



DANGEROUS GOODS PANEL (DGP)

TWENTY-SEVENTH MEETING

Montréal, 16 to 20 September 2019

Agenda Item 4: Clarifying State oversight responsibilities in Annex 18 (Ref: Job Card DGP.005.02)

REPORT OF THE DGP WORKING GROUP ON CLARIFYING STATES' RESPONSIBILITIES IN ANNEX 18

(Presented by the Chairman of the DGP Working Group on Clarifying States'
Responsibilities in Annex 18)

SUMMARY

This information paper provides a summary of the work done by the DGP Working Group on clarifying States' responsibilities in Annex 18 (DGP-WG/Annex 18).

1. INTRODUCTION — ANC JOB CARD DGP.005

1.1 The DGP Working Group on Clarifying States' Responsibilities in Annex 18 (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 dangerous goods 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 oversight 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 States' safety management responsibilities. 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 would provide clarity. The job card was initially approved by the Air Navigation Commission (ANC) on 27 February 2017. A revised timeline was approved by the ANC on 28 June 2018 as shown in the second version of the job card (DGP.005.002).

2. PROGRESSION OF WORK

2.1 DGP-WG/Annex 18 has conducted its work virtually and through two face-to-face meetings following a brief one day “kick-off” meeting after DGP/26 (Montréal, 16 – 27 October 2017). The working group was reminded of the basic principles behind developing SARPs by reviewing the Air Navigation Commission’s Guide to the drafting of SARPs and PANS. SARPs needed to consist of broad, mature and stable provisions specifying functional and performance requirements that provide for requisite levels of safety, regularity and efficiency. The importance of developing clear, simple and concise SARPs that would be readily understood by all Contracting States was emphasized, as was the difference between prescriptive and performance-based SARPs including the pros and cons of each. The working group also reviewed the differences between the different parts of the Annex, including appendices and attachments. A presentation highlighting these principles is provided in Appendix B.

2.2 LONDON FACE-TO-FACE MEETING

2.2.1 DGP-WG/Annex 18 met in London, England from 16 to 17 July 2018. The meeting was hosted by the panel member nominated by the United Kingdom Mr. Eric Gillett on behalf of the United Kingdom Civil Aviation Authority (CAA) at the CAA London Head Office. The meeting expressed its appreciation to its hosts. The output of that meeting was:

- a) a document identifying common terminology, interrelationships, and potential ambiguities, inconsistencies or gaps between cargo-related provisions in all ICAO Annexes (see Appendix C); and
- b) a document identifying dangerous-goods related protocol questions for aircraft operations — OPS from the ICAO Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA) for which a clear link to associated responsibilities in Annex 18 and/or the Technical Instructions was lacking or unclear. The protocol questions will be reviewed again once amendments to Annex 18 are developed. It was emphasized that the working group would not use the protocol questions to direct their work, but rather use them to have a clearer picture of the current system. In fact, it would be the other way around — a final review of the protocol questions following the completion of the restructure of Annex 18 would likely result in recommended revisions to them.

2.2.2 The meeting in London also confirmed that the critical elements of a State’s safety oversight system were not all adequately addressed in Annex 18. It was recognized that Amendment 1 to Annex 19 integrated the eight critical elements of a State’s oversight system with its safety programme framework (SSP) and that these two concepts were referred to collectively in the second edition of Annex 19 as the State’s safety management responsibilities. The next phase for DGP-WG/Annex 18 would be to develop a framework for Annex 18 that would make these responsibilities clear for dangerous goods State employees.

2.3 DUBAI FACE-TO-FACE MEETING

2.3.1 DGP-WG/Annex 18 met in Dubai, United Arab Emirates from 23 to 25 July 2019. The meeting was hosted by the DGP panel member nominated by the UAE Mr. Hamad Al Muhairi on behalf of His Excellency, Mr. Saif Mohammed Al Suwaidi, the Director General of the UAE General Civil Aviation Authority (GCAA) at the Emirates Aviation College in Dubai. The meeting expressed its appreciation to the UAE GCAA for hosting the meeting and to Emirates Airline for providing the venue.

A list of participants is provided in Appendix A to this working paper. The purpose of the meeting was to progress the work identified on ANC Job Card DGP.005 — Clarifying State oversight responsibilities in Annex 18 and to follow-up on the outcome from the London face-to-face meeting convened in 2018 (see paragraph 3 below). DGP-WG/Annex 18 met again at ICAO Headquarters from 11 to 13 September 2019. This information paper provides background information on the justification for the work and a summary of work completed so far.

2.3.2 The DGP-WG/Annex 18 used a working document that listed State safety management Standards from the second edition of Annex 19. The objective would be to develop draft provisions for Annex 18 through a detailed review of this document resulting in a strong base on which the current dangerous goods-specific Standards in Annex 18 could be structured.

2.3.3 The working group went through each Standard to consider how they applied to dangerous goods State responsibilities using the *Safety Management Manual (SMM)* (Doc 9859) as guidance. The meeting focused on Standards and not the Recommended Practices from Annex 19. Recommended Practices would be considered separately at a later time. A number of areas were identified that would need input from safety management experts. DGP-WG/Annex 18 also went through current Annex 18 to identify Standards that related to Annex 19 and to identify anomalies. The output of this work is provided in Appendix D to this information paper.

2.4 ICAO HEADQUARTERS FACE-TO-FACE MEETING

2.4.1 DGP-WG/Annex 18 met in Montreal from 11 to 13 Sep 2019 to review the output from the Dubai meeting and to determine which Standards needed to be elaborated to capture dangerous goods-specific responsibilities and which did not. The group concluded that the former would be considered new Standards and would therefore need to be included in the main body of Annex 18. The latter were existing Standards in Annex 19. Repeating them in the main body of Annex 18 was considered, as this would make safety management responsibilities clear to dangerous goods State employees, but this was not the usual approach taken by ICAO. There was potential to confuse States into thinking they were subject to a different Standard. It was decided a better approach would be to capture all safety management responsibilities in an attachment to Annex 18 as high-level guidance material. The development of more detailed guidance material was recommended as a future task. The output of the ICAO Headquarters face-to-face meeting is provided in Appendix F to this working paper.

3. FUTURE WORK

3.1 The next steps for the working group will be to consider:

- a) the need to highlight interrelationships between Annex 18 and other ICAO Annexes using the document developed at the London face-to-face meeting (see Appendix A) to this working paper;
- b) how to structure all of Annex 18 around the safety management provisions provided in Appendices C and D to this working paper (look at output from Dubai);
- c) whether recommendation to modify existing protocol questions was necessary based on the proposed revisions to Annex 18; and

- d) whether existing guidance material related to States' oversight responsibilities contained in the Supplement should be maintained in that document along with additional guidance material that may be developed as referenced in paragraph 2.4.1, or if consideration should be given to moving appropriate guidance to an attachment to Annex 18 or a separate document.

APPENDIX A

**DGP-WG/ANNEX 18 FACE-TO-FACE MEETING, DUBAI, UNITED EMIRATES
23 to 25 July 2019**

LIST OF PARTICIPANTS

NAME	NOMINATED BY
Ahmed Wagih (Chairman)	United Arab Emirates (Chairman)
Khaled Al Belooshi	United Arab Emirates
Charles Betts	United States
Michaela Boehm	France
Hermann Brockhaus	Germany
Mohamed Ebrahim	United Arab Emirates
Eric Gillett	United Kingdom
Funmi Hamilton Carroll	Rwanda
Trevor Howard	United Arab Emirates
Shair Ahmed Khan	United Arab Emirates
Kevin Leary	United States
Lynn McGuigan	Secretariat
Teun Muller	Netherlands
Micheline Paquette	Canada
Ejan Petrie	United States
William Quade	United States
Katherine Rooney	Secretariat

APPENDIX B
RULES AND TIPS FOR DRAFTING SARPS



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Rules and tips for drafting SARPs

**DGP WORKING GROUP ON CLARIFYING
STATE OVERSIGHT RESPONSIBILITIES IN
ANNEX 18**





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Background on SARPs development and structure of Annexes



SARPs Development

- Clear
- Simple
- Concise
- Readily understood by 193 Contracting States



Consistent — reliable — effective:
IMPROVED IMPLEMENTATION



SARPs — Assembly Resolution

- Broad, mature and stable
- Specify functional and **performance requirements** that provide for requisite levels of safety, regularity and efficiency
- Consistent with other Annexes





ANC Guide to Drafting of SARPs and PANS

“The drafter of SARPs or PANS should have a thorough knowledge of the contents of this document and, to the extent practicable, adhere to the principles therein”





ANC Guide — Contents

- General information
- Structure and components
- Type of standards
- Formulation of proposals
- Plain writing





Types of Standards

Prescriptive

- How activities are to be undertaken
- One solution

Performance-based

- What performance or outcome is required
- Method of achieving up to regulated entity
- Performance criteria critical



Types of Standards — Pros and cons

Prescriptive

- Pros
 - Harmonized procedures
- Cons
 - Less relevant over time
 - Minimum requirement might become maximum ever done
 - Compliance rather than management of risk
 - Limit innovation

Performance-based

- Pros
 - Flexibility
 - Maintain relevancy over time
 - Risk-based
 - Encourage innovation
- Cons
 - Compliance difficult to demonstrate
 - Enforcement more challenging



Hybrid Standard

- Hybrid
 - Minimum prescriptive standard
 - Alternative performance-based solutions



Formulation of SARPS and PANS

- Standards: “shall”
 - Subsidiary statements if only under specified conditions: “may”
“need not”
- Recommended practices: “should”
- Definitions
- Tables, figures, diagrams and illustrations
- Notes
 - Deletion of it will not alter the obligations specified in the SARP



Appendices versus Attachments

- Appendix
 - Part of SARPs
- Attachments
 - Supplementary to SARPs
 - Should only be included if material is inappropriate for other manuals or documents under authority of the Secretary General



Subject Words in a Sentence

- Clear indication of who the SARP is addressed to
- Singular form
 - The State
 - Each State
 - The operator
 - The pilot-in-command



Plain English

- Clear and concise
- Active voice
- Present tense
- Consistency
 - Do not use different words to say same thing
- Positive instead of negative
 - “Is independent” instead of “not part of”



Guidance

- Panel members amending SARPs should regularly consult the *ANC Guide to Drafting of SARPs and PANS*
- Available on ANC panels site

<https://portal.icao.int/ANCPANELS/Pages/default.aspx>



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North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU

APPENDIX C

**COMPARISON OF ANNEX 18 WITH OTHER ANNEXES AND ASSOCIATED GUIDANCE
MATERIAL**

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
Annex 1 — <i>Personnel Licensing</i>	<p>CHAPTER 1. DEFINITIONS AND GENERAL RULES CONCERNING LICENCES</p> <p>1.1 Definitions ...</p> <p>Commercial air transport operation. An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.</p> <p>Competency. A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard.</p> <p>Competency element. An action that constitutes a task that has a triggering event and a terminating event that clearly defines its limits, and an observable outcome.</p> <p>Competency unit. A discrete function consisting of a number of competency elements.</p> <p>Flight crew member. A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.</p> <p>Performance criteria. Simple, evaluative statements on the required outcome of the competency element and a description of the criteria used to judge whether the required level of performance has been achieved.</p> <p>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.</p> <p>State safety programme (SSP). An integrated set of regulations and activities aimed at improving safety.</p>	<ul style="list-style-type: none"> — Chapter 1, Definitions <ul style="list-style-type: none"> ○ Flight crew member ○ Pilot-in-command 	<ul style="list-style-type: none"> — Part 1, Chapter 3 — Definitions <ul style="list-style-type: none"> ○ Cargo ○ Crew member ○ Flight crew member ○ Pilot-in-command — Competency referred to in Part 1, Chapter 4 (Training) 	<ul style="list-style-type: none"> — Part S-1, Chapter 5 (Guidance on competency-based training for State employees — Definitions <ul style="list-style-type: none"> ○ Competency ○ Competency element ○ Competency unit ○ Performance criteria 	<ul style="list-style-type: none"> — Guidance Material on a Competency-based Approach to Dangerous Goods Training and Assessment (under development, currently Attachment 4 to Technical Instructions) 	<ul style="list-style-type: none"> — There is a definition for flight crew member in Annex 1 and Annex 18. There is a definition for crew members in Annex 18, but not Annex 1. Annex 1 always refers to flight crew member except for within the definition for flight crew member. There are definitions for both in Annex 6, Part I, for flight crew member in Part II, and both in Part III. — There is a definition for cabin crew member in Annex 6 — Definitions for competency, competency element, competency unit and performance criteria are out of date in Annex 1 and the Supplement — Add definition for

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
						State safety programme to Annex 18?
Annex 1 — <i>Personnel Licensing</i>	<p>CHAPTER 2. LICENCES AND RATINGS FOR PILOTS ...</p> <p>2.4 Commercial pilot licence</p> <p>2.4.1 General requirements for the issue of the licence appropriate to the aeroplane, airship, helicopter and powered-lift categories ...</p> <p>2.4.1.2 <i>Knowledge</i></p> <p>The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a commercial pilot licence and appropriate to the category of aircraft intended to be included in the licence, in at least the following subjects: ...</p> <p><i>Operational procedures</i> ...</p> <p>v) operational procedures for carriage of freight; potential hazards associated with dangerous goods; ...</p> <p>2.6 Airline transport pilot licence</p> <p>2.6.1 General requirements for the issue of the licence appropriate to</p>	Chapter 10 Training programmes)	Part 1, Chapter 4 (Training)		<ul style="list-style-type: none"> — Guidance Material on a Competency-based Approach to Dangerous Goods Training and Assessment (under development, currently Attachment 4 to Technical Instructions) — Cabin Crew Safety Training Manual (Doc 10002) 	

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	<p>the aeroplane, helicopter and powered-lift categories ...</p> <p>2.6.1.2 <i>Knowledge</i></p> <p>2.6.1.2.1 The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of an airline transport pilot licence and appropriate to the category of aircraft intended to be included in the licence, in at least the following subjects: ...</p> <p><i>Operational procedures</i></p> <p>y) operational procedures for carriage of freight and dangerous goods; ...</p>					
Annex 1 — <i>Personnel Licensing</i>	<p>CHAPTER 3. LICENCES FOR FLIGHT CREW MEMBERS OTHER THAN LICENCES FOR PILOTS ...</p> <p>3.3 Flight engineer licence</p> <p>3.3.1 Requirements for the issue of the licence ...</p> <p>3.3.1.2 <i>Knowledge</i></p> <p>3.3.1.2.1 The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight engineer licence, in at least the following subjects:</p>	Chapter 10 Training programmes)	Part 1, Chapter 4 (Training)	—	<ul style="list-style-type: none"> — Guidance Material on a Competency-based Approach to Dangerous Goods Training and Assessment (under development, currently Attachment 4 to Technical Instructions) — Cabin Crew Safety Training Manual (Doc 10002) 	

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	<p>...</p> <p><i>Operational procedures</i></p> <p>...</p> <p>r) operational procedures for carriage of freight and dangerous goods;</p> <p>...</p>					
Annex 1 — <i>Personnel Licensing</i>	<p>CHAPTER 4. LICENCES AND RATINGS FOR PERSONNEL OTHER THAN FLIGHT CREW MEMBERS</p> <p>...</p> <p>4.6 Flight operations officer/flight dispatcher licence</p> <p>4.6.1 Requirements for the issue of the licence</p> <p>...</p> <p>4.6.1.2 <i>Knowledge</i></p> <p>The applicant shall have demonstrated a level of knowledge appropriate to the privileges granted to the holder of a flight operations officer licence, in at least the following subjects:</p> <p>...</p> <p><i>Operational procedures</i></p> <p>...</p> <p>n) operational procedures for the carriage of freight and dangerous goods;</p> <p>...</p>	Chapter 10 Training programmes)	Part 1, Chapter 4 (Training)	—	<ul style="list-style-type: none"> — Guidance Material on a Competency-based Approach to Dangerous Goods Training and Assessment (under development, currently Attachment 4 to Technical Instructions) — Cabin Crew Safety Training Manual (Doc 10002) 	
Annex 2 — <i>Rules of the</i>	CHAPTER 1. DEFINITIONS	— Chapter 1, Definitions	— Part 1, Chapter 3 — Definitions	— Part S-1, Chapter 5 (Guidance on		Add note from under definition for operator

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
Air	<p>...</p> <p>Air-taxiing. Movement of a helicopter/VTOL above the surface of an aerodrome, normally in ground effect and at a ground speed normally less than 37 km/h (20 kt).</p> <p><i>Note.— The actual height may vary, and some helicopters may require air-taxiing above 8 m (25 ft) AGL to reduce ground effect turbulence or provide clearance for cargo slingloads.</i></p> <p>Apron. A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.</p> <p>Flight crew member. A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.</p> <p>Operator. A person, organization or enterprise engaged in or offering to engage in an aircraft operation.</p> <p><i>Note.— In the context of remotely piloted aircraft, an aircraft operation includes the remotely piloted aircraft system.</i></p> <p>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.</p>	<ul style="list-style-type: none"> ○ Flight crew member ○ Operator ○ Pilot-in-command 	<ul style="list-style-type: none"> ○ Cargo ○ External carriage ○ Flight crew member ○ Operator ○ Pilot-in-command — Part 4, Introductory notes — ○ <i>Note 11.— Open external carriage</i> <i>When dangerous goods are prepared for open external carriage (e.g. suspended from a helicopter or in open external carrying devices), consideration should be given to the type of packaging used and protection of those</i> 	<p>competency-based training for State employees — Definitions)</p> <ul style="list-style-type: none"> ○ Operator 		<p>to Annex 18?</p>

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			<p><i>packagings where necessary from the effects of airflow and weather (e.g. by damage from rain or snow</i></p>			
<p>Annex 3 — <i>Meteorological Service for International Air Navigation</i></p>	<p>CHAPTER 1. DEFINITIONS</p> <p><i>Flight crew member.</i> A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.</p> <p><i>Operator.</i> The person, organization or enterprise engaged in or offering to engage in an aircraft operation.</p> <p><i>Pilot-in-command.</i> 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.</p>	<p>— Chapter 1, Definitions</p> <ul style="list-style-type: none"> ○ Flight crew member ○ Operator ○ Pilot-in-command 	<p>— Chapter 1, Definitions</p> <ul style="list-style-type: none"> ○ Flight crew member ○ Operator ○ Pilot-in-command 			
<p>Annex 4 — <i>Aeronautical Charts</i></p>	<p>CHAPTER 1. DEFINITIONS, APPLICABILITY AND AVAILABILITY</p> <p>1.1 Definitions</p> <p>...</p> <p><i>Apron.</i> A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.</p> <p>...</p>		<p>— Chapter 1, Definitions</p> <ul style="list-style-type: none"> ○ Cargo 			

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
Annex 5 — <i>Units of Measurement to be Used in Air and Ground Operations</i>	<p>CHAPTER 1. DEFINITIONS</p> <p>Ampere (A). The ampere is that constant electric current which, if maintained in two straight parallel conductors of infinite length, of negligible circular cross-section, and placed 1 metre apart in a vacuum, would produce between these conductors a force equal to 2×10^{-7} newton per metre of length.</p> <p>Becquerel (Bq). The activity of a radionuclide having one spontaneous nuclear transition per second.</p> <p>Degree Celsius (°C). The special name for the unit kelvin for use in stating values of Celsius temperature.</p> <p>Gray (Gy). The energy imparted by ionizing radiation to a mass of matter corresponding to 1 joule per kilogram.</p> <p>Hertz (Hz). The frequency of a periodic phenomenon of which the period is 1 second.</p> <p>Joule (J). The work done when the point of application of a force of 1 newton is displaced a distance of 1 metre in the direction of the force.</p> <p>Kelvin (K). A unit of thermodynamic temperature which is the fraction 1/273.16 of the thermodynamic temperature of the triple point of water.</p> <p>Kilogram (kg). The unit of mass equal to the mass of the international prototype of the kilogram.</p> <p>Litre (L). A unit of volume restricted to the measurement of liquids and gases which is equal to 1 cubic decimetre.</p> <p>Lux (lx). The illuminance produced by a luminous flux of 1 lumen uniformly distributed over a surface of 1 square metre.</p> <p>Metre (m). The distance travelled by light in a vacuum during 1/299 792</p>		<p><i>International System of Units (SI).</i> A rational and coherent system of units which provides the basis for the units of measurement used for air and ground operations as contained in Annex 5 to the Convention on International Civil Aviation. Throughout the Technical Instructions</p> <p>Foreword, Abbreviations and symbols</p> <p>Part 3, Chapter 2, abbreviations and symbols</p> <p>Part 1, Chapter 3 (General information)</p> <p>...</p> <p>3.2 UNITS OF MEASUREMENT AND CONVERSION FACTORS</p> <p>3.2.1 Units of</p>			

