaded and stowed on an aircraft in accordance with the provisions of the Technical Instructions;

Moved from 8.7:

8.7.1—~~b) Packages containing dangerous goods which might react dangerously one with another shall are not be~~ stowed on an aircraft next to each other or in a position that would allow interaction between them in the event of leakage;

~~8.7.2 Packages of toxic and infectious substances shall be stowed on an aircraft in accordance with the provisions of the Technical Instructions.~~

8.7.3—~~c) Packages of containing radioactive materials shall be are~~ stowed on an aircraft so that they are separated from persons, live animals and undeveloped film, in accordance with the ~~provisions in the~~ Technical Instructions.

Moved from 8.8:

d) ~~When packages containing dangerous goods subject to the provisions contained herein are~~ loaded in an aircraft, ~~the operator shall are~~ protected ~~the dangerous goods~~ from being damaged, and ~~shall secured such goods~~ in the aircraft in such a manner that will prevent any movement in flight which would change the orientation of the packages. ~~For packages containing radioactive materials, the securing shall be adequate to ensure that the separation requirements of 8.7.3 are met at all times.~~

Moved from 8.9:

- e) ~~P~~ackages of dangerous goods bearing the “Cargo aircraft only” label ~~shall be~~ are loaded in accordance with the ~~provisions in the~~ Technical Instructions; ~~and~~

#### ~~8.5—Loading restrictions in passenger cabin or on flight deck~~

- f) ~~D~~angerous goods ~~shall~~ are not ~~be~~ carried in an aircraft cabin occupied by passengers or on the flight deck of an aircraft, except in circumstances permitted by the ~~provisions of the~~ Technical Instructions.

Moved to 6.5:

#### ~~8.6—Removal of contamination~~

~~—8.6.1—Any hazardous contamination found on an aircraft as a result of leakage or damage to dangerous goods shall be removed without delay.~~

~~—8.6.2—An aircraft which has been contaminated by radioactive materials shall immediately be taken out of service and not returned to service until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions.~~

#### ~~8.7—Separation and segregation~~

Moved to 6.6:

~~—8.7.1—Packages containing dangerous goods which might react dangerously one with another shall not be stowed on an aircraft next to each other or in a position that would allow interaction between them in the event of leakage.~~

~~—8.7.2—Packages of toxic and infectious substances shall be stowed on an aircraft in accordance with the provisions of the Technical Instructions.~~

~~—8.7.3—Packages of radioactive materials shall be stowed on an aircraft so that they are separated from persons, live animals and undeveloped film, in accordance with the provisions in the Technical Instructions.~~

#### ~~8.8—Securing of dangerous goods cargo loads~~

Moved to 6.6:

~~When dangerous goods subject to the provisions contained herein are loaded in an aircraft, the operator shall protect the dangerous goods from being damaged, and shall secure such goods in the aircraft in such a manner that will prevent any movement in flight which would change the orientation of the packages. For packages containing radioactive materials, the securing shall be adequate to ensure that the separation requirements of 8.7.3 are met at all times.~~

**8.9 — Loading on cargo aircraft**

Moved to 6.6:

~~Packages of dangerous goods bearing the “Cargo aircraft only” label shall be loaded in accordance with the provisions in the Technical Instructions.~~

Moved from 9.1:

**9.16.7 Information to pilot-in-command or remote-pilot-in-command**

~~The operator of an aircraft in which dangerous goods are to be carried shall~~ An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that when an aircraft is to transport dangerous goods as cargo, provide the pilot-in-command or remote-pilot-in-command, as applicable, is provided as early as practicable before departure of the aircraft with ~~written~~ information as specified in accordance with the Technical Instructions.

Moved from 9.2:

**9.26.8 ~~Information and instructions to flight crew members~~ Emergency procedures**

6.8.1 The operator shall develop and provide ~~such information in the Operations Manual as will enable the flight crew to carry out its responsibilities with regard to the transport of dangerous goods and shall provide~~ instructions to crew members as to the action to be taken in the event of an emergency ~~emergency arising~~ involving dangerous goods.

Moved from 9.5:

6.8.2 An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to address that if an in-flight emergency occurs, the pilot-in-command or remote-pilot-in-command shall, as soon as the situation permits, inform the appropriate air traffic services unit, for the information of aerodrome authorities, of any dangerous goods on board the aircraft, as provided for in the Technical Instructions.

Moved from 9.6:

9.6.16.8.3 An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that if in the event of:

- a) an aircraft accident; or
- b) a serious incident where dangerous goods carried as cargo may be involved,

~~the operator of the aircraft carrying dangerous goods as cargo shall provide information~~ information that was provided to the pilot-in-command or remote-pilot-in-command is provided, without delay, to emergency services responding to the accident or serious incident about the dangerous goods on board, ~~as shown on the written information to the pilot-in-command~~. As soon as possible, the operator shall also provide this information to the appropriate authorities of the State of the Operator and the State in which the accident or serious incident occurred.

9-6-26.8.4 An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that ~~in the event of an aircraft incident, the operator of an aircraft carrying dangerous goods as cargo shall~~, if requested to do so, ~~provide the~~ information ~~that was provided to the pilot-in-command or remote-pilot-in-command is provided~~ without delay to emergency services responding to the incident and to the appropriate authority of the State in which the incident occurred, about the dangerous goods on board, as shown on the written information to the pilot-in-command.

*Note.— The terms “accident”, “serious incident” and “incident” are as defined in Annex 13.*

## **6.9 Reporting**

6.9.1 The operator shall develop and implement procedures to ensure that:

- a) where undeclared dangerous goods are discovered in cargo or mail, a report is provided to the appropriate authorities of the State of the Operator and the State in which this occurred;
- b) where dangerous goods not permitted by the Technical Instructions are discovered in passenger or crew baggage by the operator, or the operator is advised of such dangerous goods, that a report is submitted to the appropriate authority of the State in which this occurred.

6.9.2 An operator with a specific approval to transport dangerous goods as cargo shall in addition develop and implement procedures to ensure that:

- a) dangerous goods accidents and dangerous goods incidents are reported to the appropriate authorities of the State of the Operator and the State in which the dangerous goods accident or dangerous goods incident occurred; and
- b) where misdeclared dangerous goods are discovered in cargo or mail, a report is provided to the appropriate authorities of the State of the Operator and the State in which this occurred.

## **6.10 Retention of documents**

6.10.1 An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that documents are retained in accordance with the Technical Instructions.

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**CHAPTER 7. SHIPPER'S RESPONSIBILITIES****7.1—General requirements**

~~Before a person offers any package or overpack of dangerous goods for transport by air, that person shall ensure that the dangerous goods are not forbidden for transport by air and are properly classified, packed, marked, labelled and accompanied by a properly executed dangerous goods transport document, as specified in this Annex and the Technical Instructions.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	This SARP is covered by proposed new 5.2.1 a), 5.2.1 b) 2), 5.2.1 b) 3), 5.2.1 b) 4) and 5.2.1 b) 5)

**7.2—Dangerous goods transport document**

~~— 7.2.1— Unless otherwise provided for in the Technical Instructions, the person who offers dangerous goods for transport by air shall complete, sign and provide to the operator a dangerous goods transport document, which shall contain the information required by those Instructions.~~

~~— 7.2.2— The transport document shall bear a declaration signed by the person who offers dangerous goods for transport indicating that the dangerous goods are fully and accurately described by their proper shipping names and that they are classified, packed, marked, labelled, and in proper condition for transport by air in accordance with the relevant regulations.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The provisions in 7.2 are details contained in the Technical Instructions. The SARPs are therefore redundant. The dangerous goods transport document is covered by proposed new 5.2.1 b) 4)

**7.3—Languages to be used**

~~— **Recommendation.**— In addition to the languages which may be required by the State of Origin and pending the development and adoption of a more suitable form of expression for universal use, English should be used for the dangerous goods transport document.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	This recommendation is contained in by Part 5, Chapter 4, 4.1.6.3 of the Technical Instructions. It is therefore redundant.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Currently Annex 18 excepts dangerous goods carried by passengers and crew to the extent specified in the Technical Instructions. Saying they are excepted is not entirely accurate because they are forbidden unless specifically permitted in the Technical Instructions, and there are criteria for allowing them there. The proposed new Standard in 2.4.1.2 makes this clear. This new chapter is proposed to make the responsibility of the State clear and to merge provisions related to the carriage of dangerous goods by passengers and crew together in one place.

## CHAPTER 7. DANGEROUS GOODS CARRIED BY PASSENGERS AND CREW

### 7.1 Limitations

Each Contracting State shall adopt regulations which prohibit passengers and crew from carrying dangerous goods as or in carry-on baggage, as or in checked baggage or on their person unless the dangerous goods are permitted in accordance with Part 8 of the Technical Instructions.

Moved from 9.3:

#### 9.37.2 Provision of information to passengers

Each Contracting State shall ~~ensure that information is~~ adopt regulations to require that airport operators promulgated information in such a manner that passengers are warned ~~as to~~ of the types of dangerous goods which they are forbidden from ~~transporting~~ carrying aboard an aircraft as provided for in ~~the Part 7 of the~~ Part 7 of the Technical Instructions.

Note.— Requirements for the operator to provide information to passengers are contained in Chapter 6.

Moved to Chapter 6:

## CHAPTER 8.—OPERATOR'S RESPONSIBILITIES

~~— Note 1. Annex 19 includes safety management provisions for air operators. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).~~

~~— Note 2. The carriage of dangerous goods is included in the scope of the operator's safety management system (SMS).~~

### 8.1—Acceptance for transport

~~An operator shall not accept dangerous goods for transport by air:~~

- ~~— a) unless the dangerous goods are accompanied by a completed dangerous goods transport document, except where the Technical Instructions indicate that such a document is not required; and~~
- ~~— b) until the package, overpack or freight container containing the dangerous goods has been inspected in accordance with the acceptance procedures contained in the Technical Instructions.~~

~~— Note 1. See Chapter 12 concerning the reporting of dangerous goods accidents and incidents.~~

~~— Note 2. Special provisions relating to the acceptance of overpacks are contained in the Technical Instructions.~~

### 8.2—Acceptance checklist

~~An operator shall develop and use an acceptance checklist as an aid to compliance with the provisions of 8.1.~~

### 8.3—Loading and stowage

~~Packages and overpacks containing dangerous goods and freight containers containing radioactive materials shall be loaded and stowed on an aircraft in accordance with the provisions of the Technical Instructions.~~

### 8.4—Inspection for damage or leakage

~~— 8.4.1 Packages and overpacks containing dangerous goods and freight containers containing radioactive materials shall be inspected for evidence of leakage or damage before loading on an aircraft or into a unit load device. Leaking or damaged packages, overpacks or freight containers shall not be loaded on an aircraft.~~

~~— 8.4.2 A unit load device shall not be loaded aboard an aircraft unless the device has been inspected and found free from any evidence of leakage from, or damage to, any dangerous goods contained therein.~~

~~— 8.4.3 Where any package of dangerous goods loaded on an aircraft appears to be damaged or leaking, the operator shall remove such package from the aircraft, or arrange for its removal by an appropriate authority or organization, and thereafter shall ensure that the remainder of the consignment is in a proper condition for transport by air and that no other package has been contaminated.~~

