



## **GUIDANCE FOR DEVELOPMENT OF DANGEROUS GOODS TRAINING PROGRAMS**

**Purpose**— This Advisory Circular (AC) provides specific guidance to organizations needing to approval of dangerous goods training programs.

### Table of Contents

|   |   |
|---|---|
| Section 1 General .....   | 2 |
| 1.1 Status of this Advisory Circular .....                                    | 2 |
| 1.2 Background .....  | 2 |
| 1.3 Applicability .....   | 3 |
| 1.4 Related Regulations .....   | 3 |
| 1.5 Related Publications .....  | 3 |
| 1.6 Definitions & Acronyms .....  | 3 |
| Section 2 Summary of Requirements .....                                       | 4 |
| 2.1 General Training Requirements .....                                       | 4 |
| 2.2 ICAO-TI Specific Personnel Needing Training .....                         | 5 |
| 2.3 Specific Training Subject Elements for Specific Groups of Employees ..... | 5 |
| 2.4 Verifiable & Recent Training .....  | 5 |
| Section 3 Training Programs to be Approved by RCAA-FSS .....                  | 6 |
| 3.1 General Policy .....  | 6 |
| 3.2 Employee Groupings for Training Programs .....                            | 6 |
| 3.3 RCAA Evaluation Actions .....   | 7 |
| 3.4 Interim Approval .....  | 7 |
| 3.5 Operational Approval .....  | 7 |
| 3.6 Adaptation of Curriculum Allowed .....                                    | 7 |
| 3.7 Application for Re-Approval of a Training program .....                   | 7 |
| 3.8 Unsatisfactory Training programs .....                                    | 8 |
| Section 4 Training Programs .....   | 8 |
| 4.1 Training Program .....  | 8 |

- Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.
- Where an AC is referred to in a 'Note' below the regulation, the AC remains as guidance material,
- ACs should always be read in conjunction with the referenced regulations.

|   |    |
|---|----|
| Section 5 Lesson Plans .....                                      | 9  |
| 5.1 Need for Lesson Plans .....                                   | 9  |
| 5.2 Acceptable Lesson Plans .....                                 | 9  |
| Section 6 Dangerous Goods Instructors .....                       | 9  |
| 6.1 Approval Required .....                                       | 9  |
| 6.2 Qualification .....   | 10 |
| 6.3 Continuing Experience .....                                   | 10 |
| Section 7 Training Records Contents & Retention .....             | 10 |
| 7.1 Requirement for Records .....                                 | 10 |
| 7.2 Content of a Training Record .....                            | 10 |
| 7.3 Period of Retention .....                                     | 10 |
| Section 8 Service Provider Arrangements .....                     | 11 |
| 8.1 Availability of Training programs from External Sources ..... | 11 |
| 8.2 Delegation To Conduct Training .....                          | 11 |
| 8.3 Approval of DG Service & Training Providers .....             | 11 |
| Appendix A<br>Rwanda Requirements for DG Training .....           | 12 |
| Appendix B<br>Objectives for Curriculum Segments .....            | 13 |

## **SECTION 1 GENERAL**

### **1.1 STATUS OF THIS ADVISORY CIRCULAR**

This is an original issuance of this AC.

### **1.2 BACKGROUND**

- A. ICAO Standards in Annex 18, Safe Transportation of Dangerous Goods by Air, require that Rwanda must complete an assessment of an individual, organization or entity before issuing an authorization allowing these entities to engage in the process of transportation of dangerous goods by air.
- B. In support of its international safety oversight obligations, Rwanda has safety legislation and guidance regarding the requirements that apply to the safe transportation of dangerous goods, including—
  - 1) RCAR, Part 18; and
  - 2) Dangerous goods advisory circulars
- C. Rwanda has established a certification process to ensure the completeness and standardization for the issuance of authorizations to transport dangerous goods by air.