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	<p>458 of a second.</p> <p>Newton (N). The force which when applied to a body having a mass of 1 kilogram gives it an acceleration of 1 metre per second squared.</p> <p>Ohm (Ω). The electric resistance between two points of a conductor when a constant difference of potential of 1 volt, applied between these two points, produces in this conductor a current of 1 ampere, this conductor not being the source of any electromotive force.</p> <p>Pascal (Pa). The pressure or stress of 1 newton per square metre.</p> <p>Sievert (Sv). The unit of radiation dose equivalent corresponding to 1 joule per</p> <p>Tonne (t). The mass equal to 1 000 kilograms.</p> <p>Volt (V). The unit of electric potential difference and electromotive force which is the difference of electric potential between two points of a conductor carrying a constant current of 1 ampere, when the power dissipated between these points is equal to 1 watt.</p> <p>Watt (W). The power which gives rise to the production of energy at the rate of 1 joule per second.</p> <p>CHAPTER 3. STANDARD APPLICATION OF UNITS OF MEASUREMENT</p> <p>3.1 SI units</p> <p>3.1.1 The International System of Units developed and maintained by the General Conference of Weights and Measures (CGPM) shall, subject to the provisions of 3.2 and 3.3, be used as the standard system of units of measurement for all aspects of international civil aviation air and ground operations.</p>		<p>measurement</p> <p>The units of measurement to be used in the transport of dangerous goods by air are those specified by the International System (SI) as modified for international civil aviation by Annex 5 to the Chicago Convention. The primary units of mass and volume will be the kilogram (kg) and the litre (L) and the unit of pressure will be the kilopascal (kPa). Except as specifically provided for in these Instructions, only those abbreviations for units of measurement that are indicated in this paragraph, or in Annex 5 to the Chicago Convention, may be used in the transport of dangerous goods by air.</p> <p><i>Note.— Where measurements relating to radioactivity occur in these Instructions, the value is given in SI</i></p>			

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			<p><i>units followed, in parentheses, by the non-SI equivalent.</i></p> <p>...</p> <p>3.2.3 Conversion factors</p> <p>Precise conversion factors for commonly used SI units are given in Annex 5 to the Chicago Convention. Tables 1-2 and 1-3 show conversion factors, to four significant figures, for some units widely used in dangerous goods transport.</p>			
<p>Annex 6 — <i>Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes</i></p>	<p>Table of Contents</p> <p>...</p> <p>CHAPTER 14. Dangerous goods.....</p> <p>14.1 State responsibilities</p> <p>14.2 Operators with no operational approval to transport dangerous goods as cargo</p> <p>14.3 Operators transporting dangerous goods as cargo.....</p> <p>14.4 Provision of information</p> <p>14.5 Domestic commercial air transport operations.....</p> <p>ATTACHMENT J. Dangerous goods</p> <p>1. Purpose and scope</p> <p>2. Definitions</p>					<ul style="list-style-type: none"> — Need to ensure alignment with terminology for approval/specific approval/ authorization etc. — Need stronger linkage in Annex 18 to Annex 6 — Part II — International General Aviation — Aeroplanes: Not

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments								
	<p>3. States.....</p> <p>4. Operator.....</p> <p>...</p> <p>PUBLICATIONS <i>(referred to in this Annex)</i></p> <p>ICAO Publications</p> <p>...</p> <p>Annex 18 — <i>The Safe Transport of Dangerous Goods by Air</i></p> <p>...</p> <p><i>Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods</i> (Doc 9481)</p> <p>...</p> <p><i>Technical Instructions for the Safe Transport of Dangerous Goods by Air</i> (Doc 9284)</p> <p>...</p> <p>Table A. Amendments to Annex 6, Part I</p> <p>...</p> <table border="1"> <thead> <tr> <th><i>Amendment</i></th> <th><i>Source(s)</i></th> <th><i>Subject(s)</i></th> <th><i>Adopted Effective Applicable</i></th> </tr> </thead> <tbody> <tr> <td>...</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>	...								<p>clear to all whether it applies to dangerous goods</p>
<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted Effective Applicable</i>											
...														

Annex	Extract				Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	16 (4th Edition)	Third and Fourth meetings of the Operations Panel, AGA Divisional Meeting (1981), amendments consequent to adoption of Annex 18 and an Air Navigation Study	Introduced provisions related to aircraft operating procedures for noise abatement, development and use of instrument flight procedures, authority and competence to taxi aeroplanes and refuelling with passengers on board. Changes to the Annex were introduced as a result of adoption by the Council of Annex 18 in respect to the carriage of dangerous goods and requirements for crew training programmes in their carriage in commercial aeroplanes. The provisions in respect of aerodromes	29 March 1983 29 July 1983 24 November 1983					

Annex	Extract				Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			operating minima were revised to clarify the requirements and to include a requirement for RVR information. Units of measurement were brought in line with the provisions of Annex 5, and the Note in Chapter 3 concerning lease, charter and interchange was updated.						
	...								
	21 (6th Edition)	Air Navigation Commission studies, Fourteenth meeting of the Dangerous Goods Panel, editorial amendment, text alignment with Annex 6, Part II and/or Part III, consequential amendment							

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
<p>Annex 6 — <i>Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes</i></p>	<p>CHAPTER 1. DEFINITIONS</p> <p>PROPOSED IN AMENDMENT TO ANNEX 6 (FROM FLTOPSP)</p> <p>Operations specifications. The authorizations <u>specific approvals</u>, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual.</p> <p><u>Specific approval. A specific approval is an approval which is documented in the Operations Specifications for commercial air transport operations or in the list of specific approvals for non-commercial operations.</u></p> <p><u><i>Note.— The terms authorization, specific approval, approval and acceptance are further described in Attachment C.</i></u></p> <p>EXISTING:</p> <p>Aeroplane. A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.</p> <p>Aircraft. Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface</p> <p>Air operator certificate (AOC). A certificate authorizing an operator to carry out specified commercial air transport operations.</p> <p>Cabin crew member. A crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crew member.</p> <p>COMAT. Operator material carried on an operator's aircraft for the operator's own purposes.</p>	<ul style="list-style-type: none"> — Chapter 1, Definitions <ul style="list-style-type: none"> ○ Crew member ○ Dangerous goods ○ Flight crew member ○ Operator ○ Pilot-in-command 	<ul style="list-style-type: none"> — Part 1, Chapter 1, Definitions <ul style="list-style-type: none"> ○ Crew member ○ Dangerous goods ○ Flight crew member ○ Operator ○ Pilot-in-command ○ State of Registry 	<ul style="list-style-type: none"> — Part S-1, Chapter 5 (Guidance to States on competency-based training) — Definitions: <ul style="list-style-type: none"> ○ Dangerous goods. ○ Operator ○ Inspection method. Techniques that are used during the course of evaluating compliance with relevant regulations. The inspection methods include: a) observation: visually observing the performance of regulatory requirements for compliance with relevant regulations; b) interview: a technique by which questions 		<ul style="list-style-type: none"> — Need to ensure terminology is consistent with regard to approval/specific approval etc. (amendment sent to States for comment at the end of Summer 2018) — Definition for dangerous goods in Annex 6 has a note referring to classification in Chapter 3 of Annex 18. This note is not included in the Annex 18 definition — Should definitions for aircraft and aeroplane be added to Annex 18? — Should definition for COMAT be added to Annex 18? — Should definition for commercial air transport operation be added to Annex 18? — Should definition for electronic flight

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	<p>Commercial air transport operation. An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.</p> <p>Crew member. A person assigned by an operator to duty on an aircraft during a flight duty period.</p> <p>Dangerous goods. Articles or substances which are capable of posing a risk 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.</p> <p><i>Note.— Dangerous goods are classified in Annex 18, Chapter 3.</i></p> <p>Electronic flight bag (EFB). An electronic information system, comprised of equipment and applications for flight crew, which allows for the storing, updating, displaying and processing of EFB functions to support flight operations or duties.</p> <p>Flight crew member. A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.</p> <p>Flight operations officer/flight dispatcher. A person designated by the operator to engage in the control and supervision of flight operations, whether licensed or not, suitably qualified in accordance with Annex 1, who supports, briefs and/or assists the pilot-in-command in the safe conduct of the flight.</p> <p>Ground handling. Services necessary for an aircraft's arrival at, and departure from, an airport, other than air traffic services.</p> <p>Operations manual. A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.</p> <p>Operator. The person, organization or enterprise engaged in or offering to</p>			<p>directed to or discussions with persons performing transportation functions are used to gather information concerning the transport of dangerous goods; c) document review: reviewing paper or electronic records to determine whether required documents are properly prepared, contain accurate information, and are maintained as required by the regulations; d) verification: using third-party information to</p>		<p>bag be added to Annex 18?</p> <ul style="list-style-type: none"> — Should definition for Flight operations officer/flight dispatcher be added to Annex 18 or the Technical Instructions (referred to in Part 7;4.1.1)? — Should definition for ground handling be added to Annex 18 or the Technical Instructions? — Should definition for operations manual be added to Annex 18 or the Technical Instructions? — State of Registry definition in Annex 6 has a note which is not included in the Technical Instruction definition — Should definition for target level of safety be added to Annex 18 and/or

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	<p>engage in an aircraft operation.</p> <p>State of Registry. The State on whose register the aircraft is entered.</p> <p><i>Note.— In the case of the registration of aircraft of an international operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations which, under the Chicago Convention, attach to a State of Registry. See, in this regard, the Council Resolution of 14 December 1967 on Nationality and Registration of Aircraft Operated by International Operating Agencies which can be found in Policy and Guidance Material on the Economic Regulation of International Air Transport (Doc 9587).</i></p> <p>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.</p> <p>Target level of safety (TLS). A generic term representing the level of risk which is considered acceptable in particular circumstances.</p>			<p>confirm independently whether regulatory requirements are being met; and e) procedure evaluation: ensuring appropriate written procedures, which address all regulated activities undertaken, are in place</p> <ul style="list-style-type: none"> ○ Operations manual. A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties. ○ Air operator certificate (AOC). A certificate authorizing an 		<p>the Technical Instructions (with introduction of safety management responsibilities in Annex 18?)</p>