~~— 8.4.4 Packages or overpacks containing dangerous goods and freight containers containing radioactive materials shall be inspected for signs of damage or leakage upon unloading from the aircraft or unit load device. If evidence of damage or leakage is found, the area where the dangerous goods or unit load device were stowed on the aircraft shall be inspected for damage or contamination.~~

### **~~8.5—Loading restrictions in passenger cabin or on flight deck~~**

~~Dangerous goods shall not be carried in an aircraft cabin occupied by passengers or on the flight deck of an aircraft, except in circumstances permitted by the provisions of the Technical Instructions.~~

### **~~8.6—Removal of contamination~~**

~~—8.6.1—Any hazardous contamination found on an aircraft as a result of leakage or damage to dangerous goods shall be removed without delay.~~

~~—8.6.2—An aircraft which has been contaminated by radioactive materials shall immediately be taken out of service and not returned to service until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions.~~

### **~~8.7—Separation and segregation~~**

~~—8.7.1—Packages containing dangerous goods which might react dangerously one with another shall not be stowed on an aircraft next to each other or in a position that would allow interaction between them in the event of leakage.~~

~~—8.7.2—Packages of toxic and infectious substances shall be stowed on an aircraft in accordance with the provisions of the Technical Instructions.~~

~~—8.7.3—Packages of radioactive materials shall be stowed on an aircraft so that they are separated from persons, live animals and undeveloped film, in accordance with the provisions in the Technical Instructions.~~

### **~~8.8—Securing of dangerous goods cargo loads~~**

~~When dangerous goods subject to the provisions contained herein are loaded in an aircraft, the operator shall protect the dangerous goods from being damaged, and shall secure such goods in the aircraft in such a manner that will prevent any movement in flight which would change the orientation of the packages. For packages containing radioactive materials, the securing shall be adequate to ensure that the separation requirements of 8.7.3 are met at all times.~~

### **~~8.9—Loading on cargo aircraft~~**

~~Packages of dangerous goods bearing the “Cargo aircraft only” label shall be loaded in accordance with the provisions in the Technical Instructions.~~

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**CHAPTER 8. TRANSPORT OF DANGEROUS GOODS BY POST**

Moved from under 11.4, Note 1.

*Note 1.*— *In accordance with the Universal Postal Union (UPU) Convention, dangerous goods are not permitted in mail, except as provided for in the Technical Instructions.*

**8.1 Designated postal operator's responsibilities**

8.1.1 All designated postal operators accepting mail into air transport shall:

- a) establish and maintain a dangerous goods training programme in accordance with Chapter 9;
- b) develop and implement procedures for preventing the introduction of dangerous goods in mail when not in compliance with the provisions of this Annex and the Technical Instructions; and
- c) develop and implement procedures for the reporting of dangerous goods accidents, dangerous goods incidents and occasions when undeclared or misdeclared dangerous goods are discovered in mail offered for air transport in accordance with Chapter 10.

8.1.2 A designated postal operator with a policy to allow dangerous goods in mail shall:

- a) establish procedures for controlling the introduction of dangerous goods in mail into air transport; and
- b) not permit lithium batteries identified in Part 1;2.3 of the Technical Instructions in the mail into air transport unless the civil aviation authority of its State has issued a specific approval.

8.1.3 Each Contracting State's designated postal operator accepting mail in another State shall establish procedures and training for the activities described by this chapter.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The designated postal operator is responsible for its postal operators regardless of where they operate. The civil aviation authority needs to evaluate how the designated postal operator manages its operation in other States when approving the dangerous goods training programme.

Moved from 11.4:

**11.48.2 Approval of procedures for controlling the introduction of dangerous goods by mail into air transport**

The procedures of a State's designated postal operators ~~for controlling the introduction of dangerous goods in mail into air transport identified in 8.1~~ shall be approved by the State's civil aviation authority ~~of the State where the mail is accepted.~~

Current Note 1 is moved to top of this chapter:

~~— *Note 1.*— *In accordance with the Universal Postal Union (UPU) Convention, dangerous goods are not permitted in mail, except as provided for in the Technical Instructions.*~~

~~— *Note 1.*— *See Chapter 9 for approval of the designated postal operator's dangerous goods training programmes.*~~

~~— *Note 2.*— *The Universal Postal Union has established procedures to control the introduction of dangerous goods into air transport through the postal services. The Universal Postal Convention embodies the rules applicable throughout the international postal service and the provisions concerning the letter-post and parcel-post services. The Universal Postal Union (UPU) requires that member countries ensure that their designated postal operators fulfil the obligations arising from the Universal Postal Convention. The Regulations to the Universal Postal Convention contain the rules of application necessary for the implementation of the Universal Postal Convention and reflect the ICAO Standards for the transport of dangerous goods in airmail (see the UPU Convention Manual Parcel-Post Regulations and Letter-Post Regulations).*~~

~~— *Note 3.*— *Guidance for approving the procedures established by designated postal operators to control the introduction of dangerous goods into air transport may be found in the Supplement to the Technical Instructions (Part S-1, Chapter 3).*~~

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## ~~CHAPTER 9. PROVISION OF INFORMATION~~

Moved to 6.7:

### ~~9.1—Information to pilot in command~~

~~The operator of an aircraft in which dangerous goods are to be carried shall provide the pilot in command as early as practicable before departure of the aircraft with written information as specified in the Technical Instructions.~~

Moved to 6.8.1:

### ~~9.2—Information and instructions to flight crew members~~

~~The operator shall provide such information in the Operations Manual as will enable the flight crew to carry out its responsibilities with regard to the transport of dangerous goods and shall provide instructions as to the action to be taken in the event of emergencies arising involving dangerous goods.~~

Moved to 7.2:

### ~~9.3—Information to passengers~~

~~Each Contracting State shall ensure that information is promulgated in such a manner that passengers are warned as to the types of dangerous goods which they are forbidden from transporting aboard an aircraft as provided for in the Technical Instructions.~~

Captured in Chapter 6:

### ~~9.4—Information to other persons~~

~~Operators, shippers or other organizations involved in the transport of dangerous goods by air shall provide such information to their personnel as will enable them to carry out their responsibilities with regard to the transport of dangerous goods and shall provide instructions as to the action to be taken in the event of emergencies arising involving dangerous goods.~~

### ~~9.5—Information from pilot in command to aerodrome authorities~~

Moved to 6.8.2:

~~If an in-flight emergency occurs, the pilot in command shall, as soon as the situation permits, inform the appropriate air traffic services unit, for the information of aerodrome authorities, of any dangerous goods on board the aircraft, as provided for in the Technical Instructions.~~

Moved to 6.8.3:

**9.6—Information in the event of an aircraft accident or incident**

— 9.6.1 — In the event of:

— a) — an aircraft accident; or

— b) — a serious incident where dangerous goods carried as cargo may be involved;

~~the operator of the aircraft carrying dangerous goods as cargo shall provide information, without delay, to emergency services responding to the accident or serious incident about the dangerous goods on board, as shown on the written information to the pilot in command. As soon as possible, the operator shall also provide this information to the appropriate authorities of the State of the Operator and the State in which the accident or serious incident occurred.~~

— 9.6.2 — ~~In the event of an aircraft incident, the operator of an aircraft carrying dangerous goods as cargo shall, if requested to do so, provide information without delay to emergency services responding to the incident and to the appropriate authority of the State in which the incident occurred, about the dangerous goods on board, as shown on the written information to the pilot in command.~~

— *Note.* — *The terms “accident”, “serious incident” and “incident” are as defined in Annex 13.*

<i>Origin:</i>	<i>Rationale for approach taken in amending the training provisions:</i>
DGP/29	Much of the dangerous goods training provisions currently in the Technical Instructions are proposed for inclusion in Annex 18. It is considered more appropriate to include training provisions in the Annex because the State's oversight responsibilities including the obligation to approve dangerous goods training programmes of the operator and may determine that approval is necessary for other entities in its State as well. Keeping the provisions in the Annex creates more visibility to the State and ensures they are consulted when amendments are proposed.

Moved from Chapter 10:

## **CHAPTER ~~109~~. TRAINING PROGRAMMES AND ASSESSMENT**

<i>Origin:</i>	<i>Rationale for approach taken in amending the training provisions:</i>
DGP/29	The title is modified to reflect the critical role assessment plays in ensuring personnel are competent to perform their dangerous goods functions.

### **10.19.1 Establishment of Dangerous goods training programmes**

*Note 1.—A training programme includes elements such as design methodology, assessment, initial and recurrent training, instructor qualifications and competencies, training records, and evaluation of its effectiveness.*

<i>Origin:</i>	<i>Rationale for approach taken in amending the training provisions:</i>
DGP/29	The note is moved from the Technical Instructions. It is intended to make it clear that the State needs to consider more than a course syllabus when approving dangerous goods training programmes.

~~Initial and recurrent dangerous goods training programmes shall be established and maintained in accordance with the Technical Instructions.~~ 9.1.1 Each Contracting State shall require the establishment and maintenance of a dangerous goods training programme by any entity that:

a) offers, handles, or transports dangerous goods by air; or

b) causes to offer, handle, or transport dangerous goods by air.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Who requires a dangerous goods training programme is currently established in the Technical Instructions. There have been extensive discussions on the Dangerous Goods Panel on whether training programmes can be required for entities not intending to handle dangerous goods by air. Entities such as freight forwarders play an important role in preventing undeclared dangerous goods from being introduced into the air cargo system, but they can only do this if they know how to identify them. A mandatory requirement for freight forwarders and other entities handling general cargo to be trained was introduced into the 2005-2006 Edition of the Technical Instructions, but some panel members had not interpreted the provisions to be mandatory because they referred to guidance. Whether mandating training for entities not intending to handle dangerous goods is feasible globally was raised

	by the DGP when it was revising the dangerous goods training provisions in the Technical Instructions to support a competency-based approach to training and assessment. Some States did not have oversight authority over entities not performing functions described in the Technical Instructions, so a mandatory requirement was not feasible in those States. However, entities performing functions described in the Technical Instructions are required to be trained in those States regardless of whether they knowingly or unknowingly perform them. The amendment is intended to capture this concept.
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Moved from under 10.2.1:

*Note 1.— ~~A~~ Dangerous goods training programmes ~~are~~ is required for all operators regardless of whether ~~or not they are approved~~ the operator has been issued a specific approval to transport dangerous goods as cargo in accordance with Annex 6.*

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Amendments to the note are proposed to refer to the specific approval required by Annex 6 and to specify that it applies to cargo. The need for all operators to have dangerous goods training programmes is established in new 9.1.1, but it is important to maintain this note for the same reason it was added through Amendment 12 to Annex 18. The need for clarification was based on safety oversight audit results that highlighted a lack of awareness of dangerous goods training requirements in relation to operators not approved to carry dangerous goods.

*Note 2.— See Annex 6, Part I, Chapter 14; Part III, Chapter 12; and Part IV, Chapter 14 for the establishment of dangerous goods training programmes by the operator.*

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The note is added to establish a connection between Annex 18 and 6 with respect to the operator's dangerous goods programme. The need for a dangerous goods training programme and for the details of it to be included in the operator's operations manual are provided in Annex 6.

9.1.2 Each Contracting State shall require the establishment and maintenance of a dangerous goods programme by its designated postal operators regardless of whether the designated postal operator allows the introduction of dangerous goods in mail.

