



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/15)**

Montreal, 27 April to 1 May 2015

**Agenda Item 6: Resolution, where possible, of the non-recurrent work items identified by Air Navigation Commission or the Dangerous Goods Panel:
6.3: Development of competency-based training provisions for dangerous goods**

COMPETENCY-BASED TRAINING FOR DANGEROUS GOODS PERSONNEL AND STATE EMPLOYEES

(Presented by T. Muller)

SUMMARY

This working paper presents an overview of the work done and the results realized by the DGP Working Group on Training. It contains finalized training provisions and guidance material developed by the training working group based on comments made during discussions at the DGP working group meeting in Rio de Janeiro (DGP-WG/14, 20 to 24 October 2014).

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 At the last DGP working group meeting in Rio de Janeiro, Brazil (DGP-WG/14, 20 to 24 October 2014), draft guidance material developed by the DGP Working Group on Training along with draft amendments to Table 1-4 of the Technical Instructions were presented. The guidance material provided a competency framework for dangerous goods personnel and background information on competency-based training and how it was used to develop the competency frameworks. The training working group recommended, as a first step, to include the guidance material as a new attachment in the 2017- 2018 Edition of the Technical Instructions and to consider also providing the material on the ICAO public website. This would provide the opportunity for States and industry to become familiar with the new provisions and to provide feedback.

1.2 There was strong support at DGP-WG/14 for issuing the guidance material, the Competency Framework for Dangerous Goods Personnel, and proposed amendments to Part 1;4 in a new attachment to the Technical Instructions and for publishing the material on the ICAO public website as a transitional measure. The working group recognized the need to amend Part 1;4 to reflect the

competency-based approach and the importance of finalizing the competency framework for State employees.

1.3 The DGP Working Group on Training met from 16 to 20 February in Montreal to refine the material and to address comments raised at DGP-WG/14. The working group finalized the Competency Framework for State Employees and the Guidance on Dangerous Goods Competency-Based Training and made further amendments to Part 1;4 of the Technical Instructions. The guidance material and amended Part 1;4 is included in Attachment 4 to the Technical Instructions provided in Appendix A to this working paper. The Competency Framework for State Employees is provided in Appendix B to this working paper.

1.4 While considering the comments raised at DGP-WG/14 regarding Tables 1-4 and 1-5 of the Technical Instructions, the DGP Working Group on Training discussed whether including training tables in Part 1;4 would be necessary. When developing competency-based training, the type and level of knowledge necessary to perform a specific function needs to be determined. This might range from a familiarization level for some functions to an expert level for others. Accordingly, Part 1;4 of the Technical Instructions currently requires personnel to be trained commensurate with their responsibilities, and the content of training courses tables are provided as guidance. It is recognized, however, that the tables are often considered mandatory requirements and the principle of “commensurate with responsibilities” is not always applied. Personnel are often trained on all subject matters regardless of the functions they perform. This may lead to general knowledge of all subject matter, not all of which is necessary to perform a particular function, and not enough detailed knowledge of the particular subject matter that is needed to perform a particular function. The working group determined that a revised version of the tables in the form of a matrix should be provided as a tool for analysing the type and level of knowledge needed to perform specific functions. A revised table was developed and is provided in Appendix A to this working paper as proposed Chapter 5 to Attachment 4 of the Technical Instructions. The working group concluded that removing Tables 1-4 and 1-5 from Part 1;4 and including the revised matrix in an attachment to the Technical Instructions would reinforce the need for proper analysis of training needs commensurate with responsibilities.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to:

- a) incorporate the proposed amendments to Part 1;4 and Guidance on Dangerous Goods Competency-Based Training in Attachment 4 to the 2017-2018 Edition of the Technical Instructions as provided in Appendix A to this working paper; and
- b) incorporate the Competency Framework for State Employees provided in Appendix B to this working paper in the 2017-2018 Edition of the Supplement to the Technical Instructions.

APPENDIX A

**PROPOSED NEW TRAINING PROVISIONS FOR INCORPORATION IN AN ATTACHMENT
TO THE TECHNICAL INSTRUCTIONS**

Attachment 4

**REVISED TRAINING PROVISIONS
(APPLICABLE FROM 1 JANUARY 2019)**

INTRODUCTORY CHAPTER

REVISED TRAINING PROVISIONS

The training provisions have undergone an extensive review by the Dangerous Goods Panel which will result in revisions to Part 1;4 of these Instructions and the addition of new guidance material which will be incorporated as a new attachment. These provisions will become applicable on 1 January 2019; they are provided here for information purposes only. The material can also be found on the ICAO public website at www.icao.int/safety/DangerousGoods.

The new provisions are based on a competency-based approach towards training aimed at ensuring that employees are trained to perform their dangerous-goods related functions competently. Chapter 1 of this attachment provides the training requirements which will replace current Part 1;4 in the 2019-2020 Edition of these Instructions. Chapters 2 through 4 provide guidance material on dangerous goods competency-based training which will be included as a new attachment in the 2019-2020 Edition of the Technical Instructions.

Comments on the revised training provisions are welcome and should be submitted through the ICAO website at www.icao.int/safety/DangerousGoods. These will be reviewed by the DGP in the Fall of 2017, and further amendments may be made based on this review.

Chapter 1

REVISIONS TO PART 1, CHAPTER 4 — TRAINING

INTRODUCTORY NOTE

The successful application of regulations concerning the transport of dangerous goods and the achievement of their objectives are greatly dependent on the appreciation by all individuals concerned of the risks involved and on a detailed understanding of the regulations. This can only be achieved by properly planned and maintained initial and recurrent training programmes in the transport of dangerous goods for all persons concerned.

Chapter 4

TRAINING

*Parts of this Chapter are affected by State Variations AE 2, BR 7, CA 11, HK 1;
see Table A-1*

4.1 ESTABLISHMENT OF TRAINING PROGRAMMES GENERAL REQUIREMENTS

- ~~4.1.1 Initial and recurrent dangerous goods training programmes must be established and maintained by or on behalf of:~~
- ~~a) shippers of dangerous goods, including packers and persons or organizations undertaking the responsibilities of the shipper;~~
 - ~~b) operators;~~
 - ~~≠ c) ground handling agencies which perform, on behalf of the operator, the act of accepting, handling, loading, unloading, transferring or other processing of cargo or mail;~~
 - ~~d) ground handling agencies located at an airport which perform, on behalf of the operator, the act of processing passengers;~~
 - ~~e) agencies, not located at an airport, which perform, on behalf of the operator, the act of checking in passengers;~~
 - ~~f) freight forwarders;~~
 - ~~≠ g) agencies engaged in the security screening of passengers and crew and their baggage and/or cargo or mail; and~~
 - ~~h) designated postal operators.~~ The employer must ensure that personnel are competent to perform any function described in these Instructions for which they are responsible prior to performing any of these functions. This must be achieved through training and assessment.