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
				operator to carry out specified civil air transport operations.		
Annex 6 — <i>Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes</i>	<p style="text-align: center;">4.2.3 Operations manual</p> <p>4.2.3.1 The operator shall provide, for the use and guidance of operations personnel concerned, an operations manual in accordance with Appendix 2. The operations manual shall be amended or revised as is necessary to ensure that the information contained therein is kept up to date. All such amendments or revisions shall be issued to all personnel that are required to use this manual.</p> <p>4.2.3.2 The State of the Operator shall establish a requirement for the operator to provide a copy of the operations manual together with all amendments and/or revisions, for review and acceptance and, where required, approval. The operator shall incorporate in the operations manual such mandatory material as the State of the Operator may require.</p> <p><i>Note 1.— Requirements for the organization and content of an operations manual are provided in Appendix 2.</i></p> <p><i>Note 2.— Specific items in the operations manual require the approval of the State of the Operator in accordance with the Standards in 4.2.8, 6.1.3, 9.3.1, 12.4 and 13.4.1.</i></p>	<p>9.2 Information and instructions to flight crew members</p> <p>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.</p>	<p>2.2 EXCEPTIONS FOR DANGEROUS GOODS OF THE OPERATOR</p> <p>Part 1 (General), Chapter 2 (Limitation of dangerous goods on aircraft)</p> <p>...</p> <p>2.2.1 The provisions of these Instructions do not apply to the following:</p> <p>...</p> <p>d) electronic devices, such as electronic flight bags, personal entertainment devices, and credit card readers, containing lithium metal or lithium ion cells or batteries and spare lithium batteries for such devices</p>	<p>— operator to carry out specified civil air transport operations.</p> <p>— Competency framework — CE 2.1 Approve the dangerous goods component of the operations manual</p> <p>— Competency framework — PC 2.2.2 Verify that the training programme addresses all dangerous goods functions identified in the operations manual</p> <p>— Part S-7, Chapter 2, STORAGE AND LOADING and Chapter 5, PROVISIONS CONCERNIN</p>		<p>— Is there a need to add provisions related to the OPS Manual contained in the Technical Instructions/Supplement to Annex 6?</p> <p>— Is reference to dangerous goods audit in the Supplement appropriate (Attachment i to Chapter 6 Dangerous Goods Audit Form) (audit versus inspection)</p>

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			<p>carried aboard an aircraft by the operator for use on the aircraft during the flight or series of flights, provided that the batteries meet the provisions of 8;1.1.2 20). Spare lithium batteries must be individually protected so as to prevent short circuits when not in use. Conditions for the carriage and use of these electronic devices and for the carriage of spare batteries must be provided in the operations manual and/or other appropriate manuals as will enable flight crew, cabin crew and other employees to carry out their responsibilities.</p> <p>...</p> <p>Part 7 (Operator's responsibilities),</p>	<p>G PASSENGERS AND CREW</p> <ul style="list-style-type: none"> o 2.2.6 The <i>operations</i> manual and other appropriate manuals must contain specific procedures for dealing with any incidents that may occur during flight. o 5.1.1 The purpose of this guidance is to provide States with a model for use in approving an operator's operations manual content on the provision of information to passengers as required by Part 7;5.1 of the Technical Instructions. 		

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			<p>Chapter 4 (Provision of information) ...</p> <p>4.1 INFORMATION TO THE PILOT-IN-COMMAND 4.1.1 As early as practicable before departure of the aircraft, but in no case later than when the aircraft moves under its own power, the operator of an aircraft in which dangerous goods are to be carried must: a) provide the pilot-in-command with accurate and legible written or printed information concerning dangerous goods that are to be carried as cargo; and b) provide personnel with responsibilities for operational control of the aircraft (e.g. the flight operations officer, flight dispatcher, or designated ground personnel responsible for flight operations) with the same</p>	<ul style="list-style-type: none"> o 5.3 5.3.2 Each operator must ensure that all policies, procedures and systems for notifying passengers about dangerous goods that are forbidden from transport aboard aircraft are documented in an appropriate operations manual and approved by a national authority of the State of the Operator. At a minimum, the operations manual must include information on how passengers will be notified of and acknowledge, 		

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			<p>information that is required to be provided to the pilot-in-command (e.g. a copy of the written information provided to the pilot-in-command). Each operator must specify the personnel (job title or function) to be provided this information in their operations manual and/or other appropriate manuals.</p> <p>...</p> <p>4.2 INFORMATION TO BE PROVIDED TO EMPLOYEES</p> <p>An operator must provide such information in the operations manual and/or other appropriate manuals as will enable flight crews and other employees to carry out their responsibilities with regard to the transport of dangerous goods. This information must include instructions as to the</p>	<p>when required, the restriction on the carriage of dangerous goods before, during, and after ticketing/booking, boarding pass issuance and check-in processes.</p> <ul style="list-style-type: none"> ○ 5.4.1 This guidance is intended to serve as a template for the type of passenger notification information that should be included, documented, and approved in an operator's operations manual(s). ○ 5.4.2 The State should utilize its normal method to notify operators (e.g. 		

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			<p>action to be taken in the event of emergencies involving dangerous goods, and details of the location and numbering system of cargo compartments together with: a) the maximum quantity of dry ice permitted in each compartment; and b) if radioactive material is to be carried, instructions on the loading of such dangerous goods based on the requirements of 7;2.9. Where applicable, this information must also be provided to ground handling agents.</p> <p>...</p> <p>5.1 INFORMATION TO PASSENGERS 5.1.1 Operators must inform passengers about dangerous goods that passengers are forbidden to transport aboard an aircraft. The notification system must be described in their operations manual</p>	<p>information bulletins, advisory circulars) on specific information or guidance necessary to implement a passenger notification system in their operations manual in alignment with the provisions in the Technical Instructions and this Supplement</p> <ul style="list-style-type: none"> o 6.4 OPERATION S MANUAL AND OTHER STAFF INSTRUCTIO NS 6.4.1 A check of the operations manual and other staff instructions should be made during 		

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			<p>and/or other appropriate manuals. If the ticket purchase and/or boarding pass issuance can be completed by a passenger without the involvement of another person, the notification system must include an acknowledgement by the passenger that he or she has been presented with the information. The information must be provided to passengers: a) at the point of ticket purchase or, if this is not practical, made available in another manner to passengers prior to boarding pass issuance; and b) at boarding pass issuance, or when no boarding pass is issued, prior to boarding the aircraft. Note.— The information may be provided in text or pictorial form, electronically, or verbally, as described in the operator’s manuals.</p>	<p>the organization and procedures inspection referred to above. The Technical Instructions require the operations manual or other manuals to contain certain information when the operator intends to carry dangerous goods. In addition to this information, the operations manual needs to contain sufficient guidance material and instructions to enable all those concerned (both ground staff and flight</p>		

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
				<p>and cabin crew) to meet their responsibilities . The operations manual inspection aims to confirm the information provided is adequate, complete and up to date; also that any handling agent has copies of the relevant parts of the manual or other instructions concerning the operator's policy and procedures.</p> <p>6.4.2 When an operator does not intend to carry dangerous goods, the operations manual should</p>		

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
				<p>still be checked to ensure it contains information about the policy of the operator in regard to dangerous goods and instructions about the carriage of passengers with dangerous goods.</p> <ul style="list-style-type: none"> ○ ATTACHMENT I TO CHAPTER 6 DANGEROUS GOODS AUDIT FORM (table, CAA Reference No. 3) 		

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
Annex 6 — <i>Operation of Aircraft,</i> Part I — <i>International Commercial Air Transport</i> — <i>Aeroplanes</i>	<p>Too much to extract ... only partial extract should look at Annex 6, Part II</p> <p>8.7 APPROVED MAINTENANCE ORGANIZATION</p> <p>8.7.1 Issue of approval</p> <p>8.7.1.1 The issue of a maintenance organization approval by a State shall be dependent upon the applicant demonstrating compliance with the requirements of 8.7 to this Annex and the relevant provisions contained in Annex 19 for such organizations.</p> <p>8.7.1.2 The approval document shall contain at least the following: a) organization's name and location; b) date of issue and period of validity; c) terms of approval.</p> <p>8.7.1.3 The continued validity of the approval shall depend upon the organization remaining in compliance with the requirements of 8.7 to this Annex and with the relevant provisions contained in Annex 19 for an approved maintenance organization.</p> <p>8.7.2 Maintenance organization's procedures manual</p> <p>8.7.2.1 The maintenance organization shall provide for the use and guidance of maintenance personnel concerned a procedures manual which may be issued in separate parts containing the following information: a) a general description of the scope of work authorized under the organization's terms of approval; b) a description of the organization's procedures and quality or inspection system in accordance with 8.7.4; c) a general description of the organization's facilities; d) names and duties of the person or persons required by 8.7.6.1; e) a description of the procedures used to establish the competence of maintenance personnel as required by 8.7.6.3; f) a description of the method used for the completion and retention of the maintenance records required by 8.7.7; g) a description of the procedures for preparing the maintenance release and the circumstances under which the release is to be signed; h) the personnel authorized to sign the maintenance release and the scope of their authorization; i) a description, when applicable, of the additional procedures for complying with the operator's maintenance procedures and requirements; j) a description of the procedures for complying with the service information reporting requirements of Annex 8, Part II, 4.2.3 f) and 4.2.4; and k) a description of the procedure for receiving, assessing,</p>			—	—	<ul style="list-style-type: none"> — Organization is approved, not the individual — Is there a need to raise the issue of dangerous goods training (shipping COMAT classified as dangerous goods?) — Should something be required in the procedures manual regarding stores?