### **10.29.2 Approval of training programmes**

10.2.19.2.1 The operator's ~~D~~dangerous goods training programme ~~for operators~~ shall be approved by the appropriate authority of the State of the Operator.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Editorial revision for the sake of alignment with the wording of other Standards.

Moved from under 10.2.3

~~Note 2.— See 4.2.2 of Annex 6— Operation of Aircraft, Part I— International Commercial Air Transport— Aeroplanes for surveillance of operations by a foreign operator, Parts I, III and IV require that States recognize as valid the air operator certificate (AOC) issued by another State provided that the requirements under which the certificate was issued are at least equal to the applicable Standards specified in Annexes 6 and 19. This includes the dangerous goods training programme.~~

Origin:	Rationale:
DGP/29	Modified to clarify the intent of the existing note and to add missing references. It has been reported that some States subject foreign operators' training programmes to review and approval despite training programmes only being subject to the approval of the State of the Operator. A reference to the Standard in Annex 6 that specifies that the State shall recognize as valid an air operator certificate issued by another Contracting State was added through Amendment 12 to Annex 18. The expands the note by describing the actual requirement in Annex 6.

Moved to under 9.1.1 as Note 1:

~~Note.— Dangerous goods training programmes are required for all operators regardless of whether or not they are approved to transport dangerous goods.~~

~~10.2.29.2.2~~ Dangerous goods training programmes ~~of a State's~~ for designated postal operators shall be approved by the ~~State's~~ civil aviation authority ~~of the State where the mail is accepted by the designated postal operator.~~

Origin:	Rationale:
DGP/29	<p>Revised to clarify the scope of oversight. Designated postal operators may operate in different States. The wording of the current Standard may imply that the civil aviation authority must approve the training programme of foreign designated postal operators operating in its State.</p> <p>The existing SARP was added to Annex 18 through Amendment 12, along with new Standards in current 11.4, to control the introduction of dangerous goods not permitted in mail from entering the airmail stream. The provisions were intended to provide for stronger relationships between civil aviation and postal authorities. Not specifying the civil aviation authority as the authority required to approve the training programme could result in the designated postal operator approving itself. The civil aviation authority needs to approve the dangerous goods programme because of the unique risks to air transport of which the designated postal operator may not be aware.</p>

~~10.2.39.2.3~~ **Recommendation.**— *Dangerous goods training programmes required for entities other than operators and designated postal operators should be approved as determined by the appropriate national authority in accordance with its safety risk management activities.*

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Modified to clarify that a risk-based approach to determining whether to approve other entities should be used. The decision will be different among States based on the level of risk posed by specific entities in the State and the size and complexity of the State. Alternate risk mitigating approaches may be more appropriate

~~Note 1. See 11.4 for dangerous goods by mail.~~

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Deleted because provisions for the mail are no longer contained in one area and it would be inconsistent to cross reference provisions for one entity without cross referencing parts of the Annex for others.

Moved to under 9.2.1

~~Note 2. See 4.2.2 of Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes for surveillance of operations by a foreign operator.~~

### 9.3 Competency of personnel

9.2.1 Each Contracting State shall require the employer to ensure their personnel are competent to perform any function for which they are responsible prior to performing any of the functions through dangerous goods training and assessment commensurate with the functions for which they are responsible.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Moved from the Technical Instructions to make the objective of training clear.

Note.— An approach to ensuring personnel are competent to perform any function for which they are responsible is provided in Guidance on a Competency-based Approach to Dangerous Goods Training and Assessment (Doc 10147).

9.2.2 Each Contracting State shall require the employer to periodically supplement training for their personnel to take account of changes in regulations and to ensure that competency has been maintained. This shall be achieved, at a minimum, by providing recurrent training and assessment within 24 months of previous training and assessment.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The need for recurrent training and assessment within 24 months of previous training and assessment is moved from the Technical Instruction. It is a long-standing requirement aimed at ensuring an employee's competence is maintained and that they are current with new regulations. Twenty-four months was established to reflect the fact that the regulations are modified at least once every two years through the biennial editions of the Technical Instructions. It implies that training once every two years is sufficient to ensure competency is maintained. The provision is revised to focus on the need for supplemental training to ensure competency is maintained while still maintaining the minimum requirement of recurrent training and assessment within 24 months of previous training and assessment.

9.2.3 Each Contracting State shall require the employer to ensure that instructors delivering training are competent in instruction and the function(s) that they will instruct prior to delivering such training.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	Moved from the Technical Instructions.

### 9.3 Training and assessment records

9.3.1 Each Contracting State shall require the employer to maintain a record of training and assessment for its personnel for a minimum period of 36 months from the most recent training and assessment completion month.

9.3.2 The record of training and assessment required by 9.3.1 shall be made available upon request to personnel or the appropriate national authority.

9.3.3 Each Contracting State shall identify the minimum information required to be included in a record of training and assessment.

<i>Origin:</i>	<i>Rationale:</i>
DGP/29	The SARPs in Section 9.3 are moved from the Technical Instructions. The record of training provides evidence that employees have been trained and assessed as competent to perform their functions. They provide a standardized tool for authorities to use when evaluating training programmes.

Moved to Chapter 9:

## CHAPTER 10. — TRAINING PROGRAMMES

Moved to 9.1:

### 10.1 — Establishment of training programmes

~~Initial and recurrent dangerous goods training programmes shall be established and maintained in accordance with the Technical Instructions.~~

Moved to 9.2:

### 10.2 — Approval of training programmes

~~— 10.2.1 — Dangerous goods training programmes for operators shall be approved by the appropriate authority of the State of the Operator.~~

Moved to under 9.1.1:

~~— Note. — Dangerous goods training programmes are required for all operators regardless of whether or not they are approved to transport dangerous goods.~~

Moved to 9.2.2:

~~— 10.2.2 — Dangerous goods training programmes for designated postal operators shall be approved by the civil aviation authority of the State where the mail is accepted by the designated postal operator.~~

Moved to 9.2.3:

~~— 10.2.3 — **Recommendation.** — Dangerous goods training programmes required for entities other than operators and designated postal operators should be approved as determined by the appropriate national authority.~~

~~— Note 1. — See 11.4 for dangerous goods by mail.~~

Moved to under 9.2.1:

~~— Note 2. — See 4.2.2 of Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes for surveillance of operations by a foreign operator.~~

## **CHAPTER 10. DANGEROUS GOODS SAFETY INTELLIGENCE**

Note.— In addition to the provisions of this chapter, other provisions relative to the promotion of dangerous goods accident and incident prevention by collection and analysis of safety data and by a prompt exchange of safety information, as part of the State safety programme (SSP), are included in Annex 19 — Safety Management and, to this effect, are applicable to this Annex. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).

### **10.1 Safety data collection and processing systems**

The State shall ensure its safety data collection and processing systems (SDCPS) capture, store, aggregate and enable the analysis of dangerous goods safety data and dangerous goods safety information in accordance with Annex 19, 5.1.

Note 1.— Within the context of this Annex, SDCPS refers to processing and reporting systems, safety databases, schemes for exchange of information, and recorded information including but not limited to:

- a) data and information related to safety investigations by State authorities, operators or other entities involved with the transport of dangerous goods by air;
- b) mandatory safety reporting systems as indicated in 5.1.2 of Annex 19 and 8.1.1 of this Annex; and
- c) voluntary safety reporting systems as indicated in 5.1.3 of Annex 19 and 8.1.2 of this Annex.

Note 2.— Guidance related to SDCPS is contained in the Safety Management Manual (SMM) (Doc 9859) and the [DG guidance material].

#### **10.1.1 Mandatory safety reporting system**

10.1.1.1 States shall include reporting of dangerous goods accidents, dangerous goods incidents and occasions when undeclared or misdeclared dangerous goods are discovered as part of their mandatory safety reporting systems in accordance with the provisions of Annex 19.

10.1.1.2 States' mandatory reporting systems shall include a requirement for the operator to report dangerous goods accidents and dangerous goods incidents to the appropriate authority of the State in which they occurred and to the State of the Operator.

10.1.1.3 States' mandatory reporting systems shall include a requirement for the operator to report occasions when undeclared or misdeclared dangerous goods are discovered in cargo or mail to the appropriate authority of the State in which they were discovered and the State of the Operator.

10.1.1.4 States' mandatory reporting systems shall include a requirement for the operator to report occasions when dangerous goods not permitted to be carried by passengers or crew are discovered by the operator, or the operator is advised by the entity that discovers the dangerous goods, either in the baggage or on the person, of passengers or crew members to the appropriate authority of the State in which this occurred.

*Note.— Dangerous goods permitted to be carried by passengers and crew are provided in Part 8 of the Technical Instructions.*

10.1.1.5 States' mandatory reporting systems shall include a requirement for entities other than operators to report dangerous goods accidents and dangerous goods incidents to the appropriate authority of the State in which they occurred.

10.1.1.6 **Recommendation.**— States' mandatory reporting systems should include a requirement for entities other than operators to report occasions when undeclared or misdeclared dangerous goods are discovered to the appropriate authority of the State in which they were discovered.

### **10.1.2 Voluntary safety reporting system**

10.1.2.1 States shall establish a voluntary dangerous goods safety reporting system to collect safety data and safety information from operators that is not captured by mandatory safety reporting systems in accordance with Annex 19, 5.1.

<u>Recommend that Part 7;4.6 in the TI be deleted and moved to the guidance regarding being processed through the operator's SMS.</u>
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10.1.2.2 **Recommendation.**— States should establish a voluntary dangerous goods safety reporting system to collect safety data and safety information from entities other than operators, not captured by mandatory reporting systems in accordance with Annex 19, 5.1.

### **10.2 Safety data and safety information analysis**

States shall establish and maintain a process to analyse the dangerous goods safety data and dangerous goods safety information from the SDCPS and associated safety databases in accordance with Annex 19, 5.2.

### **10.3 Safety data and safety information protection**

10.3.1 States shall accord protection to dangerous goods safety data captured by, and dangerous goods safety information derived from, voluntary safety reporting systems and related sources in accordance with Annex 19, 5.3.

10.3.2 **Recommendation.**— States should extend the protection referred to in 10.3.1 to safety data captured by, and safety information derived from, mandatory dangerous goods safety reporting system and related sources in accordance with Annex 19, 5.3.

### **10.4 Safety information sharing and exchange**

10.4.1 The State shall share and exchange dangerous goods safety information in accordance with Annex 19, 5.4.

10.4.2 If a State, in the analysis of the dangerous goods information contained in its safety data collection and processing system (SDCPS), identifies safety issues which may pose an unacceptable risk to the global aviation safety system, that State shall forward such safety information to ICAO with a minimum of delay.

*Note 1.— Provisions for a SDCPS and safety information sharing and exchange between States are included in Annex 19. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).*

*Note 2.— Whenever practicable, the safety information sent to ICAO is to be prepared in one of the working languages of the Organization.*

10.4.3 States shall provide ICAO with dangerous goods information from their SDCPS upon request to address global safety issues related to the transport of dangerous goods.

10.4.4 States shall participate in cooperative efforts with other States with the aim of eliminating unsafe practices and non-compliance with the Technical Instructions.