Some members of the Working Group on Training did not support the following provision. It was proposed by one of the group's members as a means to ensure that entities involved with handling non-dangerous goods cargo are trained. DGP-WG/15 is invited to consider whether or not the provision is appropriate.

4.1.1 The employer must ensure that personnel with responsibilities for the processing, acceptance or handling of cargo, mail or passengers or of checked and/or carry-on baggage are competent to perform the function for which they are responsible prior to performing any of these functions. This must be achieved through training and assessment.

Modified and moved to 4.2.2 and 4.4.2:

~~4.1.2 Dangerous goods training programmes required by 4.1.1 b) must be subjected to review and approval by the appropriate authority of the State of the Operator. Dangerous goods training programmes required by 4.1.1 h) must be subjected to review and approval by the civil aviation authority of the State where the mail was accepted by the designated postal operator. Dangerous goods training programmes required by other than 4.1.1 b) and h) should be subjected to review and approval as determined by the appropriate national authority.~~

4.2 TRAINING-CURRICULA PROGRAMMES

4.2.1 The employer must establish and maintain a dangerous goods training programme.

4.2.2 All operators must establish a dangerous goods training programme regardless of whether or not they are approved to transport dangerous goods as cargo. Dangerous goods training programmes for operators must be approved by the appropriate authority of the State of the Operator in accordance with the provisions of Annex 6 — Operation of Aircraft. Except as provided for in 4.4, dangerous goods training programmes other than for operators should be subjected to review and approval as determined by the appropriate national authority.

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

4.2.3 Personnel must be trained and assessed in the requirements commensurate with their the functions for which they are responsible. Such training must include: prior to performing any of these functions. [Personnel that have received training but that are assigned to new functions must be assessed to determine their competence in respect of their new function. If competency is not demonstrated, appropriate additional training must be provided.] All personnel must be trained to recognize the hazards presented by dangerous goods, to safely handle them and to apply appropriate emergency response procedures.

- ~~a) general familiarization training — which must be aimed at providing familiarity with the general provisions;~~
- ~~b) function-specific training — which must provide detailed training in the requirements applicable to the function for which that person is responsible; and~~
- ~~c) safety training — which must cover the hazards presented by dangerous goods, safe handling and emergency response procedures.~~

Moved from Note 2 under Table 1-5:

Note.— Personnel employed by or interacting with the aviation industry in areas such as passenger and cargo reservation centres, and engineering and maintenance should be provided with dangerous goods training.

~~4.2.2 Personnel identified in the categories specified in Table 1-4, 1-5 or 1-6 must be trained or training must be verified prior to the person performing any duty specified in Table 1-4, 1-5 or 1-6.~~

4.2.4 Security personnel who are involved with the screening of passengers and crew and their baggage and cargo or mail must be trained.

Moved from below 4.2.7:

Note.— Security personnel are required to be trained irrespective of whether the operator on which passenger or cargo is to be transported carries dangerous goods as cargo.

~~4.2.35 Personnel must receive Recurrent training and assessment must be provided within 24 months of previous training and assessment to ensure knowledge is current that competency has been maintained. However, if recurrent training is completed within the final three months of validity of previous training, the period of validity extends from the month on which the recurrent training was completed until 24 months from the expiry month of that previous training.~~

4.2.6 Training courses may be developed and delivered by or for the employer.

Some members of the Working Group on Training did not think including the following note was appropriate as it went against competency-based training principles in that this knowledge was not necessary to perform all dangerous-goods related functions competently. Others, although understanding this point of view, believed that the note should be included as an outreach tool recognizing that there was potential for all categories of personnel to be passengers. This was the original reasoning behind recommending training on passenger provisions for all categories of personnel in current Table 1-4.

DGP-WG/15 is invited to consider whether the note should remain.

[Note.— All training courses should include provisions for dangerous goods carried by passengers and crew (see Part 8).]

~~4.2.4 A test to verify understanding must be provided following training. Confirmation that the test has been completed satisfactorily is required.~~

4.2.7 The employer must maintain a record of training for personnel.

4.2.7.1 AThe record of training must be maintained which must include:

- a) the individual's name;
- b) the most recent training completion month;
- c) a description, copy or reference to training materials used to meet the training requirements;
- d) the name and address of the organization providing the training; and
- e) evidence which shows that competencies have been achieved ~~a test has been completed satisfactorily.~~

4.2.7.2 Training records must be retained by the employer for a minimum period of 36 months from the most recent training completion month and must be made available upon request to the employee or appropriate national authority.

~~4.2.6 The subject matter relating to dangerous goods transport with which various categories of personnel should be familiar is indicated in Table 1-4.~~

~~4.2.7 Staff of operators not carrying dangerous goods as cargo or mail must be trained commensurate with their responsibilities. The subject matter to which their various categories of staff should be familiar with is indicated in Table 1-5.~~

~~Note. Security staff are required to be trained irrespective of whether the operator on which passenger or cargo is to be transported carries dangerous goods as cargo.~~

Table 1-4. Content of training courses

<i>Aspects of transport of dangerous goods by air with which they should be familiar, as a minimum</i>	<i>Shippers and packers</i>		<i>Freight forwarders</i>			<i>Operators and ground-handling agents</i>					<i>Security staff</i>	
	1	2	3	4	5	6	7	8	9	10	11	12
General philosophy	x	x	x	x	x	x	x	x	x	x	x	x
Limitations	x		x	x	x	x	x	x	x	x	x	x
General requirements for shippers	x		x			x						
Classification	x	x	x			x						x
List of dangerous goods	x	x	x			x				x		
Packing requirements	x	x	x			x						
Labelling and marking	x	x	x	x	x	x	x	x	x	x	x	x
Dangerous goods transport document and other relevant documentation	x		x	x		x	x					
Acceptance procedures						x						
Recognition of undeclared dangerous goods	x	x	x	x	x	x	x	x	x	x	x	x
Storage and loading procedures					x	x		x		x		
Pilots' notification						x		x		x		
Provisions for passengers and crew	x	x	x	x	x	x	x	x	x	x	x	x
Emergency procedures	x	x	x	x	x	x	x	x	x	x	x	x

≠ CATEGORIES

- 1 — Shippers and persons undertaking the responsibilities of shippers
- 2 — Packers
- 3 — Staff of freight forwarders involved in processing dangerous goods
- 4 — Staff of freight forwarders involved in processing cargo or mail (other than dangerous goods)
- 5 — Staff of freight forwarders involved in the handling, storage and loading of cargo or mail
- 6 — Operator's and ground handling agent's staff accepting dangerous goods
- 7 — Operator's and ground handling agent's staff accepting cargo or mail (other than dangerous goods)
- 8 — Operator's and ground handling agent's staff involved in the handling, storage and loading of cargo or mail and baggage
- 9 — Passenger handling staff
- 10 — Flight crew members, loadmasters, load planners and flight operations officers/flight dispatchers