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	<p>amending and distributing within the maintenance organization all necessary airworthiness data from the type certificate holder or type design organization.</p> <p>8.7.2.2 The maintenance organization shall ensure that the procedures manual is amended as necessary to keep the information contained therein up to date.</p> <p>8.7.2.3 Copies of all amendments to the procedures manual shall be furnished promptly to all organizations or persons to whom the manual has been issued.</p>					
<p>Annex 6 — <i>Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes</i></p>	<p>CHAPTER 9. AEROPLANE FLIGHT CREW</p> <p>...</p> <p>9.3 FLIGHT CREW MEMBER TRAINING PROGRAMMES</p> <p>9.3.1 The operator shall establish and maintain a ground and flight training programme, approved by the State of the Operator, which ensures that all flight crew members are adequately trained to perform their assigned duties. The training programme shall:</p> <p>...</p> <p>e) include training in knowledge and skills related to visual and instrument flight procedures for the intended area of operation, charting, human performance including threat and error management and in the transport of dangerous goods;</p> <p>...</p> <p><i>Note 5.— For more information on dangerous goods operational requirements, see Chapter 14.</i></p>	<p>Chapter 10 Training programmes)</p> <p>10.2 Approval of training programmes</p> <p>CHAPTER 10. TRAINING PROGRAMMES</p> <p>10.2.1 Dangerous goods training programmes for operators shall be approved by the appropriate authority of the State of the Operator.</p> <p><i>Note.— Dangerous goods training programmes are required for all operators regardless of whether or not they are approved to transport dangerous goods.</i></p> <p>10.2.2 Dangerous goods training</p>	<p>Part 1, Chapter 4 (Training)</p>	<p>—</p>	<p>— Guidance Material on a Competency-based Approach to Dangerous Goods Training and Assessment (under development, currently Attachment 4 to Technical Instructions)</p>	

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
		<p>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.</p> <p>10.2.3 Recommendation.— <i>Dangerous goods training programmes required for entities other than operators and designated postal operators should be approved as determined by the appropriate national authority.</i></p> <p><i>Note 1.— See 11.4 for dangerous goods by mail.</i></p> <p><i>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.</i></p>				

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
<p>Annex 6 — <i>Operation of Aircraft</i>, Part I — <i>International Commercial Air Transport</i> — <i>Aeroplanes</i></p>	<p>CHAPTER 12. CABIN CREW ...</p> <p>12.4 TRAINING The operator shall establish and maintain a training programme, approved by the State of the Operator, to be completed by all persons before being assigned as a cabin crew member. Cabin crew members shall complete a recurrent training programme annually. These training programmes shall ensure that each person is: ...</p> <p>e) aware of the types of dangerous goods which may, and may not, be carried in a passenger cabin; and</p> <p>f) knowledgeable about human performance as related to passenger cabin safety duties including flight crew-cabin crew coordination.</p> <p><i>Note 1.— Requirements for the training of cabin crew members in the transport of dangerous goods are included in the Dangerous Goods Training Programme contained in Annex 18 — The Safe Transport of Dangerous Goods by Air and the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284).</i></p> <p><i>Note 2.— For more information on dangerous goods operational requirements, see Chapter 14.</i></p> <p><i>Note 3.— Guidance material to design training programmes to develop knowledge and skills in human performance can be found in the Cabin Crew Safety Training Manual (Doc 10002).</i></p>	<p>Chapter 10 Training programmes)</p> <p>(same as above)</p>	<p>Part 1, Chapter 4 (Training)</p>	<p>—</p>	<p>— Guidance Material on a Competency-based Approach to Dangerous Goods Training and Assessment (under development, currently Attachment 4 to Technical Instructions)</p> <p>— Cabin Crew Safety Training Manual (Doc 10002)</p>	

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
Annex 6 — <i>Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes</i>	CHAPTER 14 — DANGEROUS GOODS (too long to extract, see Annex 6, Part I)			<ul style="list-style-type: none"> — Part S-7, Chapter 8— ANNEX 6 INFORMATION RELEVANT TO STATE'S DANGEROUS GOODS RESPONSIBILITIES — Too much to extract, see the Supplement 	—	<ul style="list-style-type: none"> — Editorial revision needed in 14.3.3): “:” instead of a “;,” — References to Tables 1-4 and 1-5 need to be removed to align with new training provisions (2021-2022 Edition) — Need to include freight forwarders in Annex 6, Chapter 14.1, Note 1 (Annex 18, chapter 11, contains requirements for each Contracting State to establish oversight procedures for all entities (including packers, shippers, ground handling agents and operators) performing dangerous goods functions. — Nothing about action to be taken in the event of an emergency in Chapter 4 (required

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
						<p>in OPS manual (See A6, Appendix 2, 2.1.35)</p> <ul style="list-style-type: none"> — Is there a need to strengthen State safety management responsibilities related to dangerous goods, e.g. requiring that dangerous goods be included in State SSP/requiring that operator's SMS include dangerous goods? — Is there a need to clarify operator's SMS responsibilities as they related to dangerous goods (probably not – already done in new Chapter by CSSG) — Is there a need to strengthen State responsibilities for operators carrying versus not carrying dangerous goods (right now focus is on training)

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
Annex 6 — <i>Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes</i>	Attachment I — DANGEROUS GOODS (supplementary to Chapter 14) (too large to extract, see Annex 6, Part I)					<ul style="list-style-type: none"> — References to Tables 1-4 and 1-5 need to be removed to align with new training provisions (2021-2022 Edition) — Is there a need for additional guidance in this attachment? — Is there a need to strengthen concept of operator shipping COMAT, or anyone shipping on their behalf, must comply with Annex 18/TIs? — Paragraph 3.1 refers to a requirement but “should” is used: — The State of the Operator should indicate in the operations specification if the operator is approved or is not approved to transport dangerous goods as cargo. When the operator is approved to

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
						<p>transport dangerous goods as cargo any limitations should be included.</p> <ul style="list-style-type: none"> — Paragraph 4.2 not clear. Training programme /policies and procedures regarding third-party personnel should be included in the OPS manual. Is it the policies and procedures for ensuring third party personnel are competently trained? If yes, needs to be clarified — Editorial revision suggested for 4.7: First sentence should be last.

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
Annex 6 — <i>Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes</i>	<p>APPENDIX 2. ORGANIZATION AND CONTENTS OF AN OPERATIONS MANUAL (Chapter 4, 4.2.3.1, refers)</p> <p>1. ORGANIZATION</p> <p>An operations manual, which may be issued in separate parts corresponding to specific aspects of operations, provided in accordance with Chapter 4, 4.2.3.1, shall be organized with the following structure:</p> <p>a) General; b) Aircraft operating information; c) Areas, routes and aerodromes; and d) Training.</p> <p>2. CONTENTS The operations manual referred to in 1 shall contain at the least the following:</p> <p>2.1 General</p> <p>...</p> <p>2.1.35 Information and instructions on the carriage of dangerous goods, in accordance with Chapter 14, including action to be taken in the event of an emergency.</p> <p><i>Note.— Guidance material on the development of policies and procedures for dealing with dangerous goods incidents on board aircraft is contained in Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (Doc 9481).</i></p>	<p>Chapter 9</p> <p>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</p>	<p>2.2 EXCEPTIONS FOR DANGEROUS GOODS OF THE OPERATOR</p> <p>Part 1 (General), Chapter 2 (Limitation of dangerous goods on aircraft)</p> <p>...</p> <p>2.2.1 The provisions of these Instructions do not apply to the following:</p> <p>...</p> <p>d) electronic devices, such as electronic flight bags, personal entertainment devices, and credit card readers, containing lithium metal or lithium ion cells or batteries and spare lithium batteries for such devices carried aboard an aircraft by the operator for use on the aircraft during the flight or series</p>	<p>— Part S-7, Chapter 8— ANNEX 6 INFORMATION RELEVANT TO STATE'S DANGEROUS GOODS RESPONSIBILITIES</p> <p>— Too much to extract, see the Supplement</p>	<p>— <i>Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods</i> (Doc 9481)</p> <p>— <i>Cabin Crew Safety Training Manual</i> (Doc 10002)</p>	<p>— Should note under 2.1.35 refer also to the Cabin Crew Safety Training Manual (Doc 10002)</p>

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			<p>of flights, provided that the batteries meet the provisions of 8;1.1.2 20). Spare lithium batteries must be individually protected so as to prevent short circuits when not in use. Conditions for the carriage and use of these electronic devices and for the carriage of spare batteries must be provided in the operations manual and/or other appropriate manuals as will enable flight crew, cabin crew and other employees to carry out their responsibilities.</p> <p>...</p> <p>Part 7 (Operator's responsibilities), Chapter 4 (Provision of information)</p> <p>...</p> <p>4.1 INFORMATION</p>			

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			<p>TO THE PILOT-IN-COMMAND 4.1.1 As early as practicable before departure of the aircraft, but in no case later than when the aircraft moves under its own power, the operator of an aircraft in which dangerous goods are to be carried must: a) provide the pilot-in-command with accurate and legible written or printed information concerning dangerous goods that are to be carried as cargo; and b) provide personnel with responsibilities for operational control of the aircraft (e.g. the flight operations officer, flight dispatcher, or designated ground personnel responsible for flight operations) with the same information that is required to be provided to the pilot-in-command (e.g. a copy of the written</p>			

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			<p>information provided to the pilot-in-command). Each operator must specify the personnel (job title or function) to be provided this information in their operations manual and/or other appropriate manuals.</p> <p>...</p> <p>4.2 INFORMATION TO BE PROVIDED TO EMPLOYEES</p> <p>An operator must provide such information in the operations manual and/or other appropriate manuals as will enable flight crews and other employees to carry out their responsibilities with regard to the transport of dangerous goods. This information must include instructions as to the action to be taken in the event of emergencies involving dangerous goods, and details of the location and</p>			

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			<p>numbering system of cargo compartments together with: a) the maximum quantity of dry ice permitted in each compartment; and b) if radioactive material is to be carried, instructions on the loading of such dangerous goods based on the requirements of 7;2.9. Where applicable, this information must also be provided to ground handling agents.</p> <p>• • •</p> <p>5.1 INFORMATION TO PASSENGERS</p> <p>5.1.1 Operators must inform passengers about dangerous goods that passengers are forbidden to transport aboard an aircraft. The notification system must be described in their operations manual and/or other appropriate manuals. If the ticket purchase and/or boarding pass issuance can be completed by a</p>			

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
			<p>passenger without the involvement of another person, the notification system must include an acknowledgement by the passenger that he or she has been presented with the information. The information must be provided to passengers: a) at the point of ticket purchase or, if this is not practical, made available in another manner to passengers prior to boarding pass issuance; and b) at boarding pass issuance, or when no boarding pass is issued, prior to boarding the aircraft. Note.— The information may be provided in text or pictorial form, electronically, or verbally, as described in the operator’s manuals.</p>			

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
Annex 6 — <i>Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes</i>	Appendix 5. Safety oversight of air operators (too big to extract, see Annex 6, part I)	Too big to extract — See Annex 18 Chapter 10 Training Chapter 11 — Compliance Chapter 12 — Dangerous goods accident and incident reporting		— Part S-7: State's responsibilities with respect to operators (too big to extract, see Supplement)	— <i>Manual of Procedures for Operations Inspection, Certification and Continued Surveillance</i> (Doc 8335)	<ul style="list-style-type: none"> — Annex 18 provisions need to be strengthened — being reviewed by DGP — Based on Annex 19 — Need to maintain alignment with Annex 19 — Consider incorporating some of Annex 6, Appendix 5 and Annex 19 into Annex 18? — This is being considered by DGP-WG/Reporting and DGP-WG/Annex 18
Annex 6 — <i>Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes</i>	Appendix 6. Air Operator Certificate			— Part S-7, CHAPTER 8	—	— Need to make sure AOC/OPERATIONS specifications templates extract in the Supplement are aligned with source in Annex 6
Annex 6 — <i>Operation of Aircraft,</i>	Attachment C. Air operator certification and validation (too large to extract, see Annex 6, Part I) specific dangerous goods provision:	Chapter 10 (Training programmes)	Part 1, Chapter 4 (Training)	— Part S-1, Chapter 5 (Guidance to States on competency-	— Guidance Material on a Competency-based Approach to	Need to ensure consistency of terminology between

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
Part I — <i>International Commercial Air Transport</i> — <i>Aeroplanes</i>	3.3 Provisions that require an approval ... r) training in the transport of dangerous goods (9.3.1, Note 5)			based training) — Part S-7: State’s responsibilities with respect to operators (too big to extract, see Supplement)	Dangerous Goods Training and Assessment (under development, currently Attachment 4 to Technical Instructions) —	Annex 18 (and related documents) and Annex 6, i.e. approval in Annex 6 versus Annex 18, specific approval in Annex 6 (being revised now, State letter will be sent by end of summer 2018) — Should dangerous goods approvals/exemptions (to ship/transport things not normally permitted be referred to in Annex 6? — Operator’s responsibilities with regard to dangerous goods in the post? — Approval of DPO’s dangerous goods processes procedures and training programmes? — Approval for DPO’s to accept lithium batteries? — Recommended approval of other entities ?