### 1.3 APPLICABILITY

- A. All organizations and entities are required to have an approved dangerous goods training programs, including curriculums for each function identified as applicable to the personnel that they assign to work in the dangerous goods transportation process.
- B. All individuals involved in the process of transport of dangerous goods by air are required to have completed—
  - 1) The approved initial training curriculum applicable to their specific function before performing that function; and
  - 2) Subsequent recurrent training as required by the applicable regulations and the approved training curriculum.
- C. The training requirements of RCAR Part 18 do not apply to operators of aircraft not registered in Rwanda who undertake the training of their own Rwanda-based staff.
- D. However, they do apply to Rwanda-based handling agents of those operators.

### 1.4 RELATED REGULATIONS

The following regulations are directly applicable to the guidance contained in this advisory circular—

- RCAR Part 18, Carriage of Dangerous Goods by Air

### 1.5 RELATED PUBLICATIONS

For further information on this topic, individuals, organizations and other entities are invited to consult the following publications—

- 1) Rwanda Civil Flight Safety Services (RCAA)

Copies may be obtained from the RCAA Flight Safety Services.

- ◆ AC 18-001, Process & Application: Transportation of Dangerous Goods by Air.
- ◆ AC 18-002, Guidance for Development of Dangerous Goods Manuals

- 2) International Air Transport Association (IATA)

- ◆ Dangerous Goods Regulations

- 3) International Civil Aviation Organization (ICAO)

- ◆ Annex 18, Safe Transportation of Dangerous Goods by Air

Copies may be obtained from Document Sales Unit, ICAO, 999 University Street, Montreal, Quebec, Canada H3C 5H7.

- ◆ Technical Instructions (TI)

### 1.6 DEFINITIONS & ACRONYMS

#### 1.6.1 DEFINITIONS

- A. The following definitions are used in this advisory circular—
  - 1) **Dangerous goods.** Articles or substances which are capable of posing a risk to health, safety, property or the environment when transported by air and which are classified according to the International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air.

- 2) **Dangerous goods accident.** An occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person or major property damage.
- 3) **Dangerous goods incident.** An occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardizes the aircraft or its occupants is also deemed to constitute a dangerous goods incident.
- 1) **Hazardous chemical** – Any chemical which has properties that present either physical or health hazards. Hazardous chemicals include both physical and health hazards.
- 2) **Hazardous materials** – A substance or material which is capable of posing an unreasonable risk to health, safety and property when transported. (See also the definition of “dangerous goods.”)
- 3) **Hazardous Occurrence:** accident or other occurrence arising in the course of or in connection with the employee’s work that has caused or is likely to cause injury to that employee or to any other person
- 4) **Hazardous waste** – A discarded substance that because of its quantity, concentration, physical, chemical or infectious characteristics may cause or contribute to a serious illness or pose a substantial or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of.

### **1.6.2 ACRONYMS**

The following acronyms are used in this manual—

- 5) **AOC** – Air Operator Certificate
- 6) **RCAA** – Rwanda Civil Flight Safety Services
- 7) **RCAR(s)** – Rwanda Civil Aviation Regulation(s)
- 8) **DG** – Dangerous Goods
- 9) **DGC** – Dangerous Goods Coordinator
- 10) **FSS** – Flight Safety Services
- 11) **IAEA** – International Atomic Energy Agency.
- 12) **IATA** – International Air Transport Association
- 13) **ICAO** – International Civil Aviation Organization
- 14) **ICAO-TI’s** – International Civil Aviation Organization Technical Instruction for the Safe Transport of Dangerous Goods by Air.

## **SECTION 2 SUMMARY OF REQUIREMENTS**

### **2.1 GENERAL TRAINING REQUIREMENTS**

The RCAR Part 18 requires the training specified by ICAO-TI. Those training requirements are—

- 1) The content of training programs must be as specified in the Technical Instructions.
-

- 2) Initial and training programs must be established and maintained as required by the Technical Instructions.
- 3) Recurrent training must take place not less than every two years.
- 4) Records of training must be maintained as required by the Technical Instructions.
- 5) RCAA-FSS approval is required for the training programs of training providers, handling agents (dangerous goods acceptance staff only) and operators of Rwanda-registered aircraft (all categories of staff).