- 11 — Crew members (other than flight crew members)
 12 — Security staff who are involved with the screening of passengers and crew and their baggage and cargo or mail, e.g. security screeners, their supervisors and staff involved in implementing security procedures

Table 1-5. Content of training courses for operators not carrying dangerous goods as cargo or mail

Contents	Categories of staff				
	13	14	15	16	17
General philosophy	X	X	X	X	X
Limitations	X	X	X	X	X
Labelling and marking	X	X	X	X	X
Dangerous goods transport document and other relevant documentation	X				
Recognition of undeclared dangerous goods	X	X	X	X	X
Provisions for passengers and crew	X	X	X	X	X
Emergency procedures	X	X	X	X	X

CATEGORIES

- 13 — Operator's and ground handling agent's staff accepting cargo or mail (other than dangerous goods)
 14 — Operator's and ground handling agent's staff involved in the handling, storage and loading of cargo or mail (other than dangerous goods) and baggage
 15 — Passenger handling staff
 16 — Flight crew members, loadmasters, load planners and flight operations officers/flight dispatchers
 17 — Crew members (other than flight crew members)

Note 1. — Depending on the responsibilities of the person, the aspects of training to be covered may vary from those shown in Tables 1-4 and 1-5. For example, in respect of classification, staff involved in implementing security procedures (e.g. screeners and their supervisors) need only be trained in the general properties of dangerous goods.

Note 2. — The categories of personnel identified in Tables 1-4 and 1-5 are not all encompassing. Personnel employed by or interacting with the aviation industry in areas such as passenger and cargo reservation centres, and engineering and maintenance, except when acting in a capacity identified in Table 1-4 or 1-5, should be provided with dangerous goods training in accordance with 4.2.

4.2.8 Staff of designated postal operators must be trained commensurate with their responsibilities. The subject matter to which their various categories of staff should be familiar with is indicated in Table 1-6.

4.3 INSTRUCTOR QUALIFICATIONS AND COMPETENCIES

4.3.1 Unless otherwise provided for by the appropriate national authority, instructors of initial and recurrent dangerous goods training programmes must have adequate demonstrate competencies in instructional and the function that they will instruct skills and have successfully completed a dangerous goods training programme in the applicable category, or Category 6, prior to delivering such a dangerous goods training programme.

4.3.2 Instructors delivering initial and recurrent dangerous goods training programmes must at least every 24 months deliver such courses, or in the absence of this attend recurrent training.

4.4 DESIGNATED POSTAL OPERATORS

4.4.1 Staff of designated postal operators must be trained commensurate with their responsibilities. The subject matter to which their various categories of staff should be familiar with is indicated in Table 1-4.

Modified and moved from 4.1.2:

4.4.2 Dangerous goods training programmes for designated postal operators must be subjected to review and approval by the civil aviation authority of the State where the mail was accepted by the designated postal operator.

Table 1-64. Content of training courses for staff of designated postal operators

<i>Aspects of transport of dangerous goods by air with which they should be familiar, as a minimum</i>	<i>Designated postal operators</i>		
	<i>Categories of staff</i>		
	<i>A</i>	<i>B</i>	<i>C</i>
General philosophy	x	x	x
Limitations	x	x	x
General requirements for shippers	x		
Classification	x		
List of dangerous goods	x		
Packing requirements	x		
Labelling and marking	x	x	x
Dangerous goods transport document and other relevant documentation	x	x	
Acceptance of the dangerous goods listed in 1;2.3.2	x		
Recognition of undeclared dangerous goods	x	x	x
Storage and loading procedures			x
Provisions for passengers and crew	x	x	x
Emergency procedures	x	x	x

CATEGORIES

- A — Staff of designated postal operators involved in accepting mail containing dangerous goods
- B — Staff of designated postal operators involved in processing mail (other than dangerous goods)
- C — Staff of designated postal operators involved in the handling, storage and loading of mail

Note.— Guidance on the aspects of training to be covered by staff of designated postal operators can be found in S-1;3.

4.4 COMPETENCY-BASED TRAINING AND ASSESSMENT

Training programmes should be developed following a C-competency-based training and assessment should be used in accordance with the general provisions contained in Chapter 2 of the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868) approach. A generic competency framework for dangerous goods personnel and guidance on competency-based training and assessment is provided in Attachment 4.

Chapter 2

GUIDANCE ON DANGEROUS GOODS COMPETENCY-BASED TRAINING

Note.— The purpose of this guidance material is not to describe generic features of competency-based training but to explain how it applies to dangerous goods training. The Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868) contains more detailed features of competency based training.

2.1 INTRODUCTION

ICAO has recognized that the implementation of a competency-based approach for safety-critical functions is essential to ensure that enough qualified and competent personnel support the air transport system. This document provides guidance to Contracting States in implementing dangerous goods competency-based training and assessment for personnel involved in the transport of cargo, mail, passengers and baggage by air.

2.2 COMPETENCY-BASED TRAINING

2.2.1 Conventional dangerous goods training is typically designed around the job title and is subject-matter driven (e.g. Table 1-4 in Part 1;4 of this edition of the Technical Instructions lists the subject matter relating to dangerous goods which various categories of personnel should be familiar). Competency-based training is designed to ensure that personnel can perform the function for which they are responsible.

2.2.2 Competencies describe what a competent person's performance on the job should be. The *Procedures for Air Navigation Services — Training* (PANS-TRG, Doc 9868) defines competency as "a combination of skills, knowledge and attitudes required to perform a task to the prescribed standard". For more detailed information on the features of competency based training, see Doc 9868.

2.2.3 A critical feature of competency-based training is the inclusion of a continuous assessment process that extends beyond completion of the training course. This ensures training is efficient and effective in order to provide the skills, knowledge and attitudes required to perform the function.

2.3 COMPETENCY-BASED PROVISIONS IN ICAO

2.3.1 Competency-based approaches are used to prepare professionals for a variety of domains besides aviation (e.g. medical education, the oil and gas industry, pharmaceutical industry, social work, teacher education).

2.3.2 In 2006, ICAO introduced the multi-crew pilot licence (MPL) in Annex 1 — *Personnel Licensing*. This was the first competency-based provision developed by ICAO. It resulted from the work of the Flight Crew Licensing and Training Panel (FCLTP) whose goal was to develop provisions that would not put conventional pilot training methods out of compliance but would allow an alternative training path that made use of contemporary instructional methods. The FCLTP developed the first edition of the PANS-TRG to provide detailed procedures to assist States and the industry in implementing the MPL.