10.4.5 States' cooperative efforts shall include coordination of investigations of dangerous goods accidents and dangerous goods incidents, identified safety issues related to the transport of dangerous goods, non-compliance with the Technical Instructions and enforcement actions.

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## CHAPTER 11.—COMPLIANCE

Moved to

### 11.1—Inspection systems

~~Each Contracting State shall establish inspection, surveillance and enforcement procedures for all entities performing any function prescribed in its regulations for air transport of dangerous goods with a view to achieving compliance with those regulations.~~

~~— Note 1. — It is envisaged that these procedures would include provisions for:~~

~~— inspecting dangerous goods consignments prepared, offered, accepted or transported by the entities referred to in 11.1;~~

~~— inspecting the practices of the entities referred to in 11.1; and~~

~~— investigating alleged violations (see 11.3).~~

~~— Note 2. — Guidance on dangerous goods inspections and enforcement may be found in the Supplement to the Technical Instructions (Part S-5, Chapter 1 and Part S-7, Chapters 5 and 6).~~

### 11.2—Cooperation between States

Moved to 3.2.3.2:

~~— **Recommendation.** — Each Contracting State should participate in cooperative efforts with other States concerning violations of dangerous goods regulations, with the aim of eliminating such violations. Cooperative efforts could include coordination of investigations and enforcement actions; exchanging information on a regulated party's compliance history; joint inspections and other technical liaisons, exchange of technical staff, and joint meetings and conferences. Appropriate information that could be exchanged include safety alerts, bulletins or dangerous goods advisories; proposed and completed regulatory actions; incident reports; documentary and other evidence developed in the investigation of incidents; proposed and final enforcement actions; and educational/outreach materials suitable for public dissemination.~~

### 11.3—Penalties

~~— 11.3.1 — Each Contracting State shall take such measures as it may deem appropriate to achieve compliance with its dangerous goods regulations including the prescription of appropriate penalties for violations.~~

~~— 11.3.2 **Recommendation.** — Each Contracting State should take appropriate action to achieve compliance with its dangerous goods regulations, including the prescription of appropriate penalties for violations, when information about a violation is received from another Contracting State, such as when a consignment of dangerous goods is found not to comply with the requirements of the Technical Instructions on arrival in a Contracting State and that State reports the matter to the State of Origin.~~

Origin: DGP/29	Rationale:
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Moved to Chapter 7:

#### **11.4—Dangerous goods by mail**

~~The procedures of designated postal operators for controlling the introduction of dangerous goods in mail into air transport shall be approved by the civil aviation authority of the State where the mail is accepted.~~

~~— Note 1.— In accordance with the Universal Postal Union (UPU) Convention, dangerous goods are not permitted in mail, except as provided for in the Technical Instructions.~~

~~— Note 2.— The Universal Postal Union has established procedures to control the introduction of dangerous goods into air transport through the postal services (see the UPU Parcel Post Regulations and Letter Post Regulations).~~

~~— Note 3.— Guidance for approving the procedures established by designated postal operators to control the introduction of dangerous goods into air transport may be found in the Supplement to the Technical Instructions (Part S-1, Chapter 3).~~

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## ~~CHAPTER 12. DANGEROUS GOODS ACCIDENT AND INCIDENT REPORTING~~

Moved partly to 3.2.3 and partly to 10.1.1.2:

~~12.1 With the aim of preventing the recurrence of dangerous goods accidents and incidents, each Contracting State shall establish procedures for investigating and compiling information concerning such accidents and incidents which occur in its territory and which involve the transport of dangerous goods originating in or destined for another State. Reports on such accidents and incidents shall be made in accordance with the detailed provisions of the Technical Instructions.~~

~~—12.2 **Recommendation.**—With the aim of preventing the recurrence of dangerous goods accidents and incidents, each Contracting State should establish procedures for investigating and compiling information concerning such accidents and incidents which occur in its territory other than those described in 12.1. Reports on such accidents and incidents should be made in accordance with the detailed provisions of the Technical Instructions.~~

~~—12.3 With the aim of preventing the recurrence of instances of undeclared or misdeclared dangerous goods in cargo, each Contracting State shall establish procedures for investigating and compiling information concerning such occurrences which occur in its territory and which involve the transport of dangerous goods originating in or destined for another State. Reports on such instances shall be made in accordance with the detailed provisions of the Technical Instructions.~~

~~—12.4 **Recommendation.**—With the aim of preventing the recurrence of instances of undeclared or misdeclared dangerous goods in cargo, each Contracting State should establish procedures for investigating and compiling information concerning such occurrences which occur in its territory other than those described in 12.3. Reports on such instances should be made in accordance with the detailed provisions of the Technical Instructions.~~

**CHAPTER ~~13~~ 11. DANGEROUS GOODS SECURITY PROVISIONS**

11.1 Each Contracting State shall establish dangerous goods security measures, applicable ~~to shippers, operators and other individuals~~ entities in the supply chain engaged in the transport of dangerous goods by air, to be taken to minimize theft or misuse of dangerous goods that may endanger persons, property or the environment. These measures should be commensurate with security provisions specified in other Annexes and the Technical Instructions.

11.2 Each Contracting State shall establish measures to ensure the physical and cyber security of data it collects when processing exemptions for the transport of high consequence dangerous goods.

11.3 Each Contracting State shall adopt regulations to require that training and assessment in accordance with Chapter 9 are provided to security personnel who are involved with the screening of passengers and crew and their baggage and cargo or mail.

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**APPENDIX B**

**CLEAN VERSION OF PROPOSED AMENDMENT TO ANNEX 18 — THE SAFE TRANSPORT  
OF DANGEROUS GOODS BY AIR**

**PROPOSED AMENDMENT TO ANNEX 18 — *THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR***

**FOREWORD**

**Historical background**

The provisions of Annex 18 govern the international transport of dangerous goods by air. They were developed by the Air Navigation Commission in response to a need expressed by Contracting States for an internationally agreed set of provisions governing the safe transport of dangerous goods by air. They were adopted by Council on 26 June 1981 and became applicable on 1 January 1984.

***Relationship with the Technical Instructions  
for the Safe Transport of Dangerous Goods by Air  
(Doc 9284)***

Annex 18 specifies the broad Standards and Recommended Practices to be followed to enable dangerous goods to be carried safely. The broad provisions are amplified by the detailed specifications of the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) (Technical Instructions). The provisions of the Technical Instructions are based on recommendations on the transport of dangerous goods for all modes of transport developed by the United Nations Economic and Social Council's Committee of Experts on the Transport of Dangerous Goods. The intent of using this common base by all modes of transport is to allow cargo to be transferred safely and smoothly between air, sea, rail, and road modes. Modifications from these recommendations are made in the Technical to address specific aviation needs while keeping in the mind the need to ensure modal compatibility.

***Status of the Technical Instructions  
for the Safe Transport of Dangerous Goods by Air  
(Doc 9284)***

The detailed requirements of the Technical Instructions are considered binding on a State by virtue of 2.3.1.1 of this Annex unless it has notified a difference to this provision under Article 38 of the Convention.

**Amendments to Annex 18 and the Technical Instructions**

Annex 18 is intended to contain stable material requiring only minor amendments using the normal Annex amendment process. The Technical Instructions require more substantial and frequent amendments to keep up with day-to-day operational use. The significant growth and complexity in air cargo operations since Annex 18 was first adopted necessitates the implementation of the same proactive strategy to improve safety performance needed in other aviation sectors through the State safety programme (SSP). Provisions aimed at ensuring States integrate dangerous goods operations within their SSP were adopted by Council on ... 2025 through Amendment 13. The provisions provide clarity and sufficient detail to effectively outline States' responsibilities with respect to the safe transport of dangerous goods by air and the interrelationship of responsibilities between dangerous goods and other aviation

activities. In order that a comprehensive document may be available to States for implementation of the dangerous goods provisions prescribed by this Annex, an Attachment hereto describes the interrelationships between Annex 18 and other Annexes bearing on the safe transport of dangerous goods by air.

The Air Navigation established the Dangerous Goods Panel (DGP) and tasked it with maintaining the Technical Instructions. The DGP meets periodically to review comments received from States and interested international organizations, to consider any changed recommendations of the United Nations Committee or the IAEA, to address safety and facilitation issues specific to air transport and to prepare revised editions of the Technical Instructions. Amendments recommended by the DGP are published in panel meeting reports and made available on [www.icao.int/safety/DangerousGoods](http://www.icao.int/safety/DangerousGoods).

Amendments recommended by the DGP are reviewed by the Air Navigation Commission and approved, issued and amended by the Council. Action taken by the Air Navigation Commission or the Council on the recommendations is published in the Supplement to DGP meeting reports and made available on [www.icao.int/safety/DangerousGoods/](http://www.icao.int/safety/DangerousGoods/).

A new edition of the Technical Instructions is published every two years. Amendments to the Technical Instructions during the specific period of applicability of an edition of the document may also be published if deemed necessary. Amendments during the specific period of applicability are made available on [www.icao.int/safety/dangerous](http://www.icao.int/safety/dangerous) goods.

### Guidance

Guidance to States on the implementation of Annex 18 is contained in *Oversight and Management of the Safe Transport of Dangerous Goods by Air Manual (Doc xxxxx)*.

The Technical Instructions are supported by the *Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284)*. The Supplement contains guidance to assist States when considering authorizations to transport dangerous goods by air that the Technical Instructions forbid under normal circumstances through approvals or exemptions.

### Action by Contracting States

*Notification of differences.* The attention of Contracting States is drawn to the obligation imposed by Article 38 of the Convention by which Contracting States are required to notify the Organization of any differences between their national regulations and practices and the International Standards contained in this Annex and any amendments thereto. Contracting States are invited to extend such notification to any differences from the Recommended Practices contained in this Annex, and any amendments thereto, when the notification of such differences is important for the safety of air navigation. Further, Contracting States are invited to keep the Organization currently informed of any differences which may subsequently occur, or of the withdrawal of any differences previously notified. A specific request for notification of differences will be sent to Contracting States immediately after the adoption of each amendment to this Annex.

The attention of States is also drawn to the provisions of Annex 15 related to the publication of differences between their national regulations and practices and the related ICAO Standards and Recommended Practices through the Aeronautical Information Service, in addition to the obligation of States under Article 38 of the Convention.

In the specific case of 2.2.1 of this Annex, it should be noted that States are expected to file a difference only if they are unable to accept the binding nature of the Technical Instructions. Variations from the detailed provisions of

the Technical Instructions are to be reported to ICAO for publication in that document as required by 2.5 of this Annex. Such detailed variations from the Technical Instructions will not be published with any other differences in a Supplement to this Annex and are not expected to be published under the provisions of Annex 15.

*Promulgation of information.* The establishment and withdrawal of any changes to facilities, services and procedures affecting aircraft operations provided in accordance with the Standards specified in this Annex should be notified and take effect in accordance with the provisions of Annex 15.

### **Status of Annex components**

An Annex is made up of the following component parts, not all of which, however, are necessarily found in every Annex; they have the status indicated:

1.— *Material comprising the Annex proper:*

- a) *Standards and Recommended Practices* adopted by the Council under the provisions of the Convention. They are defined as follows:

*Standard:* Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation and to which Contracting States will conform in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory under Article 38.