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
Annex 6 — <i>Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes</i>	Attachment H Rescue and Firefighting services levels			—	—	— Seems to be based on the aeroplane size, is there/should there be cargo type/size component?
Annex 7 — <i>Aircraft Nationality and Registration Marks</i>	<p>CHAPTER 1. DEFINITIONS</p> <p><i>Aeroplane.</i> A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.</p> <p><i>Aircraft.</i> Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface. (See Table 1, Classification of aircraft.)</p> <p><i>Fireproof material.</i> A material capable of withstanding heat as well as or better than steel when the dimensions in both cases are appropriate for the specific purpose.</p> <p><i>Helicopter.</i> A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.</p> <p><i>Remotely piloted aircraft (RPA).</i> An unmanned aircraft which is piloted from a remote pilot station.</p>					— Are any of these definitions needed in Annex 18 now or in the future?
Annex 8 — <i>Airworthiness of Aircraft</i>	<p>Part I. DEFINITIONS</p> <p><i>Aeroplane.</i> A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed</p>					— Are any of these definitions needed in Annex 18 now or in the future?

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	<p>under given conditions of flight.</p> <p><i>Aircraft.</i> Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.</p> <p><i>Fireproof.</i> The capability to withstand the application of heat by a flame for a period of 15 minutes. <i>Note.— The characteristics of an acceptable flame can be found in ISO 2685.</i></p> <p><i>Fire resistant.</i> The capability to withstand the application of heat by a flame for a period of 5 minutes. <i>Note.— The characteristics of an acceptable flame can be found in ISO 2685.</i></p> <p><i>Helicopter.</i> A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.</p>					
	<p>PART III. LARGE AEROPLANES</p> <p>PART IIIA. AEROPLANES OVER 5 700 KG FOR WHICH APPLICATION FOR CERTIFICATION WAS SUBMITTED ON OR AFTER 13 JUNE 1960 BUT BEFORE 2 MARCH 2004</p> <p>...</p> <p>CHAPTER 4. DESIGN AND CONSTRUCTION</p> <p>...</p> <p>4.1 General</p>					<p>— Airworthiness panel is looking at cargo accessibility assumptions, electromagnetic interference, and cargo compartment fire suppression systems</p>

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	<p>...</p> <p>4.1.6 Systems design features</p> <p>...</p> <p>f) Fire precautions. The design of the aeroplane and the materials used in its manufacture, including cabin interior furnishing materials replaced during major refurbishing, shall be such as to minimize the possibility of in-flight and ground fires and also to minimize the production of smoke and toxic gases in the event of a fire. Means shall be provided to contain or to detect and extinguish such fires as might occur in such a way that no additional danger to the aeroplane is caused.</p> <p>g) Fire suppression. For aeroplanes for which the application for certification was submitted on or after 12 March 2000, cargo compartment fire suppression systems, including their extinguishing agents, shall be designed so as to take into account a sudden and extensive fire such as could be caused by an explosive or incendiary device or dangerous goods.</p> <p>h) Incapacitation of occupants.</p> <p>1) For aeroplanes of a maximum certificated take-off mass in excess of 45 500 kg or with a passenger seating capacity greater than 60 and for which the application for certification was submitted on or after 12 March 2000, design precautions shall be taken to protect against possible instances of cabin depressurization and against the presence of smoke or other toxic gases, including those caused by explosive or incendiary devices or dangerous goods, which could incapacitate the occupants of the aeroplane.</p> <p>2) Recommendation.— For aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg but not exceeding 45 500 kg and for which the application for certification was submitted on or after 12 March 2000, design precautions should be taken to protect</p>					

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	<p>against possible instances of cabin depressurization and against the presence of smoke or other toxic gases, including those caused by explosive or incendiary devices or dangerous goods, which could incapacitate the occupants of the aeroplane.</p> <p>...</p> <p>PART IIIB. AEROPLANES OVER 5 700 KG FOR WHICH APPLICATION FOR CERTIFICATION WAS SUBMITTED ON OR AFTER 2 MARCH 2004</p> <p>CHAPTER 1. GENERAL</p> <p>4.2 Systems design feat</p> <p>...</p> <p>g) Cargo compartment protection.</p> <ol style="list-style-type: none"> 1) Each cargo compartment accessible to a crew member in a passenger-carrying aeroplane shall be equipped with a fire suppression system; 2) each cargo compartment not accessible to a crew member shall be equipped with a built-in fire detection system and a built-in fire suppression system; and 3) cargo compartment fire suppression systems, including their extinguishing agents, shall be designed so as to take into account a sudden and extensive fire such as could be caused by an explosive or incendiary device or dangerous goods. <p>h) Incapacitation of occupants.</p> <p>...</p> <ol style="list-style-type: none"> 2) In addition, for aeroplanes of a maximum certificated take-off mass in excess of 45 500 kg or with a passenger seating capacity 					

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	<p>greater than 60, design precautions shall be taken to protect against possible instances of cabin depressurization and against the presence of smoke or other toxic gases caused by explosive or incendiary devices or dangerous goods, which could incapacitate the occupants of the aeroplane.</p> <p>3) Recommendation.— For aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg but not exceeding 45 500 kg, design precautions should be taken to protect against possible instances of cabin depressurization and against the presence of smoke or other toxic gases, including those caused by explosive or incendiary devices or dangerous goods, which could incapacitate the occupants of the aeroplane.</p> <p>...</p> <p>PART IV. HELICOPTERS</p> <p>PART IVA. HELICOPTERS FOR WHICH APPLICATION FOR CERTIFICATION WAS SUBMITTED ON OR AFTER 22 MARCH 1991 BUT BEFORE 13 DECEMBER 2007</p> <p>CHAPTER 1. GENERAL</p> <p>1.2 Limitations</p> <p><i>Note 2.— The following items, for instance, may be considered as basic helicopter limitations:</i></p> <p>...</p> <p>— maximum certificated cargo sling mass.</p> <p>...</p> <p>PART IVB. HELICOPTERS FOR WHICH APPLICATION FOR CERTIFICATION WAS SUBMITTED ON OR AFTER 13 DECEMBER 2007</p>					

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	<p>CHAPTER 1. GENERAL</p> <p>1.1 Applicability ...</p> <p>1.1.2 Except for those Standards and Recommended Practices which specify a different applicability, the Standards and Recommended Practices of this part shall apply to all aeroplanes having a maximum certificated take-off mass greater than 750 kg but not exceeding 5 700 kg intended for the carriage of passengers or cargo or mail in international air navigation. ...</p> <p>PART V. SMALL AEROPLANES — AEROPLANES OVER 750 KG BUT NOT EXCEEDING 5 700 KG FOR WHICH APPLICATION FOR CERTIFICATION WAS SUBMITTED ON OR AFTER 13 DECEMBER 2007</p> <p>CHAPTER 1. GENERAL</p> <p>1.1 Applicability ...</p> <p>1.1.2 Except for those Standards and Recommended Practices which specify a different applicability, the Standards and Recommended Practices of this part shall apply to all aeroplanes having a maximum certificated take-off mass greater than 750 kg but not exceeding 5 700 kg intended for the carriage of passengers or cargo or mail in international air navigation. ...</p> <p>CHAPTER 4. DESIGN AND CONSTRUCTION</p> <p>4.1 General</p>					

Annex	Extract	Related provisions in Annex 18	Related provisions in Technical Instructions	Related provisions in the Supplement	Associated guidance material	Comments
	<p>...</p> <p>4.2 Systems design features</p> <p>...</p> <p>g) Cargo compartment protection.</p> <p>1) Sources of heat within the compartment which are capable of igniting the cargo or baggage shall be shielded or insulated to prevent such ignition; and</p> <p>2) Each cargo and baggage compartment shall be constructed of materials which are at least flame resistant.</p> <p>...</p>					

APPENDIX D

DUBAI FACE-TO-FACE MEETING OUTPUT: ANNEX 18 REVIEW

INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES

CHAPTER 1. DEFINITIONS

The following amendment is proposed for the sake of alignment with dangerous goods incident and to differentiate from the definition of an aircraft incident in Annex 13.

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.

The following is added for the sake of clarity. The note is currently included under the definition for dangerous goods incident in the Technical Instructions.

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

The following amendments are largely structural to improve readability. In addition, “fluid” is replaced with “contents” so as to address solids.

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) any occurrence relating to the transport of dangerous goods which seriously jeopardizes the aircraft or its occupants.

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

...

CHAPTER 2. APPLICABILITY

2.1 General applicability

Following applies to CE 1

A17 says “international civil aviation operations”. Should A18 too? A6 PI and II is applicable to the operation of aeroplanes by operators authorized to conduct international commercial air transport operations. A18 is a wider scope than A6 because its aircraft instead of aeroplane. A19 is safe operation of aircraft A9 is to all categories of aircraft operation except where a particular provision refers specifically to only one type of operation:

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

Incorporate in Chapter 3 (note is there too)?:

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.

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.

Incorporate in Chapter 3 (CE 6)?:

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.

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).

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

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.

2.2 Dangerous Goods Technical Instructions

Should this somehow be incorporated in Chapter 3? Should be above the previous recommendation?

2.2.1 Each Contracting State shall take the necessary measures to achieve compliance with the detailed provisions contained in the Technical Instructions. 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.