2.3.3 Since then, ICAO has introduced several competency frameworks in its provisions related to the following functions:

- a) for aircraft maintenance personnel (PANS-TRG, Doc 9868);
- b) flight procedure designers (*The Quality Assurance Manual for Flight Procedure Design* (Doc 9906), Volume 2);
- c) flight validation pilots (Doc 9906, Volume 6);
- d) designated medical examiners (*Manual of Civil Aviation Medicine* (Doc 8984)); and
- e) air traffic controllers and air traffic safety electronics personnel (PANS TRG, Doc 9868)

2.4 BENEFITS OF COMPETENCY-BASED TRAINING TO THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR

2.4.1 Supports safety management systems (SMS)

2.4.1.1 Annexes 6, 18 and 19 require dangerous goods to be included in the operator's SMS. Other entities in the dangerous goods transport chain should be encouraged to implement a similar system.

2.4.1.2 Implementing SMS requires that all personnel understand the safety philosophy and embrace a disciplined and standardized approach for SMS. Personnel need to know their roles and responsibilities with respect to dangerous goods and have the requisite competencies to perform their functions within the SMS. Therefore, the depth of training each person receives should be appropriate to the functions they perform. This could range from a familiarization level to expert-level for dangerous goods professionals. To ensure that personnel have the knowledge, skills and abilities to support SMS, training activities should follow the competency-based approach.

2.4.1.3 The "Swiss-Cheese" Model of accident causation proposes that complex aviation systems are extremely well defended by layers of defences making single-point failures rarely consequential in such systems (see paragraph 2.3 of the *Safety Management Manual (SMM)* (Doc 9859)). The model illustrates that accidents involve successive breaches of multiple system defences and that all accidents include a combination of both active conditions (actions or inactions that have an immediate adverse effect) and latent conditions (conditions that exist in the aviation system well before a damaging outcome is experienced). Doc 9859 identifies training as one of the three main groups of defences in aviation and identifies deficiencies in training as a latent condition. The importance of clearly-defined competency-based training is essential for the design and delivery of training programmes aimed at developing qualified personnel better able to eliminate or mitigate risks related to the safe transport of dangerous goods by air.

2.4.2 Facilitates development of effective dangerous goods training and reduces risks

2.4.2.1 The application of competency-based training will benefit the safe transport of dangerous goods, which may reduce occurrences that could introduce risk to the aviation system. Currently the training requirement in the Technical Instructions is based on evidence that personnel have completed the dangerous goods course and successfully passed the test. This, however, does not guarantee that personnel can apply what was learned in the course while performing their functions. A competency-based training approach designs training and assessment that is specific to their functions and not just theoretical knowledge about dangerous goods.

2.4.2.2 The acceptance of dangerous goods for air transport requiring an operator to verify that the dangerous goods are properly prepared for transport can be used an example. This verification is accomplished through a checklist process so as to prevent dangerous goods not properly prepared from being transported on the aircraft. However, if training has not adequately prepared personnel to complete this process, risks to the aircraft and its occupants may be introduced if an improperly prepared shipment is accepted and transported. In addition without adequate ability to complete the acceptance process, the shipment may be rejected even though it is properly prepared. This can cause increased costs to the shipper and the operator and delay the shipment.

2.4.2.3 Another example would be the preparation of dangerous goods shipments which includes identifying, classifying, packaging, marking, labelling and documentation for the transport of dangerous goods. These functions are considered critical and key to the correct transport of dangerous goods. In competency-based training, shipper's knowledge, skills and abilities should result in demonstrating their proficiency to meet these functions. It is critical that dangerous goods shipments are prepared in compliance to the Technical Instructions prior to offering the shipment for transport to an operator. This should reduce the number of improperly prepared shipments thus reducing cost and the introduction of risk in to the aviation system.

2.5 DRIVING PRINCIPLES

2.5.1 The "function" approach

2.5.1.1 The Technical Instructions state that personnel must be trained in the requirements commensurate with their responsibilities. Responsibilities are not necessarily category/job specific as indicated in Tables 1-4 and 1-5 in Part 1;4 of this edition of the Technical Instructions. For example, in smaller operations, a person may perform many functions such as accepting dangerous goods and loading/securing dangerous goods on board an aircraft. This person's training must address all of the functions performed. Also, entities such as ground handling companies and freight forwarders may perform functions that are specific to a shipper or an operator. These entities must train their personnel commensurate with their responsibilities and functions they perform regardless of their job title. Concentrating on functions and responsibilities rather than a job title or description will ensure that a person is competent to perform the function in compliance with the Technical Instructions.

2.5.1.2 Tables 1-4 and 1-5 in Part 1;4 of this edition of the Technical Instructions refer only to the aspect of knowledge that personnel should have to perform their specific job, but do not cover the "how to" part of their job. The focus of competency based training is to ensure that personnel can perform their job. Tables 1-4 and 1-5 in current Part 1;4 do not support a competency-based approach.

2.6 ROLES AND RESPONSIBILITIES IN COMPETENCY-BASED TRAINING

2.6.1 Employer

2.6.1.1 Employers need to determine the purpose and objective of the competency-based training programme in alignment with the function their personnel will perform.

2.6.1.2 Employers should ensure that training is designed and developed to establish clear links among the competencies to be achieved, learning objectives, assessment methods, and course materials.

2.6.1.3 Once personnel have successfully completed the competency-based training, employers should assess their performance on the job against the applicable competencies. This assessment is performed on a continuous basis and involves data collection and analysis, which supports SMS.

2.6.2 Instructor

2.6.2.1 In competency-based training, the instructor facilitates the trainee's progression towards the achievement of competencies. They also collect information about the effectiveness of the training materials which supports continuous improvement. See instructor competencies in PANS-TRG.

2.6.3 Trainee

2.6.3.1 In competency-based training, trainees are active participants in their learning process and the achievement of competencies as opposed to passive recipients of knowledge. The competency-based training programme provides them with a clear idea of their learning path towards competency through the training programme and beyond. The competency-based training should directly contribute to improving their performance on the job. Trainees' feedback is essential in ensuring that competency-based training is effective.

2.6.4 Regulator

2.6.4.1 There are important differences between the ways the regulator would oversee a traditional training programme versus a competency-based training programme. In a traditional training programme, the authority may assess the course components and final test against the elements described in Part 1, Chapter 4, Tables 1-4 and 1-5 of this edition of the Technical Instructions. The fact that all components of the course are there (or appear to be there) does not necessarily mean that training is effective.

2.6.4.2 Where competency-based training has been implemented, regulators should oversee the training programme to ensure that it actually produces personnel that can perform the function for which they are responsible in a specific operational setting and in compliance with the national regulatory framework.