*Recommended Practice:* Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as desirable in the interest of safety, regularity or efficiency of international air navigation, and to which Contracting States will endeavour to conform in accordance with the Convention.

- b) *Appendices* comprising material grouped separately for convenience but forming part of the Standards and Recommended Practices adopted by the Council.
- c) *Definitions* of terms used in the Standards and Recommended Practices which are not self-explanatory in that they do not have accepted dictionary meanings. A definition does not have independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.
- d) *Tables and Figures* which add to or illustrate a Standard or Recommended Practice and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

2.— *Material approved by the Council for publication in association with the Standards and Recommended Practices:*

- a) *Forewords* comprising historical and explanatory material based on the action of the Council and including an explanation of the obligations of States with regard to the application of the Standards and Recommended Practices ensuing from the Convention and the Resolution of Adoption.
- b) *Introductions* comprising explanatory material introduced at the beginning of parts, chapters or sections of the Annex to assist in the understanding of the application of the text.

- c) *Notes* included in the text, where appropriate, to give factual information or references bearing on the Standards or Recommended Practices in question, but not constituting part of the Standards or Recommended Practices.
- d) *Attachments* comprising material supplementary to the Standards and Recommended Practices, or included as a guide to their application.

### Selection of language

This Annex has been adopted in six languages — English, Arabic, Chinese, French, Russian and Spanish. Each Contracting State is requested to select one of those texts for the purpose of national implementation and for other effects provided for in the Convention, either through direct use or through translation into its own national language, and to notify the Organization accordingly.

### Editorial practices

The following practice has been adhered to in order to indicate at a glance the status of each statement: *Standards* have been printed in light face roman; *Recommended Practices* have been printed in light face italics, the status being indicated by the prefix **Recommendation**; *Notes* have been printed in light face italics, the status being indicated by the prefix *Note*.

It will be noted that in the English text the following practice has been adhered to when writing the specifications: Standards employ the operative verb “shall” while Recommended Practices employ the operative verb “should”.

Any reference to a portion of this document, which is identified by a number and/or title, includes all subdivisions of that portion.

Table A. Amendments to Annex 18

<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted/approved Effective Applicable</i>
1st Edition	Air Navigation Commission Study		26 June 1981 1 January 1983 1 January 1984
1	Sixth Meeting of the Dangerous Goods Panel	Miscellaneous amendments for alignment with Recommendations of the UN Committee of Experts and IAEA.	26 November 1982 26 March 1983 1 January 1984
2	Fifth, Sixth and Seventh Meetings of the Dangerous Goods Panel	Improved definitions for overpack and unit load device. Definitions of package and packaging aligned with Recommendations of the UN Committee of Experts. Addition of a paragraph covering surface transport to or from aerodromes. The requirement to provide information to the pilot-in-command revised to indicate when this information should be given.	1 June 1983 1 October 1983 1 January 1984
3	Eighth Meeting of the Dangerous Goods Panel	Clarification of the circumstances when exemptions may be granted. Clarification of the segregation requirements of poisons or infectious substances from animals or foodstuffs.	25 March 1985 29 July 1985 1 January 1986

<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted/approved Effective Applicable</i>
4 (2nd Edition)	Eleventh Meeting of the Dangerous Goods Panel	General simplification of the provisions of Annex 18 through the removal of technical detail. Miscellaneous amendments to various provisions.	24 February 1989 23 July 1989 16 November 1989
5	Fourteenth and Sixteenth Meetings of the Dangerous Goods Panel	Clarification of the responsibility of States to achieve compliance with any amendment to the <i>Technical Instructions for the Safe Transport of Dangerous Goods by Air</i> (Doc 9284). Clarification of the exceptions to dangerous goods carried by passengers and crew members.	10 March 1999 19 July 1999 4 November 1999
6 (3rd Edition)	Seventeenth Meeting of the Dangerous Goods Panel and Amendment 25 to Annex 6, Part I	<ul style="list-style-type: none"> <li>a) revised definitions of dangerous goods, crew member, flight crew member and pilot-in-command;</li> <li>b) revision of the provisions to grant exemptions in special circumstances by the States of Overflight to facilitate the movement of dangerous goods in an aircraft overflying its territory;</li> <li>c) alignment of provisions regarding packaging with the Technical Instructions;</li> <li>d) introduction of provisions to cover the requirement to load and stow dangerous goods in accordance with the Technical Instructions;</li> <li>e) revision of the provisions to place the overall responsibility with States to provide information to passengers;</li> <li>f) revision of the provisions to ensure that emergency response personnel are informed without delay, after an accident or incident, about the dangerous goods carried as cargo on board the aircraft;</li> <li>g) revision of the provisions to enhance cooperation between States in taking action against shippers who wilfully violate the dangerous goods transport regulations; and</li> <li>h) revision of the provisions of the pilot to provide information on dangerous goods on board in the event of an emergency.</li> </ul>	7 March 2001 16 July 2001 1 November 2001
7	Eighteenth Meeting of the Dangerous Goods Panel	<ul style="list-style-type: none"> <li>a) notification to ICAO of appropriate national authorities responsible for dangerous goods; and</li> <li>b) provision of emergency response information regarding dangerous goods.</li> </ul>	24 February 2003 14 July 2003 27 November 2003
8	Nineteenth Meeting of the Dangerous Goods Panel	<ul style="list-style-type: none"> <li>a) a refinement of paragraph 9.6.1 to make it clear that the presence of dangerous goods needs to be reported only in the case of a serious incident in which the dangerous goods were likely to have been involved; and</li> <li>b) introduction of a new Chapter 13 requiring States to establish dangerous goods security measures.</li> </ul>	16 February 2005 11 July 2005 24 November 2005
9	Twentieth Meeting of the Dangerous Goods Panel	The extension of the provisions in Chapter 12 relating to the investigation of dangerous goods accidents and incidents to include cases of misdeclared and undeclared dangerous goods.	19 February 2007 16 July 2007 20 November 2008

<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted/approved Effective Applicable</i>
10 (4th Edition)	Twenty-first and twenty-second meetings of the Dangerous Goods Panel (DGP/21 and 22)	a) loading of dangerous goods on cargo only aircraft; and b) requirements for the issuance of exemptions and approvals in Chapter 2 and to certain definitions in Chapter 1.	4 March 2011 18 July 2011 17 November 2011
11	Twenty-third meeting of the Dangerous Goods Panel (DGP/23)	Requirements for State inspection systems in Chapter 11 and to certain definitions in Chapter 1.	27 February 2013 15 July 2013 14 November 2013
12	Twenty-fourth meeting of the Dangerous Goods Panel (DGP/24)	Amendment concerning: a) safety management systems (SMS); b) dangerous goods in the mail; and c) dangerous goods training programmes.	2 March 2015 13 July 2015 12 November 2015

# INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES

## CHAPTER 1. DEFINITIONS

When the following terms are used in this Annex, they have the following meanings:

**Approval.** An authorization granted by an appropriate national authority for:

- a) the transport of dangerous goods forbidden on passenger and/or cargo aircraft where the Technical Instructions state that such goods may be carried with an approval; or
- b) other purposes as provided for in the Technical Instructions.

*Note.— In the absence of a specific reference in the Technical Instructions allowing the granting of an approval, an exemption may be sought.*

**Cargo.** Any property carried on an aircraft other than mail and accompanied or mishandled baggage.

*Note.— This definition differs from the definition of “cargo” given in Annex 9 — Facilitation.*

**Cargo aircraft.** Any aircraft, other than a passenger aircraft, which is carrying goods or property.

**Civil aviation authority (CAA).** The governmental entity or entities, however titled, that are directly responsible for the regulation of all aspects of civil air transport, technical (i.e. air navigation and aviation safety) and economic (i.e. the commercial aspects of air transport).

**Consignment.** One or more packages of dangerous goods accepted by an operator from one shipper at one time and at one address, received for in one lot and moving to one consignee at one destination address.

**Crew member.** A person assigned by an operator to duty on an aircraft during a flight duty period.

**Dangerous goods.** Articles or substances which are capable of posing a hazard to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions or which are classified according to those Instructions.

**Dangerous goods accident.** An occurrence associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in fatal or serious injury to a person or major property or environmental damage.

*Note.— A dangerous goods accident may also constitute an aircraft accident as defined in Annex 13— Aircraft Accident and Incident Investigation.*

**Dangerous goods incident.** An occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft where:

- a) a person is injured;
- b) there is property or environmental damage;

- c) there is fire, breakage, spillage, leakage of contents or radiation or there is other evidence that the integrity of the packaging has not been maintained; or
- d) the safety of the aircraft or its occupants is jeopardized.

*Note.*— *A dangerous goods incident may also constitute an aircraft incident as defined in Annex 13 — Aircraft Accident and Incident Investigation.*

**Designated postal operator.** Any governmental or non-governmental entity officially designated by a Universal Postal Union (UPU) member country to operate postal services and to fulfil the related obligations arising from the acts of the UPU Convention on its territory.

**Exception.** A provision in this Annex which excludes a specific item of dangerous goods from the requirements normally applicable to that item.

**Exemption.** An authorization, other than an approval, granted by an appropriate national authority providing relief from the provisions of the Technical Instructions.

**Flight crew member.** A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

**Misdeclared dangerous goods.** Dangerous goods offered for transport by air that are identified to not be in accordance with the information provided on the dangerous goods transport document or other documentation, when applicable.

*Note.*— *Dangerous goods identified by the operator during the acceptance check as not being in compliance with the applicable provisions of the Technical Instructions are not included in this definition.*

**Operator.** A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

**Overpack.** An enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage.

*Note.*— *A unit load device is not included in this definition.*

**Package.** The complete product of the packing operation consisting of the packaging and its contents prepared for transport.

**Packaging.** One or more receptacles and any other components or materials necessary for the receptacles to perform their containment and other safety functions.

*Note.*— *For radioactive material, see Part 2, paragraph 7.1.3 of the Technical Instructions.*

**Passenger aircraft.** An aircraft that carries any person other than a crew member, an operator's employee in an official capacity, an authorized representative of an appropriate national authority or a person accompanying a consignment or other cargo.

**Pilot-in-command.** The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

**Remote pilot-in-command.** The remote pilot designated by the operator as being in command and charged with the safe conduct of a flight.

**Safety management system (SMS).** A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

**Serious injury.** An injury which is sustained by a person in an accident and which:

- a) requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
- b) results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
- c) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
- d) involves injury to any internal organ; or
- e) involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or
- f) involves verified exposure to infectious substances or injurious radiation.

**State of Destination.** The State in the territory of which the consignment is finally to be unloaded from an aircraft.

**State of Origin.** The State in the territory of which the consignment is first to be loaded on an aircraft.

**State of the Operator.** The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

**Supply chain.** Includes any entity that:

- a) offers, handles or transports; or
- b) causes to offer, handle or transport;

dangerous goods in cargo or mail.

**Technical Instructions.** The *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284), approved and issued periodically in accordance with the procedure established by the ICAO Council.

**Undeclared dangerous goods.** Dangerous goods offered for transport by air where there is no dangerous goods transport document or other documentation, when permitted, describing the contents as containing dangerous goods or the package is not marked to identify the contents as containing dangerous goods, as required by the Technical Instructions.

**UN number.** The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals to identify an article or substance or a particular group of articles or substances.