## 2.2 ICAO-TI SPECIFIC PERSONNEL NEEDING TRAINING

The training requirements of the ICAO-TI (Part 1, Chapter 4) are that initial and recurrent dangerous goods training programs must be established and maintained by or on behalf of—

- 1) Shippers of dangerous goods, including packers and persons or organizations undertaking the responsibilities of the shipper;
- 2) Operators;
- 3) Ground handling agencies which perform, on behalf of the operator, the act of accepting, handling, loading, unloading, transferring or other processing of cargo, mail or stores;
- 4) Ground handling agencies located at an airport which perform, on behalf of the operator, the act of processing passengers;
- 5) Agencies, not located at an airport, which perform, on behalf of the operator, the act of checking in passengers;
- 6) Freight forwarders; and
- 7) Agencies engaged in the security screening of passengers and their baggage and/ or cargo, mail or stores.

## 2.3 SPECIFIC TRAINING SUBJECT ELEMENTS FOR SPECIFIC GROUPS OF EMPLOYEES

- A. The training elements, hand-on exercises and written exams that are included in the curriculum for a specific employee grouping must be commensurate with their responsibilities.
- B. The training elements of each curriculum segment must include—
  - 1) *General familiarization training* – which must be aimed at providing familiarity with the general provisions;
  - 2) *Function Specific Training* – which must provide detailed training in the requirements applicable to the function for which that person is responsible; and
  - 3) *Safety training* (as applicable to the particular curriculum segment) – which must cover the hazards presented by dangerous goods, safe handling and emergency procedures.

## 2.4 VERIFIABLE & RECENT TRAINING

- A. Training must be provided, or verified, upon the employment of a person in a position involving the transport of dangerous goods by air or the processing of cargo or passengers.
  - B. Recurrent training must take place within 24 months of previous training to ensure knowledge is current.
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- C. A test to verify understanding must be undertaken following training.
- D. The subject matter relating to dangerous goods transport with which various categories of personnel should be familiar is indicated in Appendix A of this AC.



Confirmation that the test has been completed satisfactorily is required.

## SECTION 3 TRAINING PROGRAMS TO BE APPROVED BY RCAA-FSS

### 3.1 GENERAL POLICY

- A. The Technical Instructions require that the training programs for Rwanda operators be approved by the RCAA-FSS and recommend the approval of all other training programs.
- B. RCAA-FSS has decided that the training programs which will be subject to approval are those produced by —
- 1) Operators of Rwanda registered aircraft;
  - 2) Holders of Air Operator Certificates or Aerial Work Certificates granted by RCAA-FSS;
  - 3) Handling agents (dangerous goods acceptance staff only); and
  - 4) Training providers.
- C. Training programs subject to RCAA-FSS evaluation and approval include those training programs produced by—
- 1) Training providers on behalf of shippers and dangerous goods acceptance staff; and
  - 2) Operators and handling agents for the training of dangerous goods acceptance staff.

- Even if a training program is not subject to RCAA-FSS approval, it does not absolve a company from establishing and maintaining training programs for its staff as required by the Technical Instructions.
- RCAR Part 18 places the responsibility on all companies or organizations to have training programs for their relevant staff.

### 3.2 EMPLOYEE GROUPINGS FOR TRAINING PROGRAMS

- A. Under the current training approval process, there are four employee groupings for which individual approval is required.
- B. These employees groupings are—
- 1) The responsibilities of shippers and freight forwarders in the transport of dangerous goods by air, other than those related to the detailed requirements for radioactive material.
  - 2) The responsibilities of shippers and freight forwarders in the transport of radioactive material by air.
  - 3) The responsibilities of operators and handling agents in the acceptance of dangerous goods for transport by air, other than those related to the detailed requirements for radioactive material.
  - 4) The responsibilities of operators and handling agents in the acceptance of radioactive material for transport by air.
- C. The evaluation and approval of training programs of Rwanda operators, with the exception of dangerous goods acceptance staff, where the training is given by employees of that operator, is currently carried out by the RCAA-FSS.

### 3.3 RCAA EVALUATION ACTIONS

- A. In evaluating a training program before recommending approval to the Dangerous Goods Coordinator, the RCAA-FSS will assess whether the objectives have been met and if the material and course cover all the required areas.
- B. The RCAA-FSS to grant of approval will be based on evaluation of a training program.
- C. Subsequent verification visits will be made by the RCAA-FSS to confirm that the approved training program is being taught.
- D. Where a training program has been adapted subsequent to the approval, either for individual need or to provide recurrent training, the inspector may ask for the adapted training program.