2.7 DEVELOPING COMPETENCY-BASED TRAINING FOR DANGEROUS GOODS

2.7.1 Methods used to develop the ICAO competency framework

2.7.1.1 A competency framework for dangerous goods personnel and complementary flow charts are provided in Chapter 3. The competency framework consists of competency units, competency elements and performance criteria which are defined in the PANS-TRG as:

- a) **Competency unit.** A discrete function consisting of a number of competency elements.
- b) **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.
- c) **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.

2.7.1.2 All responsibilities of personnel involved in transport of dangerous goods by air are described by the following six functions which correspond to the competency units:

- a) classifying dangerous goods;
- b) preparing a dangerous goods shipment;
- c) processing/accepting cargo;
- d) managing cargo pre-loading;
- e) accepting passenger and crew baggage; and

- f) transporting cargo/baggage.

The flowcharts in Chapter 4 illustrate the typical processes of performing these functions.

Note 1.— Reporting of dangerous accidents, incidents and other occurrences have not been included as a function as reporting may be required at any point after dangerous goods have been prepared for transport.

Note 2.— While it is recognized that security screening is not a dangerous-goods specific function, security screening staff should have some knowledge of dangerous goods to assist in the detection and removal of dangerous goods not permitted in the transport system.

2.7.2 Methods to develop competency-based training

2.7.2.1 An employer conducts a training needs analysis to determine what they need as a result of training and what their resources are to achieve this result. This critical step will ensure that training fits the employer's purpose and is effective.

2.7.2.2 The employer selects the appropriate competencies associated with the functions that its personnel perform from the ICAO competency framework. In doing so, employers must consider their own operational and organizational environments. For example, one operator may accept dangerous goods shipments as cargo while another may not; a shipper may be dealing with a single class of dangerous goods, while another deals with many. In addition, an employer must consider domestic and international regulatory requirements that apply to their operations. Prior to proceeding with the development of competency-based training, where appropriate, employers should liaise directly with the regulator to ensure that their requirements are taken into account.

2.7.2.3 The employer then determines the level of knowledge and/or skills necessary to perform each of the customized competencies. For example, the person accepting dangerous goods will not require the same level of knowledge and/or skills related to classification as someone who is classifying dangerous goods. Chapter 5 provides a sample matrix tool that can be used to determine the knowledge personnel performing specific functions should maintain. Functions corresponding to the competency framework provided in Chapter 3 are listed across the columns of the table and subject matter (knowledge) is listed down the rows. The employer should indicate what knowledge is needed for a particular function within the organization with a check mark at the point at which the competency element and the knowledge element intersect.

2.7.2.4 The employer must study the target population (future trainees) with a view to identifying the knowledge, skills and attitudes that they already have and to collecting information on preferred learning styles and on the social and linguistic environments of prospective trainees, all of which could have an impact on the training design. The target population may be a mixture of experienced and newly recruited personnel, groups differing in age, etc. All this information is important for determining the knowledge, skills and attitudes already possessed by the target population and for designing the most appropriate programme of instruction.

2.7.2.5 The employer documents the result of the above work as its own customized competency framework. Training can then be designed based on this competency framework.

Chapter 3

DANGEROUS GOODS COMPETENCY FRAMEWORK

ABBREVIATIONS USED

<i>Abbreviation</i>	<i>Meaning</i>
CU	Competency unit
CE	Competency element
PC	Performance criteria

COMPETENCY FRAMEWORK

CU 1 Classifying dangerous goods

- CE 1.1 Evaluate substances or articles against classification criteria, as applicable
 - PC 1.1.1 Determine if it is dangerous goods
 - PC 1.1.2 Determine if it is forbidden under any circumstances
- CE 1.2 Determine dangerous goods description
 - PC 1.2.1 Determine class or division
 - PC 1.2.2 Determine packing group, if applicable
 - PC 1.2.3 Determine proper shipping name and UN number
 - PC 1.2.4 Determine if it is forbidden unless approval or exemption is granted
- CE 1.3 Review special provisions
 - PC 1.3.1 Assess if special provision(s) is applicable
 - PC 1.3.2 Apply special provision(s)

CU 2 Preparing dangerous goods shipment

- CE 2.1 Assess packing options including quantity limitations
 - PC 2.1.1 Consider limitations (de minimus quantities, excepted quantities, limited quantities, passenger aircraft, cargo aircraft only, special provisions)
 - PC 2.1.2 Consider State and operator variations
 - PC 2.1.3 Determine if all-packed-in-one can be used
 - PC 2.1.4 Select how dangerous goods will be shipped based on limitations and variations
- CE 2.2 Apply packing requirements
 - PC 2.2.1 Consider constraints of packing instructions
 - PC 2.2.2 Select packaging materials (absorbent, cushioning, etc.)
 - PC 2.2.3 Assemble package
- CE 2.3 Apply marks and labels
 - PC 2.3.1 Determine applicable marks
 - PC 2.3.2 Apply marks
 - PC 2.3.3 Determine applicable labels
 - PC 2.3.4 Apply labels
- CE 2.4 Determine if overpack can be used
 - PC 2.4.1 Apply marks if necessary
 - PC 2.4.2 Apply labels if necessary
- CE 2.5 Prepare documentation
 - PC 2.5.1 Complete the dangerous goods transport document
 - PC 2.5.2 Complete other transport documents (e.g. AWB)
 - PC 2.5.3 Include other required documentation (e.g. approvals/exemptions, etc.), as applicable
 - PC 2.5.4 Retain copies of documents as required

CU 3 Processing/accepting cargo

- CE 3.1 Review documentation
 - PC 3.1.1 Verify air waybill
 - PC 3.1.2 Verify dangerous goods transport document
 - PC 3.1.3 Verify other documents as applicable (exemptions, approvals, etc.)
 - PC 3.1.4 Verify State/operator variations
- CE 3.2 Review package(s)
 - PC 3.2.1 Verify marking
 - PC 3.2.2 Verify label
 - PC 3.2.3 Verify package type
 - PC 3.2.4 Verify package conditions
 - PC 3.2.5 Verify State/operator variations
- CE 3.3 Complete acceptance procedures
 - PC 3.3.1 Complete acceptance checklist, if applicable
 - PC 3.3.2 Provide shipment information for load planning
 - PC 3.3.3 Retain documents as required
- CE 3.4 Process/accept cargo other than dangerous goods
 - PC 3.4.1 Check documentation for indications of undeclared dangerous goods
 - PC 3.4.2 Check packages for indications of undeclared dangerous goods

CU 4 Managing cargo pre-loading

- CE 4.1 Plan loading
 - PC 4.1.1 Determine stowage requirements
 - PC 4.1.2 Determine segregation, separation, aircraft/compartment limitations
- CE 4.2 Prepare load for aircraft
 - PC 4.2.1 Check packages for indications of undeclared dangerous goods
 - PC 4.2.2 Check for damage and/or leakage
 - PC 4.2.3 Apply stowage requirements (e.g. segregation, separation, orientation)
 - PC 4.2.4 Apply ULD tags when applicable
 - PC 4.2.5 Transport cargo to aircraft
- CE 4.3 Issue NOTOC
 - PC 4.3.1 Enter required information
 - PC 4.3.2 Verify conformance with load plan
 - PC 4.3.3 Transmit to loading personnel