**Unit load device.** Any type of freight container, aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.

*Note 1.— An overpack is not included in this definition.*

*Note 2.— A freight container for radioactive material is not included in this definition.*

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## CHAPTER 2. GENERAL

### 2.1 Objectives

Each Contracting State shall have as a primary objective in the transport of dangerous goods by air the safety of the aircraft, its occupants, ground personnel, the general public and the environment.

### 2.2 Applicability

2.2.1 The Standards and Recommended Practices of this Annex shall be applicable to international civil aviation.

**Recommendation.**— *Each Contracting State should apply the Standards and Recommended Practices contained in this Annex to domestic civil aviation.*

2.2.2 Articles and substances which would otherwise be classified as dangerous goods but which are required to be aboard the aircraft in accordance with the pertinent airworthiness requirements and operating regulations, or for those specialized purposes identified in the Technical Instructions, shall be excepted from the provisions of this Annex.

*Note.*— *See Chapter 6 for the requirements applicable to the transport of articles and substances intended as replacements for those described in 2.2.3 or which have been removed for replacement when carried on an aircraft.*

### 2.3 Detailed instructions

#### 2.3.1 Dangerous Goods Technical Instructions

2.3.1.1 Each Contracting State shall take measures aimed at ensuring entities in the supply chain, passengers, and crew members achieve compliance with the detailed provisions contained in the Technical Instructions.

2.3.1.2 Each Contracting State shall also take the necessary measures to achieve compliance with any amendment to the Technical Instructions which may be published during the specified period of applicability of an edition of the Technical Instructions.

2.3.1.2 **Recommendation.**— *Although an amendment to the Technical Instructions with an immediate applicability for reasons of safety may not yet have been implemented in a Contracting State, such State should, nevertheless, facilitate the movement of dangerous goods in its territory which are consigned from another Contracting State in accordance with that amendment, providing the goods comply in total with the revised requirements.*

#### 2.3.1.3 Multimodal transport

**Recommendation.**— *Each Contracting State should take measures to enable dangerous goods intended for air transport and prepared in accordance with the Technical Instructions to be accepted for transport by other modes of transport to or from aerodromes.*

## **2.4 Limitation on the transport of dangerous goods by air**

### **2.4.1 Dangerous goods permitted for transport by air**

2.4.1.1 Each Contracting State shall only permit the transport of dangerous goods as cargo or mail by air as established in this Annex and the detailed provisions of the Technical Instructions.

2.4.1.2 Each Contracting State shall only permit the carriage of dangerous goods by passengers or crew members when specifically permitted in accordance with Part 8 of the Technical Instructions.

### **2.4.2 Dangerous goods forbidden for transport by air unless approved or exempted**

Each Contracting State shall not permit the transport of dangerous goods identified in the Technical Instructions as being forbidden for transport in normal circumstances unless the provisions of the Technical Instructions indicate they may be transported under an approval granted by the States concerned in accordance with 2.4.2.1 or an exemption granted by the States concerned in accordance with 2.4.2.2.

#### **2.4.2.1 Approvals**

Where specifically provided for in the Technical Instructions, the States concerned may grant an approval provided that in such instances an overall level of safety in transport which is equivalent to the level of safety provided for in the Technical Instructions is achieved.

*Note.— For the purpose of approvals, “States concerned” are the States of Origin and the Operator, unless otherwise specified in the Technical Instructions.*

#### **2.4.2.2 Exemptions**

In instances:

- a) of extreme urgency; or
- b) when other forms of transport are inappropriate; or
- c) when full compliance with the prescribed requirements is contrary to the public interest,

the States concerned may grant an exemption from the provisions of the Technical Instructions provided that in such instances every effort shall be made to achieve an overall level of safety in transport which is equivalent to the level of safety provided for in the Technical Instructions.

*Note 1.— For the purpose of exemptions, “States concerned” are the States of Origin, Operator, Transit, Overflight and Destination.*

*Note 3.— Guidance for the processing of exemptions, including examples of extreme urgency, may be found in the Oversight and Management of the Safe Transport of Dangerous Goods by Air Manual (Doc xxxxx), Chapter yy.*

**2.4.3 Dangerous goods forbidden for transport by air under any circumstances**

2.4.3.1 Each Contracting State shall forbid any article or substance to be transported by air under any circumstance if, as presented for transport, it is liable to explode, dangerously react, produce a flame or dangerous evolution of heat or dangerous emission of toxic, corrosive or flammable gases or vapours under conditions normally encountered in transport.

2.4.3.2 Each Contracting State shall not grant approvals or exemptions for articles and substances identified in 2.4.3.1.

*Note.— Guidance on dangerous goods forbidden for transport under any circumstance is provided in Doc xxxx, Chapter yy.*

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## CHAPTER 3. PROVISION OF INFORMATION TO ICAO

### 3.1 National authority

Each Contracting State shall designate and specify to ICAO an appropriate authority within its administration to be responsible for ensuring compliance with this Annex.

### 3.2 Notification of variations from the Technical Instructions

Where a Contracting State adopts different provisions from those specified in the Technical Instructions, it shall notify ICAO promptly of such State variations for publication in the Technical Instructions.

*Note.— Each Contracting State is expected to notify a difference to the provisions of 2.3.1.1 under Article 38 of the Convention only if they are unable to accept the binding nature of the Technical Instructions. Where States have adopted different provisions from those specified in the Technical Instructions, they are expected to be reported only under the provisions of 3.2.*

### 3.3 Difficulties encountered in the application of the Technical Instructions

**Recommendation.**— *Each Contracting State should inform ICAO of difficulties encountered in the application of the Technical Instructions and of any amendments which it would be desirable to make to them.*

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## CHAPTER 4. STATE SAFETY MANAGEMENT RESPONSIBILITIES

*Note 1.— The provisions for a State Safety Programme contained in Chapter 3 to Annex 19 are applicable to this Annex. This chapter of Annex 18 contains specific State safety management responsibilities relevant to the safe transport of dangerous goods by air.*

*Note 2.— Guidance on an SSP is contained in the Safety Management Manual (SMM) (Doc 9859).*

### 4.1 State safety policy, objectives and resources

*Note 1.— See 5.1 for primary aviation legislation specific to the safe transport of dangerous goods by air.*

*Note 2.— See 5.2 and 8.1 for specific operating regulations specific to the safe transport of dangerous goods by air.*

*Note 3.— Guidance on the establishment of authorities or government agencies supported by sufficient and qualified personnel and provided with adequate financial resources for the management of safety specific to dangerous goods is contained in Doc xxxx, Chapter yy.*

*Note 4.— Guidance on staffing, minimum qualification requirements and training for dangerous goods technical personnel involved in the regulation and oversight of transport of dangerous goods by air is contained in Doc xxxx, yyyy.*

*Note 5.— Guidance on coordination between the civil aviation authority and other appropriate national authorities that could have an impact on the transport of dangerous goods by air is contained in Doc xxxx, yyyy.*

### 4.2 State safety risk management

#### 4.2.1 Exemption and approval obligations

Each Contracting State shall implement documented processes and procedures to ensure that individuals and organizations performing activities related to the transport of dangerous goods meet the established requirements before they are allowed to exercise the privileges of an exemption or approval to conduct the relevant dangerous goods activity.

*Note.— Guidance on the establishment of documented processes and procedures related to the granting of exemption and approval obligations is contained in Doc xxxx, Chapter yyyy.*

#### 4.2.2 Safety management system obligations

*Note 1.— The transport of dangerous goods is included in the scope of the operator's safety management system (SMS).*

*Note 2.— See Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, Chapter 15 and Part IV — International Operations — Remotely Piloted Aircraft Systems, Chapter 15 for SARPs concerning hazards associated with the transport of items in the cargo compartment, the conduct of a specific safety risk assessment, and the responsibilities for the transport of dangerous goods.*

### **4.2.3 Dangerous goods safety investigations**

4.2.3.1 Each Contracting State shall establish a process to investigate dangerous goods accidents and dangerous goods incidents reported in accordance with Chapter 10 in support of the management of safety in the State.

4.2.3.2 Each Contracting State shall establish and implement a risk-based process for the investigation of:

- a) occasions when undeclared dangerous goods are discovered in cargo or mail;
- b) occasions when dangerous goods not permitted in passenger or crew baggage are discovered; and
- c) other safety issues

which are reported in accordance with Chapter 10 in support of the management of safety in the State.

4.2.3.2 Each Contracting State shall participate in cooperative efforts with other Contracting States conducting safety investigations, as necessary, with the aim of eliminating violations of dangerous goods regulations.

*Note 1.— See 10.4 for requirements related to the exchange of information.*

*Note 2.— Guidance on dangerous goods safety investigations can be found in Doc xxxx.*

### **4.2.4 Hazard identification and safety risk assessment**

4.2.4.1 Each Contracting State shall establish and maintain a process to identify the State's system-level hazards associated with the supply chain from collected safety data.

4.2.4.2 Each Contracting State shall develop and maintain a process to assess safety risks associated with identified hazards introduced within the supply chain.

### **4.2.5 Management of safety risks**

4.2.5.1 Each Contracting State shall ensure that the mechanism for the resolution of safety issues required by Annex 19 addresses safety issues associated with the supply chain, passengers and crew.

4.2.5.2 Each Contracting State shall include preventing dangerous goods not in compliance with the Technical Instructions from being transported in cargo or mail as part of their safety risk management activities.

4.2.5.3 Each Contracting State shall implement measures with the aim of ensuring that entities within the supply chain have processes and procedures in place to identify dangerous goods in cargo or mail that are not in compliance with the Technical Instructions and to prevent them from being loaded on an aircraft.

4.2.5.4 Each Contracting State shall include preventing passengers and crew from taking dangerous goods on board an aircraft which they are not permitted to carry as part of their safety risk management activities.

4.2.5.5 Each Contracting State shall implement measures with the aim of ensuring that entities handling baggage can recognize dangerous goods not permitted to be carried by passengers and crew and prevent them from being carried on an aircraft when they are discovered.

*Note.— Guidance on managing safety risks associated with dangerous goods is contained in Docs 10102 and Doc xxxx, Chapter yyyy.*

### **4.3 State Safety assurance**

*Note.— Guidance on surveillance obligations and State safety performance specific to dangerous goods is contained in Doc xxxx, Chapter yyyy.*

### **4.4 State Safety promotion**

4.4.1 Each Contracting State shall establish and manage safety promotional activities aimed at preventing passengers from carrying dangerous goods forbidden to be carried by passengers on board an aircraft.

*Note.— See Chapter 7 for dangerous goods carried by passengers and crew.*

4.4.2 Each Contracting State shall include preventing the introduction of dangerous goods in cargo and mail which are not in compliance with the provisions of this Annex and the Technical Instructions in the State safety promotion activities required by Annex 19.

4.4.3 Each Contracting State shall establish measures to improve safety awareness and promote a positive safety culture throughout the supply chain.

*Note.— Guidance related to State safety promotion and a positive safety culture specific to the safe transport of dangerous goods is contained in Doc xxxx, Chapter yyy.*

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## **CHAPTER 5. SAFETY OF THE SUPPLY CHAIN**

### **5.1 Primary aviation legislation (CE 1)**

5.1.1 Each Contracting State shall promulgate laws that enable the oversight and management of the safety of the supply chain for the transport of dangerous goods by air, the resolution of safety issues and the enforcement of regulations through the relevant authorities established for that purpose.