Text in [] to be considered?

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

2.2.3 **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.*

Chapter 3? Should be after applicability for Annex 18 2.1.1? Remove reference to Technical Instructions (Annex covers it?)

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.*

Should there be a link to another Annex?

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.

This isn't an exception, it isn't visible enough to all entities. What about other exceptions?

2.4.2 The State shall establish measures to ...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.

It's wrong focus – should be that they are forbidden unless permitted by

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.

2.5 Notification of variations from the Technical Instructions

Wording needs to be fixed, Needs to be clarified. Intent is that any differences to Annex 18 are notified, only when less restrictive are variations from the Technical Instructions filed as notification of differences, any other differences in TIs are submitted as State variations.

Action by Contracting States in Foreword of all Annexes – does it need to be clarified? Any differences? What about performance-based SARPs?

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

Note.— State variations are provided in the Technical Instructions for information purposes. They do not have any legal status.

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.

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.*

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.*

Deleted because it's proposed for inclusion in Chapter 3, 3.2.3.2. The new paragraph specifies "management of safety", as opposed to this which refers to compliance with this Annex. For discussion ... maybe we want "compliance"?

Two intents: 1. who is responsible for dangerous goods/accontable
2. contact person for exemptions/approvals/guidance on compliance

1- safety management
2- compliance

Do we want two standards? Recommendation to have two contacts?
See what Annex 17 does, do something similar?

This “working document” Chapter 3 replicates all State safety management Standards from Annex 19, Chapter 3 and links applicable Standards to States’ dangerous goods responsibilities.

CHAPTER 3. STATE SAFETY MANAGEMENT RESPONSIBILITIES RELATED TO THE TRANSPORT OF DANGEROUS GOODS

Note 1.— Chapter 3 to Annex 19 contains the general provisions for State safety management responsibilities which are applicable to this Annex. This chapter contains additional provisions specific to the safe transport of dangerous goods.

Does this need to be strengthened?

Note 2.— Annex 6 contains provisions for certification and continued surveillance of the operator, including responsibilities related to the transport of dangerous goods by air. This chapter contains additional provisions specific to the transport of dangerous goods.

3.1 State safety programme (SSP)

Specific references are included for the time being to facilitate discussion. Removing seemed to be the consensus of the group, but will be revisited when proposed amendments become more mature.

The State shall ensure that the safe transport of dangerous goods by air is addressed in their State safety programme (SSP), commensurate with the size and complexity of the State’s civil aviation system, in accordance with the provisions in Annex 19, 3.1.

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

3.2 State safety policy, objectives and resources

3.2.1 Primary aviation legislation (CE 1)

Need to check with Safety management/legal re “promulgate” (previous version was enact and implement”, which aligned with Annex 6, Appendix 5).

Do we need to be more specific with regards to functions, to ensure entities other than operator are covered? Or does “safety transport of dangerous goods by air cover” all applicable functions?

3.2.1.1 The State shall promulgate laws that enable the oversight and management of the safe transport of dangerous goods by air, consistent with the requirements contained in the Convention on International Civil Aviation, the resolution of safety issues and the enforcement of regulations through the relevant authorities or agencies established for that purpose.

Note.— See Annex 19, 3.2.1.

3.2.2 Specific operating regulations (CE 2)

3.2.2.1 The State shall promulgate specific operating regulations that provide for the safe transport of dangerous goods by air in conformity with the Annexes to the Convention on International Civil Aviation. This shall include, at a minimum, national requirements emanating from the primary legislation for the safe transport of dangerous goods by air in accordance with Annex 19, 3.2.2.

3.2.2.2 States shall periodically review the specific operating regulations, guidance material and implementation policies for the safe transport of dangerous goods by air to ensure they remain relevant and appropriate.

3.2.3 State system and functions (CE 3)

There was a question with regard to terminology and why “management of safety” is used here, but “oversight and management of the safe transport of dangerous goods by air” in 3.2.1.1. The terminology aligns with Annex 19, Appendix 1, 3.1 for this paragraph and Appendix 19, Appendix 1, 1.1 for paragraph 3.2.1.1.

Management of safety is an all-encompassing term, including oversight and SSP (see Chapter 8 of Safety management manual). Can be further clarified by safety management experts at working group meeting preceding DGP/27.

3.2.3.1 The State shall establish relevant authorities or agencies responsible for the management of safety with respect to the safe transport of dangerous goods by air in accordance with Annex 19, 3.2.3.

Should it be compliance with this Annex in this case (like current 2.7)?

3.2.3.2 The State shall specify to ICAO the relevant authority or agency responsible for the management of safety with respect to the transport of dangerous goods by air.

3.2.3.3 The State shall use a methodology to determine its staffing requirements for the management of dangerous goods safety according to the size and complexity of dangerous goods air transport activities in their State.

3.2.3.4 **Recommendation.**— The methodology in 3.2.3.3 should be documented.

Lots of discussion on whether should be and or or. It’s “or” in Annex 19

3.2.3.5 The State shall ensure that authority [and/or] agency personnel have adequate support, credentials and transportation to accomplish, independently, their dangerous goods safety management tasks.

3.2.4 Qualified technical personnel (CE 4)

Need to incorporate the need for OJT and experience somewhere (it’s protocol question)

3.2.4.1 States shall establish minimum requirements for the qualification of dangerous goods technical personnel in accordance with Annex 19, 3.2.4.

Note.— The term “technical personnel” refers to those persons performing safety-related functions for or on behalf of the State

3.2.4.2 States shall ensure that dangerous goods technical personnel performing safety-related functions are provided appropriate initial and recurrent training to maintain and enhance their competence at the desired level.

Note.— Guidance on training for State employees involved in the regulation and oversight of transport of dangerous goods by air is contained in Part 1, Chapter 5 of the Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284SU).

3.2.5 Technical guidance, tools and provision of safety-critical information (CE 5)

Minor comment – wording of this doesn't seem to be optimal. Wouldn't “The State shall “maintain” dangerous goods technical guidance ...” make more sense? To be brought to attention of safety management.

3.2.5.1 The State shall establish dangerous goods technical guidance and tools and provide safety-critical information in accordance with Annex 19, 3.2.5.

Is there a need to elaborate on this in guidance or perhaps in appendix to Annex 18 (e.g. need to strengthen provisions for approvals/exemptions).

3.2.5.2 The State shall ensure that dangerous goods technical personnel are provided with technical guidance manuals containing the policies, procedures and standards to be used when performing dangerous goods safety-management functions.

3.2.5.3 The State shall ensure that dangerous goods technical personnel are provided with technical guidance manuals containing the policies, procedures and standards to be used in the resolution of dangerous goods safety issues, including enforcement.

3.2.5.4 The State shall ensure that that dangerous goods technical personnel are provided with technical guidance manuals that address ethics, personal conduct and the avoidance of actual or perceived conflicts of interest in the performance of official duties.

3.3 State safety risk management (CE 6)

3.3.1 Licensing, certification, authorization and approval obligations

Somehow needs to be a link to 2.1.3 and 2.1.4 of A18 (exemptions/approvals) or the text needs to be incorporated here

Need link to A6 AOC/OPS spec (Appendix or guidance)?

The State shall meet the licensing, certification, authorization and approval obligations in accordance with Annex 19, 3.3.1.

States shall implement documented processes and procedures to ensure that individuals and organizations performing an aviation activity meet the established requirements before they are allowed to exercise the

privileges of a dangerous goods license, certificate, authorization or approval to conduct the relevant aviation activity.

Note.— Air operator certification and validation provisions, including provisions related to dangerous goods, are provided in Annex 6 (see chapter 4, 4.2.1.8, Appendix 5, Appendix 6 and Attachment C).

3.3.2 Safety management system obligation

3.3.2.1 States shall require the transport of dangerous goods be included in the scope of the operator's safety management system (SMS) in accordance with 3.3.2 of Annex 19.

3.3.2.2 The State shall ensure that operators establish procedures for investigating safety issues related to the transport of dangerous goods through the application of their SMS.

3.3.2.3 **Recommendation.**— The State should encourage entities other than the operator to establish procedures for investigating safety issues related to the transport of dangerous goods by air.

3.3.3 Accident and incident investigation

3.3.2.2 States shall establish a process to investigate dangerous goods accidents and dangerous goods incidents in support of the management of safety in the State.

Note.— Guidance on dangerous goods investigations can be found in [guidance DGP working group is developing]....

3.3.4 Hazard identification and safety risk assessment

3.3.4.1 States shall establish and maintain a process to identify dangerous goods hazards from collected safety data in accordance with Annex 19, 3.3.4.1

Note. — Further information regarding safety data collection, analysis and the sharing and exchange of safety information can be found in Annex 19 and Chapter 11 of this Annex.

3.3.4.2 The State shall develop and maintain a process that ensures the assessment of dangerous goods safety risks associated with the identified hazards in accordance with Annex 19, 3.3.4.2.

3.3.5 Management of safety risks (CE 8)

States shall establish mechanisms for the management of dangerous goods safety issues for all entities performing any function prescribed in the **Technical Instructions** in accordance with Annex 19, 3.3.5 and Appendix 1, 8.

Note.— Guidance on the management of dangerous goods safety risks is contained in [our guidance material on investigation]

3.4 State safety assurance

3.4.1 Surveillance obligations (CE 7)

3.4.1.1 The State shall ensure that surveillance obligations required by Annex 19, 3.4.1 are implemented for all entities performing any function prescribed in its regulations for transport of dangerous goods by air.

Note.— The surveillance of the service provider takes into consideration the safety performance as well as the size and complexity of its aviation products or services.

3.4.1.2 **Recommendation.**— States should establish procedures to prioritize inspections, audits and surveys towards those areas of greater safety concern or need.

3.4.2 State safety performance

The State shall establish the acceptable level of dangerous goods safety performance to be achieved through their SSP in accordance with Annex 19, 3.4.2.

3.5 State safety promotion

The State should promote State safety in accordance with Annex 19, 3.5.

This not be necessary for Annex. This is covered by Chapter 3/link to Technical Instructions and can be further elaborated on in guidance (Attachment)

CHAPTER 4. CLASSIFICATION

The State shall ensure that measures are Hazards are identified (through classification) and communicated ...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 hazards 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.

CHAPTER 5. LIMITATION ON THE TRANSPORT OF DANGEROUS GOODS BY AIR

Link to A6, OPS spec.

Do we need it in annex? If yes, should be up front? In applicability? Or in Chapter 3?

5.1 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.

Move to applicability chapter? Refer to Chapter 3 CE 6?

5.2 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.