CU 5 Accepting passenger and crew baggage

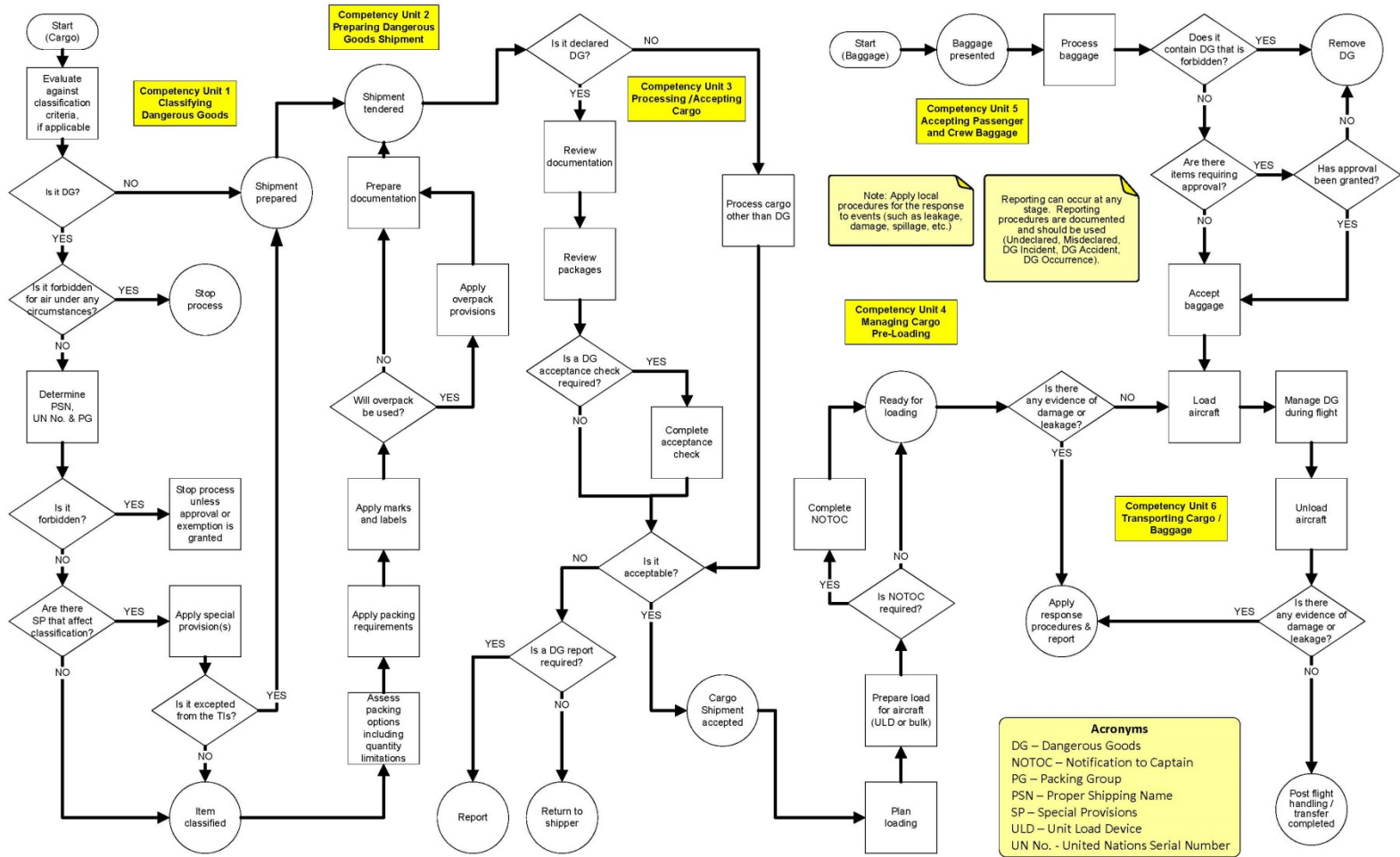
- CE 5.1 Process baggage
 - PC 5.1.1 Identify forbidden dangerous good
 - PC 5.1.2 Apply approval requirements
- CE 5.2 Accept baggage
 - PC 5.2.1 Apply operator requirements
 - PC 5.2.2 Advise pilot in command

CU 6 Transporting cargo/baggage

- CE 6.1 Load aircraft
 - PC 6.1.1 Transport cargo/baggage to aircraft
 - PC 6.1.2 Check packages for indications of undeclared dangerous goods
 - PC 6.1.3 Check for damage and/or leakage
 - PC 6.1.4 Apply stowage requirements (e.g. segregation, separation, orientation)
 - PC 6.1.5 Verify that NOTOC reflects against aircraft load
 - PC 6.1.6 Verify passenger baggage requirements if applicable
 - PC 6.1.7 Inform pilot-in-command and flight operations officer/flight dispatcher
- CE 6.2 Manage dangerous goods during flight
 - PC 6.2.1 Detect presence of dangerous goods not permitted in baggage
 - PC 6.2.2 Apply procedures in the event of an emergency
 - PC 6.2.3 Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency
- CE 6.3 Unload aircraft
 - PC 6.3.1 Apply specific unloading considerations as applicable
 - PC 6.3.2 Check packages for indications of undeclared dangerous goods
 - PC 6.3.3 Check for damage and/or leakage
 - PC 6.3.4 Transport cargo/baggage to facility/terminal

Chapter 4

DANGEROUS GOODS FUNCTIONS — PROCESS FLOWCHART



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Chapter 5
FUNCTION/KNOWLEDGE MATRIX TOOL

Template for determining the knowledge personnel performing specific functions should maintain
(CU = Competency Unit CE = Competency element)

	Dangerous goods functions																			
	CU 1 Classifying dangerous goods			CU 2 Preparing dangerous goods shipment					CU 3 Processing/ accepting cargo				CU 4 Managing cargo pre- loading			CU 5 Accepting passenger and crew baggage		CU 6 Transporting cargo/baggage		
	CE 1.1	CE 1.2	CE 1.3	CE 2.1	CE 2.2	CE 2.3	CE 2.4	CE 2.5	CE 3.1	CE 3.2	CE 3.3	CE 3.4	CE 4.1	CE 4.2	CE 4.3	CE 5.1	CE 5.2	CE 6.1	CE 6.2	CE 6.3
Dangerous goods knowledge																				
Scope and applicability																				
Limitation of dangerous goods on aircraft																				
Definitions																				
Training																				
Dangerous goods security																				
General provisions concerning radioactive material																				
Reporting of dangerous goods accidents, incidents and other occurrences																				
Classification — General																				
Classification — Class 1																				
Classification — Class 2																				
Classification — Class 3																				
Classification — Class 4																				
Classification — Class 5																				
Classification — Class 6																				
Classification — Class 7																				
Classification — Class 8																				
Classification — Class 9																				
Dangerous goods list — General																				
Dangerous goods list — Arrangement																				