The grant of approval to a DG training program or curriculum be made prior any monitoring of the actual conduct of the curriculum training.

### 3.4 INTERIM APPROVAL

- A. Interim approval of a DG training program or curriculum is granted to an organization prior to the actual beginning of training.
- B. This approval is granted by a letter issued by RCAA-FSS stating that program has been given “interim” approval.

### 3.5 OPERATIONAL APPROVAL

- A. Operational approval of a DG training program or curriculum is granted to an organization after RCAA-FSS has had an opportunity to assess the success of the program through inspection of—
  - 1) Training-in-progress;
  - 2) Training records;
  - 3) DG instructor performance; or
  - 4) A combination of these inspections.
- B. This approval is granted by a letter of approval issued by RCAA-FSS stating that the program has been given “operational” approval

### 3.6 ADAPTATION OF CURRICULUM ALLOWED

- A. Generally, a training program submitted for initial approval will be expected to cover in a broad way all the areas of training for the type of training program and not concentrate entirely on particular requirements.
- B. Once a training program has been approved it may be adapted for individual need, such as concentrating on a specific class or proper shipping name, without any further approval being needed.
- C. Once a training program has been approved it may be adapted to cover recurrent training without any further approval being needed, even if such training does not cover all the areas dealt with by the approved training program.

### 3.7 APPLICATION FOR RE-APPROVAL OF A TRAINING PROGRAM

- A. The approval for a training program is generally granted for a period of two years; after that time it will be necessary for the program to be re-evaluated.

- B. An application for re-approval should be made at least 30 calendar days prior to the expiration date.
  - 1) Under RCAR Part 18 of the, a training provider must be approved to offer the training program and curriculums outlined in Appendix A of this AC.
  - 2) Training providers are encouraged to apply for re-approval in good time so that continuity of approval and training program delivery can be achieved.
  - 3) Failure to provide sufficient time for re-approval may result in planned courses being rescheduled.

### **3.8 UNSATISFACTORY TRAINING PROGRAMS**

- A. If RCAA-FSS determines that a training program is no longer satisfactory, the DGC may discuss with the training provider what action needs to be taken to improve matters and an action plan will be agreed.
- B. If this does not result in improvement or no remedial action is taken, the RCAA-FSS may revoke the training approval.
  - 1) If an approval is revoked, the training provider will no longer be able to offer or give training under the training program(s).
  - 2) A training provider may appeal revocation of the approval to the RCAA Director.
- C. If a training approval is revoked and the training provider wishes a training program to be considered for re-approval, by the RCAA-FSS will decide what action needs to be taken; each case will be considered separately.

## **SECTION 4 TRAINING PROGRAMS**

### **4.1 TRAINING PROGRAM**

The general portion of the training program should include the policies relating to—

- 1) Company training organization
- 2) Training responsibilities;
- 3) Training facilities;
- 4) Instructor qualification;
- 5) Training records; and
- 6) Training curriculum.

#### **4.1.1 CURRICULUMS**

Training curriculums should be developed for each—

- 1) Technical work force groupings; and
- 2) Curriculum numbers as listed in Appendix A to this circular.

#### **4.1.2 CURRICULUM SEGMENTS**

- A. Each curriculum should include curriculum segments identified for that curriculum number as identified in Appendix A to this circular.
  - B. Each curriculum segment will include training—
    - 1) Objectives selected from Appendix B of this AC and
-



- 2) Subject and exercise elements that achieve those objectives.

## **SECTION 5 LESSON PLANS**

### **5.1 NEED FOR LESSON PLANS**

- A. If instructors do not have lesson plans for their training courses and rely on their memory, there is the possibility that the subject may not be covered fully or in a structured way, leaving the students confused or feeling their training has been inadequate.
- B. In the training approval, lesson plan are considered important, since they are the means of ensuring the training covers the approved training program and that the information given by the instructor is accurate and appropriate.