### **5.2 Specific operating regulations**

5.2.1 Each Contracting State shall adopt regulations to require, at a minimum, that:

- a) a person does not offer or cause to be offered for transport:
    - 1) articles or substances which are forbidden for transport in accordance with 2.4.3;
    - 2) articles or substances which are forbidden for transport in accordance with 2.4.2 unless permitted by the States concerned through an approval or exemption;
  - b) a person does not offer or cause to be offered dangerous goods for transport unless:
    - 1) policies and procedures have been developed and provided to enable them to carry out the function for which they are responsible;
    - 2) associated hazards are identified in accordance with the classification criteria of Part 2 of the Technical Instructions;
    - 3) risks associated with the identified hazards are mitigated at the package level through quantity limitations and packing and packaging requirements in accordance with Parts 3, 4 and 6 of the Technical Instructions;
    - 4) hazard and handling information are communicated to entities in the supply chain in accordance with the marking, labelling and documentation requirements of Parts 3, 4 and 5 of the Technical Instructions;
    - 5) documentation is retained in accordance with the Technical Instructions;
    - 6) in the case of radioactive material, a radiation protection programme is established and maintained in accordance with Part 1;6 of the Technical Instructions;
  - c) operators accept, handle and transport dangerous goods in accordance with Chapter 6;
  - d) dangerous goods accidents, dangerous goods incidents and occasions when undeclared or misdeclared dangerous goods are discovered are reported in accordance with Chapter 10;
  - e) training and assessment is provided in accordance with Chapter 9; and
  - f) dangerous goods are not offered, caused to be offered or accepted for transport by mail unless specifically permitted in accordance with Chapter 8.
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## CHAPTER 6. OPERATOR'S RESPONSIBILITIES

*Note 1.— Annex 19 includes safety management provisions for air operators. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).*

*Note 2.— The carriage of dangerous goods is included in the scope of the operator's safety management system (SMS).*

*Note 3.— It is not intended that this Annex be interpreted as requiring an operator to transport a particular article or substance or as preventing an operator from adopting special requirements on the transport of a particular article or substance.*

*Note 3.— The Each Contracting State is required to recognize as valid an air operator certificate issued by another Contracting State in accordance with 4.2.2 of Annex 6, Part I, 2.2.2 of Part III — International Operations — Helicopters and 4.2.3 of Part IV. This includes the specific approval to transport dangerous goods as cargo issued by another Contracting State.*

### 6.1 General

6.1.1 The operator shall not transport dangerous goods as cargo unless specifically approved to do so by the State of the Operator in accordance with the applicable provisions of Annex 6.

6.1.3 The operator with a specific approval to transport dangerous goods as cargo that includes the carriage of radioactive material shall develop, implement and maintain a radiation protection programme in accordance with the Technical Instructions.

### 6.2 Dangerous goods components of the Operations Manual

6.2.1 The operator shall develop and implement procedures in accordance with the Technical Instructions, which shall be documented in the operations or other appropriate manual available to flight crew, cabin crew and other employees, that address, as applicable, the transport of cargo and mail and the carriage of dangerous goods in passenger and crew baggage, aimed at ensuring that:

- a) undeclared and misdeclared dangerous goods are identified and prevented from being transported as cargo or carried by passengers and crew;

*Note.— This includes operator material classified as dangerous goods.*

- b) information on the transport of dangerous goods is displayed at cargo acceptance areas in accordance with the Technical Instructions;
- c) passengers and crew are prevented from carrying dangerous goods either as or in carry-on baggage, as or in checked baggage, or on their person unless the dangerous goods are permitted in accordance with Part 8 of the Technical Instructions;
- d) information is provided to passengers in accordance with Chapter 7;

- e) the reporting requirements of 6.9 are fulfilled;
- f) all personnel, including third-party personnel, involved in the acceptance, handling, loading and unloading of cargo, mail, passenger and crew baggage are informed of the operator's limitations with regard to the transport of dangerous goods;
- g) articles and substances intended as replacements for those described in 2.2.3 or which have been removed for replacement are carried in accordance with this Annex and the detailed provisions of the Technical Instructions by an operator with specific approval to transport dangerous goods as cargo.

6.2.2 An operator with a specific approval to transport dangerous goods as cargo shall in addition:

- a) develop and implement procedures in accordance with the Technical Instructions, which shall be documented in the Operations or other appropriate manuals available to flight crew, cabin crew and other employees, that address, as applicable, the carriage of dangerous goods in cargo, mail, passenger and crew baggage; and
- b) ensure that all personnel, including third-party personnel, involved in the acceptance, handling, loading and unloading of cargo, mail, passenger and crew baggage are informed of the operator's specific approvals [and limitations] with regard to the transport of dangerous goods.

### **6.3 Acceptance for transport**

6.3.1 The operator shall develop and implement procedures aimed at preventing the introduction of undeclared and misdeclared dangerous goods into air transport.

*Note.— See 6.9 concerning the reporting of dangerous goods accidents, dangerous goods incidents and instances where undeclared or misdeclared dangerous goods are identified.*

6.3.2 An operator with a specific approval to transport dangerous goods as cargo shall:

- a) develop and implement procedures to ensure that dangerous goods are not accepted for transport by air:
  - 1) unless the dangerous goods are accompanied by a completed dangerous goods transport document, except where the Technical Instructions indicate that such a document is not required; and
  - 2) until the package, overpack or freight container containing the dangerous goods has been inspected in accordance with the acceptance procedures contained in the Technical Instructions.b) develop and use an acceptance checklist as an aid to compliance with the provisions of 6.3.2 a), except where the Technical Instructions indicate that such an acceptance checklist is not required.

### **6.4 Inspection for damage or leakage**

6.4.1 An operator shall develop and implement procedures to ensure that if evidence of damage or leakage is found, the area where the cargo or unit load device were stowed on the aircraft shall be inspected for damage or contamination by dangerous goods.

6.4.2 An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that:

- a) packages and overpacks containing dangerous goods and freight containers containing radioactive materials shall be inspected for evidence of leakage or damage before loading on an aircraft or into a unit load device. Leaking or damaged packages, overpacks or freight containers shall not be loaded on an aircraft.
- b) unit load devices containing packages of dangerous goods bearing a hazard label are identified in accordance with the Technical Instructions;
- c) unit load devices are not loaded aboard an aircraft unless the device has been inspected and found free from any evidence of leakage from, or damage to, any dangerous goods contained therein.
- d) any package of dangerous goods loaded on an aircraft that appears to be damaged or leaking is removed from the aircraft, or its removal by an appropriate authority or organization is arranged, and thereafter shall ensure that the remainder of the consignment is in a proper condition for transport by air and that no other package has been contaminated.
- e) packages or overpacks containing dangerous goods and freight containers containing radioactive materials are inspected for signs of damage or leakage upon unloading from the aircraft or unit load device.

## 6.5 Removal of contamination

An operator shall develop and implement procedures to ensure that:

- a) any hazardous contamination found on an aircraft as a result of leakage or damage to dangerous goods is removed without delay.
- b) an aircraft which has been contaminated by radioactive materials is immediately taken out of service and not returned to service until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions.

*Note.— The procedures of an operator without a specific approval to transport dangerous goods as cargo are applicable to contamination from the inadvertent transport of undeclared dangerous goods; and dangerous goods carried by passengers and crew.*

## 6.6 Loading and stowage

An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that:

- a) packages, overpacks and unit load devices containing dangerous goods and freight containers containing radioactive materials are loaded and stowed on an aircraft in accordance with the provisions of the Technical Instructions;
- b) packages containing dangerous goods which might react dangerously one with another are not stowed on an aircraft next to each other or in a position that would allow interaction between them in the event of leakage;
- c) packages containing radioactive materials are stowed on an aircraft so that they are separated from persons, live animals and undeveloped film, in accordance with the Technical Instructions.

- d) packages containing dangerous goods loaded in an aircraft are protected from being damaged and secured in the aircraft in such a manner that will prevent any movement in flight which would change the orientation of the packages.
- e) packages of dangerous goods bearing the “Cargo aircraft only” label are loaded in accordance with the Technical Instructions; and
- f) dangerous goods are not carried in an aircraft cabin occupied by passengers or on the flight deck of an aircraft, except in circumstances permitted by the Technical Instructions.

### **6.7 Information to pilot-in-command or remote-pilot-in-command**

An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that when an aircraft is to transport dangerous goods as cargo, the pilot-in-command or remote-pilot-in-command, as applicable, is provided as early as practicable before departure of the aircraft with information in accordance with the Technical Instructions.

### **6.8 Emergency procedures**

6.8.1 The operator shall develop and provide instructions to crew members as to the action to be taken in the event of an emergency involving dangerous goods.

6.8.2 An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to address that if an in-flight emergency occurs, the pilot-in-command or remote-pilot-in-command shall, as soon as the situation permits, inform the appropriate air traffic services unit, for the information of aerodrome authorities, of any dangerous goods on board the aircraft, as provided for in the Technical Instructions.

6.8.3 An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that in the event of:

- a) an aircraft accident; or
- b) a serious incident where dangerous goods carried as cargo may be involved,

the information that was provided to the pilot-in-command or remote-pilot-in-command is provided, without delay, to emergency services responding to the accident or serious incident about the dangerous goods on board. As soon as possible, the operator shall also provide this information to the appropriate authorities of the State of the Operator and the State in which the accident or serious incident occurred.

6.8.4 An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that in the event of an aircraft incident, if requested to do so, the information that was provided to the pilot-in-command or remote-pilot-in-command is provided without delay to emergency services responding to the incident and to the appropriate authority of the State in which the incident occurred, about the dangerous goods on board, as shown on the written information to the pilot-in-command.

*Note.— The terms “accident”, “serious incident” and “incident” are as defined in Annex 13.*

## 6.9 Reporting

6.9.1 The operator shall develop and implement procedures to ensure that:

- a) where undeclared dangerous goods are discovered in cargo or mail, a report is provided to the appropriate authorities of the State of the Operator and the State in which this occurred;
- b) where dangerous goods not permitted by the Technical Instructions are discovered in passenger or crew baggage by the operator, or the operator is advised of such dangerous goods, that a report is submitted to the appropriate authority of the State in which this occurred.

6.9.2 An operator with a specific approval to transport dangerous goods as cargo shall in addition develop and implement procedures to ensure that:

- a) dangerous goods accidents and dangerous goods incidents are reported to the appropriate authorities of the State of the Operator and the State in which the dangerous goods accident or dangerous goods incident occurred; and
- b) where misdeclared dangerous goods are discovered in cargo or mail, a report is provided to the appropriate authorities of the State of the Operator and the State in which this occurred.

## 6.10 Retention of documents

6.10.1 An operator with a specific approval to transport dangerous goods as cargo shall develop and implement procedures to ensure that documents are retained in accordance with the Technical Instructions.

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## **CHAPTER 7. DANGEROUS GOODS CARRIED BY PASSENGERS AND CREW**

### **7.1 Limitations**

Each Contracting State shall adopt regulations which prohibit passengers and crew from carrying dangerous goods as or in carry-on baggage, as or in checked baggage or on their person unless the dangerous goods are permitted in accordance with Part 8 of the Technical Instructions.