	Dangerous goods functions																			
	CU 1 Classifying dangerous goods			CU 2 Preparing dangerous goods shipment					CU 3 Processing/ accepting cargo				CU 4 Managing cargo pre- loading			CU 5 Accepting passenger and crew baggage		CU 6 Transporting cargo/baggage		
	CE 1.1	CE 1.2	CE 1.3	CE 2.1	CE 2.2	CE 2.3	CE 2.4	CE 2.5	CE 3.1	CE 3.2	CE 3.3	CE 3.4	CE 4.1	CE 4.2	CE 4.3	CE 5.1	CE 5.2	CE 6.1	CE 6.2	CE 6.3
Dangerous goods knowledge																				
Special provisions																				
Dangerous goods in limited quantities																				
Dangerous goods packed in excepted quantities																				
Packing Instructions — General																				
Packing Instructions — Class 1																				
Packing Instructions — Class 2																				
Packing Instructions — Class 3																				
Packing Instructions — Class 4																				
Packing Instructions — Class 5																				
Packing Instructions — Class 6																				
Packing Instructions — Class 7																				
Packing Instructions — Class 8																				
Packing Instructions — Class 9																				
Preparing dangerous goods shipment — general																				
Package markings																				
Labelling																				
Documentation																				
Packaging applicability, nomenclature and codes																				
Marking of packagings other than inner packagings																				
Requirements for packagings																				
Packaging performance tests																				

Dangerous goods knowledge	Dangerous goods functions																			
	CU 1 Classifying dangerous goods			CU 2 Preparing dangerous goods shipment					CU 3 Processing/ accepting cargo				CU 4 Managing cargo pre- loading			CU 5 Accepting passenger and crew baggage		CU 6 Transporting cargo/baggage		
	CE 1.1	CE 1.2	CE 1.3	CE 2.1	CE 2.2	CE 2.3	CE 2.4	CE 2.5	CE 3.1	CE 3.2	CE 3.3	CE 3.4	CE 4.1	CE 4.2	CE 4.3	CE 5.1	CE 5.2	CE 6.1	CE 6.2	CE 6.3
Requirements for the construction and testing of cylinders and closed cryogenic receptacles, aerosol dispensers and small receptacles containing gas (gas cartridges) and fuel cell cartridges containing liquefied flammable gas																				
Packagings for infectious substances of Category A																				
Requirements for the construction, testing and approval of packages for radioactive material and for the approval of such material																				
Acceptance procedures																				
Storage and loading																				
Inspection and decontamination																				
Provision of information																				
Provisions concerning passengers and crew																				
Provisions to aid recognition of undeclared dangerous goods																				
Helicopter operations																				
Provisions for dangerous goods carried by passengers or crew																				

Competency elements

- 1.1 — Evaluate substances or articles against classification criteria, as applicable
- 1.2 — Determine dangerous goods description
- 1.3 — Review special provisions
- 2.1 — Assess packing options including quantity limitations
- 2.2 — Apply packing requirements

- 2.3 — Apply marks and labels
- 2.4 — Determine if overpack can be used
- 2.5 — Prepare documentation
- 3.1 — Review documentation
- 3.2 — Review package(s)
- 3.3 — Complete acceptance procedures
- 3.4 — Process/accept cargo other than dangerous goods
- 4.1 — Plan loading
- 4.2 — Prepare load for aircraft
- 4.3 — Issue NOTOC
- 5.1 — Process baggage
- 5.2 — Accept baggage
- 6.1 — Load aircraft
- 6.2 — Manage dangerous goods during flight
- 6.3 — Unload aircraft

APPENDIX B

PROPOSED AMENDMENT TO THE SUPPLEMENT TO THE TECHNICAL INSTRUCTIONS TO INCORPORATE GUIDANCE MATERIAL ON COMPETENCY-BASED TRAINING FOR DANGEROUS GOODS STATE EMPLOYEES

Part S-1

GENERAL

(ADDITIONAL INFORMATION FOR PART 1 OF THE TECHNICAL INSTRUCTIONS)

...

Insert new Chapter 4 as follows:

Chapter 4

GUIDANCE TO STATES ON COMPETENCY-BASED TRAINING FOR STATE EMPLOYEES INVOLVED IN THE REGULATION AND OVERSIGHT OF TRANSPORT OF DANGEROUS GOODS BY AIR

1.1 INTRODUCTION

1.1.1 The objective of this chapter is to provide guidance to States in implementing competency-based training and assessment for personnel engaged in policies, regulation, inspection and supervision of work related to the transport of dangerous goods by air. It includes a competency framework for the uniform implementation of training and assessment required for State employees who must ensure compliance with their State's obligations and with Annex 18 — *The Safe Transport of Dangerous Goods by Air*.

1.1.2 It is noted that States use a variety of systems to exercise safety oversight in the transport of dangerous goods by air. ICAO's safety oversight audits have identified differences among States in their inspectors' performance standards and in the implementation of their respective civil aviation dangerous goods programmes. For example, one State may have a clearly-defined process for the approval of dangerous goods training programmes while another may not. Applying a common competency framework would result in harmonized performance standards of State employees.

1.1.3 A generic competency framework for State employees is at Attachment I to this chapter. This competency framework reflects safety-critical tasks and, when applied, will have a positive impact on specific dangerous goods functions and the ability of individuals to perform their jobs successfully and to the required standards. Each State must provide specific training for these functions to each of its employees involved in policy making, regulation and oversight of compliance of dangerous goods transported by air.

1.2 TERMINOLOGY

For the purpose of this chapter, the following terminology applies:

Air operator certificate. A certificate authorizing an operator to carry out specified civil air transport operations.

Competency. A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard.

Competency-based training and assessment. Training and assessment that are characterized by a performance orientation, emphasis on standards of performance and their measurement, and the development of training to the specified performance standards.

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.

Competency unit. A discrete function consisting of a number of competency elements.

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.

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 or discussions with persons performing transportation functions are used to gather information concerning the transportation of dangerous goods;
- c) document review: reviewing paper or electronic records to determine whether required documents are properly prepared, contain accurate information, and maintained as required by the regulations;
- d) verification: using third party information to independently confirm whether regulatory requirements are being met; and
- e) procedure evaluation: ensuring appropriate written procedures, addressing all regulated activities undertaken, are in place.

Operations manual. A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

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

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.