Move to applicability chapter? Refer to Chapter 3 CE 6?

5.3 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.

Too detailed for Annex 18?

CHAPTER 6. PACKING

6.1 General requirements

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

6.2 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.

Too detailed for Annex 18?

CHAPTER 7. LABELLING AND MARKING

7.1 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.

7.2 Markings

7.2.1 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.

7.2.2 *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.

7.3 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.*

Too detailed. will capture in attachment associated with Chapter 3, legislation/regulations

Make language English mandatory?

CHAPTER 8. SHIPPER'S RESPONSIBILITIES

8.1 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.

8.2 Dangerous goods transport document

8.2.1 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.

8.2.2 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.

8.3 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.*

This chapter too detailed

CHAPTER 10. PROVISION OF INFORMATION

10.1 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.

10.2 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.

10.3 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.

10.4 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.

10.5 Information from pilot-in-command to aerodrome authorities

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.

10.6 Information in the event of an aircraft accident or incident

10.6.1 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.

10.6.2 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.

CHAPTER 11. TRAINING PROGRAMMES

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 DPO training to Chapter 14

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.

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

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.— Dangerous goods training programme requirements for designated postal operators are included in Chapter 14.

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.

Incorporate some of this in Chapter 3 (Licensing/approvals etc)

Replace reporting and investigation provisions currently contained in with the following new provisions. These revised provisions are based on Annex 19 with Amendment 1 incorporated.

CHAPTER 12. DANGEROUS GOODS SAFETY DATA AND SAFETY INFORMATION COLLECTION, ANALYSIS, PROTECTION, SHARING AND EXCHANGE

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).

11.1 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 11.1.1 of this Annex; and*
- c) voluntary safety reporting systems as indicated in 5.1.3 of Annex 19 and 11.1.2 of this Annex.*

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

11.1.1 Mandatory safety reporting system

11.1.1.1 State 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.

11.1.1.2 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.

11.1.1.3 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.

11.1.1.4 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.

11.1.1.5 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.

11.1.1.5 States' mandatory reporting systems shall 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.

11.1.1.6 States' mandatory reporting systems shall include a requirement for operators to report dangerous goods occurrences in accordance with the detailed provisions in the [Technical Instructions].

11.1.2 Voluntary safety reporting system

11.1.2.1 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.

11.1.2.2 **Recommendation.**— *States should establish a voluntary dangerous goods safety reporting system to collect safety data and safety information not captured by mandatory reporting systems for entities other than operators in accordance with Annex 19, 5.1.*

11.1.3 Safety investigations

11.1.3.1 States shall establish procedures for collecting data and information related to dangerous goods safety investigations which include, at a minimum:

- a) dangerous goods accidents and dangerous goods incidents;
- b) undeclared or misdeclared dangerous goods in cargo, mail or baggage; and
- c) other safety issues related to the transport of dangerous goods by air.

11.2 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.

11.3 Safety data and safety information protection

11.3.1 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.

11.3.2 **Recommendation.**— *States should extend the protection referred to in 11.3.1 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.*

11.4 Safety information sharing and exchange

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

11.4.2 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.

This may not be necessary. If it were, it would be in every Annex or at least in Annex 19.

[11.4.3 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.]

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

11.4.5 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.

Chapter 12, developed by DGP-WG/reporting regarding dangerous goods surveillance operations is deleted because the provisions are covered in proposed Chapter 3 and revised Chapter 12 (SDCPS)

Chapter 13, dangerous goods safety investigations developed by DGP-WG/Reporting is deleted because its covered by new Chapter 3 and 12 (SDCPS)

CHAPTER 13. DANGEROUS GOODS SECURITY PROVISIONS

Each Contracting State shall establish dangerous goods security measures, applicable to shippers, operators and other individuals 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.

Dgp-Reporting proposed a new chapter devoted to dangerous goods in the mail so that all provisions could be in one place

CHAPTER 14. TRANSPORT OF DANGEROUS GOODS BY POST

Moved from Chapter 10:

14.1 Establishment of training programmes

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

14.2 Approval of training programme

Moved from Chapter 10:

Focus needs to be on what State needs to do, may need more details from Technical Instructions

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 from Chapter 11:

14.2 Procedures for controlling the introduction of dangerous goods in mail into air transport

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).

APPENDIX E

MONTREAL FACE-TO-FACE MEETING OUTPUT: ANNEX 18 REVIEW DANGEROUS GOODS SAFETY MANAGEMENT RESPONSIBILITIES

All draft text in this appendix is new

Chapter 1. DEFINITIONS

Surveillance. The State activities through which the State proactively verifies through inspections and audits that entities involved with the transport of dangerous goods by air continue to meet the established requirements and function at the level of competency and safety required by the State.

Note.— *This definition differs from the definition of “surveillance” given in Annex 19*

CHAPTER 3. STATE SAFETY MANAGEMENT RESPONSIBILITIES RELATED TO THE TRANSPORT OF DANGEROUS GOODS

Note 1.— *Chapter 3 to Annex 19 contains the general provisions for State safety management responsibilities which are applicable to this Annex. This chapter contains additional provisions specific to the safe transport of dangerous goods.*

Note 2.— *Guidance to assist States in complying with the provisions for State safety management responsibilities specific to dangerous goods is provided in Attachment A. Additional guidance to assist States in establishing requirements for the qualification of technical personnel is provided in [Competency based training for Dangerous Goods State Employees (Doc xxx)].*

Note 3.— *Annex 6 contains provisions for certification and continued surveillance of the operator, including responsibilities related to the transport of dangerous goods by air. This chapter contains additional provisions specific to the transport of dangerous goods.*

3.2 State safety policy, objectives and resources

3.2.1 Primary aviation legislation (CE 1)

3.2.1.1 The State shall promulgate laws that enable the oversight and management of the safe transport of dangerous goods by air, consistent with the requirements contained in the Convention on International Civil Aviation, the resolution of safety issues and the enforcement of regulations through the relevant authorities or agencies established for that purpose.

3.2.2 Specific operating regulations (CE 2)

3.2.2.1 The State shall promulgate specific operating regulations that provide for the safe transport of dangerous goods by air in conformity with the Annexes to the Convention on International Civil Aviation. This shall include, at a minimum, national requirements emanating from the primary legislation for the safe transport of dangerous goods by air in accordance with Annex 19, 3.2.2.

3.2.2.2 States shall periodically review the specific operating regulations, guidance material and implementation policies for the safe transport of dangerous goods by air to ensure they remain relevant and appropriate.

3.2.3 State system and functions (CE 3)

3.2.3.1 The State shall establish relevant authorities or agencies responsible for the management of safety with respect to the safe transport of dangerous goods by air in accordance with Annex 19, 3.2.3.

3.2.3.2 The State shall specify to ICAO the relevant authorities or agencies responsible for the management of safety with respect to the transport of dangerous goods by air.

3.2.4 Qualified technical personnel (CE 4)

The State shall ensure that technical personnel performing dangerous goods safety-related functions are competent to perform their dangerous goods functions.

The State shall establish and maintain minimum qualification requirements to ensure dangerous goods technical personnel are competent to perform their safety management functions.

The State shall ensure that requirements for qualified technical personnel, required by Annex 19, includes dangerous goods technical personnel.

Note.— Guidance on training for State employees involved in the regulation and oversight of transport of dangerous goods by air is contained in Part 1, Chapter 5 of the Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284SU) and Manual on the Competencies of Civil Aviation Safety Inspectors (Doc 10070, AN/528).

Note.— The requirements contained in Annex 19, 3.2.4. may be incorporated as part the safety training programme for technical personnel performing dangerous goods safety related functions.

3.2.5 Technical guidance, tools and provision of safety-critical information (CE 5)

The State shall ensure technical guidance, tools and provision of safety critical information required by Annex 19 address dangerous goods safety management activities.

Note.— Guidance on this requirement is contained in the *Safety Oversight Manual, Part A — The Establishment and Management of a State Safety Oversight System* (Doc 9734).

3.3 State safety risk management (CE 6)

3.3.1 Exemptions and approval obligations

3.3.1.1 The State shall establish and implement documented procedures for granting approvals, where specifically provided for in the Technical Instructions 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.

3.3.1.3 The State shall establish and implement documented procedures for granting exemptions 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, 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,

3.3.1.4 For the State of Overflight, if none of the criteria for granting an exemption are relevant, the state shall establish procedures to ensure the exemption is granted based solely on whether it is believed that an equivalent level of safety in air transport has been achieved.

Note.— Air operator certification and validation provisions, including provisions related to dangerous goods, are provided in Annex 6 (see chapter 4, 4.2.1.8, Appendix 5, Appendix 6 and Attachment C).

3.3.2 Safety management system obligation

3.3.2.1 States shall require the transport of dangerous goods be included in the scope of the operator's safety management system (SMS) in accordance with 3.3.2 of Annex 19.

3.3.2.2 The State shall ensure that operators establish procedures for investigating safety issues related to the transport of dangerous goods through the application of their SMS.

3.3.2.3 **Recommendation.**— The State should encourage entities other than the operator to establish procedures for investigating safety issues related to the transport of dangerous goods by air.

3.3.3 Dangerous goods accident and dangerous goods incident investigation

3.3.3.2 States shall establish a process to investigate dangerous goods accidents and dangerous goods incidents in support of the management of safety in the State.

Note.— Guidance on dangerous goods investigations can be found in [guidance DGP working group is developing]....

3.3.4 Hazard identification and safety risk assessment

3.3.4.1 States shall establish and maintain a process to identify dangerous goods hazards from collected safety data in accordance with Annex 19, 3.3.4.1

Note. — Further information regarding safety data collection, analysis and the sharing and exchange of safety information can be found in Annex 19 and Chapter 11 of this Annex.

3.3.4.2 The State shall develop and maintain a process that ensures the assessment of dangerous goods safety risks associated with the identified hazards in accordance with Annex 19, 3.3.4.2.

3.3.5 Management of dangerous goods safety risks (CE 8)

Are safety risks and safety issues different? If not, why use different terms? If yes, what is the difference?

States shall establish mechanisms for the resolution of dangerous goods safety issues for all entities performing any function prescribed in the Technical Instructions in accordance with Annex 19, 3.3.5 and Appendix 1, 8.

Note.— Guidance on the management of dangerous goods safety risks is contained in [our guidance material on investigation]

3.4 State safety assurance

3.4.1 Surveillance obligations (CE 7)

3.4.1.1 States shall ensure that the implementation of documented surveillance processes required by Annex 19 include surveillance of all entities involved with the transport of dangerous goods by air.

— END —