### **7.2 Provision of information to passengers**

Each Contracting State shall adopt regulations to require that airport operators promulgate information in such a manner that passengers are warned of the types of dangerous goods which they are forbidden from carrying aboard an aircraft as provided for in Part 7 of the Technical Instructions.

*Note.— Requirements for the operator to provide information to passengers are contained in Chapter 6.*

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## CHAPTER 8. TRANSPORT OF DANGEROUS GOODS BY POST

*Note.— In accordance with the Universal Postal Union (UPU) Convention, dangerous goods are not permitted in mail, except as provided for in the Technical Instructions.*

### 8.1 Designated postal operator's responsibilities

8.1.1 All designated postal operators accepting mail into air transport shall:

- a) establish and maintain a dangerous goods training programme in accordance with Chapter 9;
- b) develop and implement procedures for preventing the introduction of dangerous goods in mail when not in compliance with the provisions of this Annex and the Technical Instructions; and
- c) develop and implement procedures for the reporting of dangerous goods accidents, dangerous goods incidents and occasions when undeclared or misdeclared dangerous goods are discovered in mail offered for air transport in accordance with Chapter 10.

8.1.2 A designated postal operator with a policy to allow dangerous goods in mail shall:

- a) establish procedures for controlling the introduction of dangerous goods in mail into air transport; and
- b) not permit lithium batteries identified in Part 1;2.3 of the Technical Instructions in the mail into air transport unless the civil aviation authority of its State has issued a specific approval.

8.1.3 Each Contracting State's designated postal operator accepting mail in another State shall establish procedures and training for the activities described by this chapter.

### 8.2 Approval of procedures for controlling the introduction of dangerous goods by mail into air transport

The procedures of a State's designated postal operators identified in 8.1 shall be approved by the State's civil aviation authority

*Note 1.— See Chapter 9 for approval of the designated postal operator's dangerous goods training programmes.*

*Note 2.— The Universal Postal Convention embodies the rules applicable throughout the international postal service and the provisions concerning the letter-post and parcel-post services. The Universal Postal Union (UPU) requires that member countries ensure that their designated postal operators fulfil the obligations arising from the Universal Postal Convention. The Regulations to the Universal Postal Convention contain the rules of application necessary for the implementation of the Universal Postal Convention and reflect the ICAO Standards for the transport of dangerous goods in airmail (see the UPU Convention Manual).*

*Note 3.— Guidance for approving the procedures established by designated postal operators to control the introduction of dangerous goods into air transport may be found in the Supplement to the Technical Instructions (Part S-1, Chapter 3).*

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## CHAPTER 9. TRAINING AND ASSESSMENT

### 9.1 Dangerous goods training programme

*Note 1.— A training programme includes elements such as design methodology, assessment, initial and recurrent training, instructor qualifications and competencies, training records, and evaluation of its effectiveness.*

9.1.1 Each Contracting State shall require the establishment and maintenance of a dangerous goods training programme by any entity that:

- a) offers, handles, or transports dangerous goods by air; or
- b) causes to offer, handle, or transport dangerous goods by air.

*Note 1.— A dangerous goods training programme is required for all operators regardless of whether the operator has been issued a specific approval to transport dangerous goods as cargo in accordance with Annex 6.*

*Note 2.— See Annex 6, Part I, Chapter 14; Part III, Chapter 12; and Part IV, Chapter 14 for the establishment of dangerous goods training programmes by the operator.*

9.1.2 Each Contracting State shall require the establishment and maintenance of a dangerous goods programme by its designated postal operators regardless of whether the designated postal operator allows the introduction of dangerous goods in mail.

### 9.2 Approval of training programmes

9.2.1 The operator's dangerous goods training programme shall be approved by the appropriate authority of the State of the Operator.

*Note.— Annex 6, Parts I, III and IV require that States recognize as valid the air operator certificate (AOC) issued by another State provided that the requirements under which the certificate was issued are at least equal to the applicable Standards specified in Annexes 6 and 19. This includes the dangerous goods training programme.*

9.2.2 Dangerous goods training programmes of a State's designated postal operators shall be approved by the State's civil aviation authority.

9.2.3 **Recommendation.**— *Dangerous goods training programmes required for entities other than operators and designated postal operators should be approved as determined by the appropriate national authority in accordance with its safety risk management activities.*

### 9.3 Competency of personnel

9.2.1 Each Contracting State shall require the employer to ensure their personnel are competent to perform any function for which they are responsible prior to performing any of the functions through dangerous goods training and assessment commensurate with the functions for which they are responsible.

*Note.— An approach to ensuring personnel are competent to perform any function for which they are responsible is provided in Guidance on a Competency-based Approach to Dangerous Goods Training and Assessment (Doc 10147).*

9.2.2 Each Contracting State shall require the employer to periodically supplement training for their personnel to take account of changes in regulations and to ensure that competency has been maintained. This shall be achieved, at a minimum, by providing recurrent training and assessment within 24 months of previous training and assessment.

9.2.3 Each Contracting State shall require the employer to ensure that instructors delivering training are competent in instruction and the function(s) that they will instruct prior to delivering such training.

### **9.3 Training and assessment records**

9.3.1 Each Contracting State shall require the employer to maintain a record of training and assessment for its personnel for a minimum period of 36 months from the most recent training and assessment completion month.

9.3.2 The record of training and assessment required by 9.3.1 shall be made available upon request to personnel or the appropriate national authority.

9.3.3 Each Contracting State shall identify the minimum information required to be included in a record of training and assessment.

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## CHAPTER 10. DANGEROUS GOODS SAFETY INTELLIGENCE

*Note.— In addition to the provisions of this chapter, other provisions relative to the promotion of dangerous goods accident and incident prevention by collection and analysis of safety data and by a prompt exchange of safety information, as part of the State safety programme (SSP), are included in Annex 19 — Safety Management and, to this effect, are applicable to this Annex. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).*

### 10.1 Safety data collection and processing systems

The State shall ensure its safety data collection and processing systems (SDCPS) capture, store, aggregate and enable the analysis of dangerous goods safety data and dangerous goods safety information in accordance with Annex 19, 5.1.

*Note 1.— Within the context of this Annex, SDCPS refers to processing and reporting systems, safety databases, schemes for exchange of information, and recorded information including but not limited to:*

- a) *data and information related to safety investigations by State authorities, operators or other entities involved with the transport of dangerous goods by air;*
- b) *mandatory safety reporting systems as indicated in 5.1.2 of Annex 19 and 8.1.1 of this Annex; and*
- c) *voluntary safety reporting systems as indicated in 5.1.3 of Annex 19 and 8.1.2 of this Annex.*

*Note 2.— Guidance related to SDCPS is contained in the Safety Management Manual (SMM) (Doc 9859) and the [DG guidance material].*

#### 10.1.1 Mandatory safety reporting system

10.1.1.1 States shall include reporting of dangerous goods accidents, dangerous goods incidents and occasions when undeclared or misdeclared dangerous goods are discovered as part of their mandatory safety reporting systems in accordance with the provisions of Annex 19.

10.1.1.2 States' mandatory reporting systems shall include a requirement for the operator to report dangerous goods accidents and dangerous goods incidents to the appropriate authority of the State in which they occurred and to the State of the Operator.

10.1.1.3 States' mandatory reporting systems shall include a requirement for the operator to report occasions when undeclared or misdeclared dangerous goods are discovered in cargo or mail to the appropriate authority of the State in which they were discovered and the State of the Operator.

10.1.1.4 States' mandatory reporting systems shall include a requirement for the operator to report occasions when dangerous goods not permitted to be carried by passengers or crew are discovered by the operator, or the operator is advised by the entity that discovers the dangerous goods, either in the baggage or on the person, of passengers or crew members to the appropriate authority of the State in which this occurred.

*Note.— Dangerous goods permitted to be carried by passengers and crew are provided in Part 8 of the Technical Instructions.*

10.1.1.5 States' mandatory reporting systems shall include a requirement for entities other than operators to report dangerous goods accidents and dangerous goods incidents to the appropriate authority of the State in which they occurred.

10.1.1.6 **Recommendation.**— *States' mandatory reporting systems should include a requirement for entities other than operators to report occasions when undeclared or misdeclared dangerous goods are discovered to the appropriate authority of the State in which they were discovered.*

### 10.1.2 Voluntary safety reporting system

10.1.2.1 States shall establish a voluntary dangerous goods safety reporting system to collect safety data and safety information from operators that is not captured by mandatory safety reporting systems in accordance with Annex 19, 5.1.

10.1.2.2 **Recommendation.**— *States should establish a voluntary dangerous goods safety reporting system to collect safety data and safety information from entities other than operators, not captured by mandatory reporting systems in accordance with Annex 19, 5.1.*

## 10.2 Safety data and safety information analysis

States shall establish and maintain a process to analyse the dangerous goods safety data and dangerous goods safety information from the SDCPS and associated safety databases in accordance with Annex 19, 5.2.

## 10.3 Safety data and safety information protection

10.3.1 States shall accord protection to dangerous goods safety data captured by, and dangerous goods safety information derived from, voluntary safety reporting systems and related sources in accordance with Annex 19, 5.3.

10.3.2 **Recommendation.**— States should extend the protection referred to in 10.3.1 to safety data captured by, and safety information derived from, mandatory dangerous goods safety reporting system and related sources in accordance with Annex 19, 5.3.

## 10.4 Safety information sharing and exchange

10.4.1 The State shall share and exchange dangerous goods safety information in accordance with Annex 19, 5.4.

10.4.2 If a State, in the analysis of the dangerous goods information contained in its safety data collection and processing system (SDCPS), identifies safety issues which may pose an unacceptable risk to the global aviation safety system, that State shall forward such safety information to ICAO with a minimum of delay.

*Note 1.— Provisions for a SDCPS and safety information sharing and exchange between States are included in Annex 19. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).*

*Note 2.— Whenever practicable, the safety information sent to ICAO is to be prepared in one of the working languages of the Organization.*

10.4.3 States shall provide ICAO with dangerous goods information from their SDCPS upon request to address global safety issues related to the transport of dangerous goods.

10.4.4 States shall participate in cooperative efforts with other States with the aim of eliminating unsafe practices and non-compliance with the Technical Instructions.

10.4.5 States' cooperative efforts shall include coordination of investigations of dangerous goods accidents and dangerous goods incidents, identified safety issues related to the transport of dangerous goods, non-compliance with the Technical Instructions and enforcement actions.

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## **CHAPTER 11. DANGEROUS GOODS SECURITY PROVISIONS**

11.1 Each Contracting State shall establish dangerous goods security measures, applicable entities in the supply chain engaged in the transport of dangerous goods by air, to be taken to minimize theft or misuse of dangerous goods that may endanger persons, property or the environment. These measures should be commensurate with security provisions specified in other Annexes and the Technical Instructions.

11.2 Each Contracting State shall establish measures to ensure the physical and cyber security of data it collects when processing exemptions for the transport of high consequence dangerous goods.

11.3 Each Contracting State shall adopt regulations to require that training and assessment in accordance with Chapter 9 are provided to security personnel who are involved with the screening of passengers and crew and their baggage and cargo or mail.

— **END** —