Shipper. A person, organization or enterprise undertaking any of the shipper's responsibilities of Part 5 of the Technical Instructions.

COMPETENCY FRAMEWORK FOR STATE EMPLOYEES

1. SCOPE OF THE COMPETENCY FRAMEWORK

1.1 The scope of the competency framework concerns State employees involved in the regulation and oversight of the transport of dangerous goods by air based on obligations of States according to the Convention on International Civil Aviation:

- a) the State is responsible for implementing a system for determining compliance with Annex 18; and
- b) the application of the basic principles of a competency-based approach determines the performance level for State employees in carrying out their function to meet the State's obligations as defined by the Annex 18;

1.2 The competency framework has taken into account the "ICAO Safety Oversight Transport of Dangerous Goods Audit Checklist", itemizing the separate civil aviation dangerous goods programme activities required by a State:

- a) conduct initial review and approval of an operation manual and training programme on dangerous goods within the approval procedures for the AOC;
- b) conduct initial inspection of new operator or operator that intends to commence carriage of dangerous goods;
- c) conduct periodic inspection of the operator;
- d) conduct an ad-hoc inspection on dangerous shipping and handling procedures
- e) conduct an investigation on dangerous goods accidents, incidents and other occurrences resulting from violations of the dangerous goods regulations;
- f) conduct a review of a revised operation manual on dangerous goods within the approval procedures for the AOC;
- g) conduct a review of a revised training programme for approval;
- h) conduct periodic inspection of shippers; and
- i) ensure that technical equipment required for inspection is being maintained and/or calibrated.

These activities have been included in the competency framework.

1.3 The details of the competency framework are based on common practices as applied by a number of States on training, operational procedures for inspection, surveillance and enforcement.

2. STRUCTURE OF THE DOCUMENT

2.1 Distinction is made between competencies of a "general nature" which are applicable to all State employees and competencies related to the actual "technical performance" of a State employee in relation to their specific tasks.

2.2 For task-related competencies, the basic competency framework is structured according to three levels defined in the *Procedures for Air Navigation Services — Training* (PANS-TRG, Doc 9868): competency units, competency elements, and performance criteria. Further detailing at these three levels is derived from job and task analyses of common practices in some States.

2.3 Regarding the responsibilities of State employees and the principles applicable to the definition of the competency framework, distinction has been made between different functional levels: strategic, managerial and operational.

2.4 Taking into account the above, the competency framework for State employees is based on:

- a) Core competencies applicable to all State employees:
 - core competencies and personal attributes; and
 - general awareness, knowledge and skills;
- b) Competency units related to specific activities of State employees:
 - support the development and implementation of a State dangerous goods programme
 - approve an operator's dangerous goods system;

- conduct oversight of dangerous goods operations;
- conduct oversight of dangerous goods operations; and
- evaluate dangerous goods accidents, incidents and other occurrences

3. CORE COMPETENCIES APPLICABLE TO ALL STATE EMPLOYEES

Core competencies have not yet been identified for State employees. This will be done once the work of the Next Generation of Aviation Professionals Task Force progresses its work is in progress and will provides a standardized basis from which to work.

5. COMPETENCIES RELATED TO SPECIFIC ACTIVITIES OF STATE EMPLOYEES

Dangerous goods are 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. The transport of dangerous goods is recognized as an integral part of a State's overall safety oversight programme. Each State must provide training to each of its dangerous goods employees which emphasizes a State's specific dangerous goods standards and regulations. Training should be designed so that it enables all State employees involved in dangerous goods oversight to perform their tasks. In the same manner in which States require industries performing dangerous goods related functions to be trained in the transport of dangerous goods, States should provide their employees with training commensurate with their responsibilities. Table S-1-1 identifies competencies related to the specific activities conducted by dangerous goods State employees.

Table S-1-1. Competency framework for State employees**COMPETENCY FRAMEWORK FOR DANGEROUS GOODS STATE EMPLOYEES****CU 1 Support the development and implementation of a State dangerous goods programme**

CE 1.1 Develop regulations

PC 1.1.1 Apply procedures to develop national regulations on the air transport of dangerous goods

PC 1.1.2 Monitor relevant changes to ICAO and other relevant international provisions that may impact national dangerous goods air transport regulations

PC 1.1.3 Develop guidance on how to comply with national regulations

CE 1.2 Develop policies and procedures

PC 1.2.1 Develop policies and procedures to approve an operator's manuals specific to dangerous goods

PC 1.2.2 Develop policies and procedures to approve an operator's training program specific to dangerous goods

PC 1.2.3 Develop policies and procedures to conduct oversight of entities performing any functions prescribed in national regulations for the air transport of dangerous goods

PC 1.2.4 Develop surveillance work plan

CE 1.3 Develop tools to support the implementation of national regulations

PC 1.3.1 Develop guidance material for entities performing any functions prescribed in national regulations for the air transport of dangerous goods

PC 1.3.2 Develop training for personnel overseeing any function prescribed in national regulations for the air transport of dangerous goods

PC 1.3.3 Develop public awareness materials related to dangerous goods

CU 2 Approve an operator's dangerous goods system

CE 2.1 Approve dangerous goods component of the operations manual

PC 2.1.1 Verify the manual against the national regulations, policies and procedures for transport by air of dangerous goods

PC 2.1.2 Recommend amendments to the operations manual as necessary

PC 2.1.3 Verify that amendments in operations manual are completed

PC 2.1.4 Issue the approval

CE 2.2 Approve dangerous goods training programme

PC 2.2.1 Verify the training programme against the national regulations, policies and procedures for transport by air of dangerous goods

PC 2.2.2 Verify that the training programme addresses all dangerous goods functions identified in the operations manual

PC 2.2.3 Recommend amendments to the training programme as necessary

PC 2.2.4 Verify that amendments to training programme are completed

PC 2.2.5 Issue the approval

CU3 Conduct oversight of dangerous goods operations

CE 3.1 Prepare for inspection

PC 3.1.1 Analyze information on dangerous goods-related functions

PC 3.1.2 Plan inspection activities

CE 3.2 Conduct inspection

PC 3.2.1 Communicate scope and intent of inspection

PC 3.2.2 Determine compliance with national regulations, policies and procedures for transport by air of dangerous goods

CE 3.3 Finalize inspection

PC 3.3.1 Communicate inspection results

PC 3.3.2 Document inspection results

CU 4 Evaluate dangerous goods accidents, incidents and other occurrences

CE 4.1 Conduct investigation

PC 4.1.1 Gather evidence

PC 4.1.2 Verify non-compliance against national regulations for dangerous goods transport by air

CE 4.2 Take corrective/appropriate action

PC 4.2.1 Document specific areas of non-compliance

PC 4.2.2 Apply national enforcement policy

PC 4.2.3 Confirm effectiveness of corrective action

— END —