### **5.2 ACCEPTABLE LESSON PLANS**

The required lesson plans should identify, for each session—:

- 1) Indicate the objectives and how they will be shared with the students;
- 2) Identify how the information will be presented (e.g. overhead/PowerPoint slides, verbal explanation, handout);
- 3) What equipment and resources are required; e.g. overhead projectors, manuals, posters, flip chart, practice items (hazard warning labels, acceptance checklists, etc.);
- 4) Show what is included, including specific IATA Dangerous Goods Regulations references;
- 5) Identify how the session will be summarized;
- 6) Indicate how it is confirmed that students have gained understanding of the subject of that session;
- 7) Include references as to when to display the individual slides; and
- 8) Include references as to when to distribute copies of the handouts, exercises etc.;
- 9) Include copies of the overheads or PowerPoint slides;
- 10) Include copies of the handouts;
- 11) Show how group exercises, other activities and skills checks are carried out, and how feedback from these is handled; and
- 12) Indicate approximate timing of the key portions of the lesson.

## **SECTION 6 DANGEROUS GOODS INSTRUCTORS**

### **6.1 APPROVAL REQUIRED**

- A. RCAA-FSS approval is not required for instructors who are employees of shippers, cargo agents, handling agents or operators, providing they are training only staff of their parent company.
  - B. All other instructors for training providers must be approved by the RCAA-FSS
  - C. RCAA-FSS approval may also be required for instructors who are employees of handling agents and operators of aircraft registered in Rwanda.
-

## **6.2 QUALIFICATION**

- A. Instructors of initial and recurrent dangerous goods training curriculums must demonstrate adequate instructional skills
- B. The new instructor must have successfully completed a dangerous goods training curriculum in the applicable employee grouping [Refer to Appendix A of this AC] or Curriculum 6, prior to assignment as an instructor for the specific curriculum.
- C. The new instructor must be mentored in the application of that curriculum by another appropriately qualified instructor.

## **6.3 CONTINUING EXPERIENCE**

- A. Instructors delivering initial and recurrent dangerous goods training programs must at least every 24 months deliver such a course or, in the absence of this, attend recurrent training

# **SECTION 7 TRAINING RECORDS CONTENTS & RETENTION**

## **7.1 REQUIREMENT FOR RECORDS**

- A. The Technical Instructions require that records of training be kept.
- B. RCAR Part 18 contains requirements that records of training shall be maintained as specified in the Technical Instructions.

## **7.2 CONTENT OF A TRAINING RECORD**

The Technical Instructions identify what information needs to be kept in a training record. The record must include—

- 1) The student's name;
- 2) Date of the training;
- 3) Description of, copy of or reference to training materials used to meet the training requirements;
- 4) The name and address of the organization giving the training; and
- 5) Evidence which shows that a test has been completed satisfactorily.

## **7.3 PERIOD OF RETENTION**

The period that records should be retained is not specified in the Technical Instructions.

- 1) The period of retention for initial training is the duration of the person's employment, plus 6 months.
  - 2) Since training for most employees is needed every 24 calendar months, recurrent training records, as a minimum, should be retained until after recurrent training has been given and a new record has been produced.
  - 3) Training records should show when the previous recurrent training was carried out so that it can be demonstrated that recurrent training was provided within the required period
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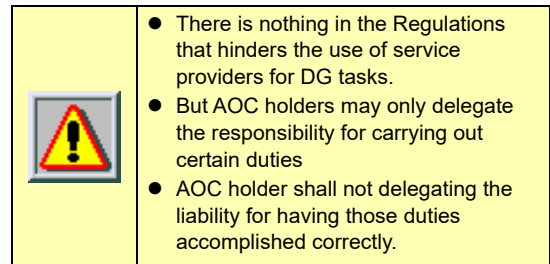
## SECTION 8 SERVICE PROVIDER ARRANGEMENTS

### 8.1 AVAILABILITY OF TRAINING PROGRAMS FROM EXTERNAL SOURCES

- A. A number of training providers have approved training program and can offer training in the responsibilities of shippers and freight forwarders or in the acceptance of dangerous goods for air transport.
- B. A list of training providers can be obtained from the RCAA-FSS's Dangerous Goods Coordinator.
- C. Other companies may also provide suitable training material for other staff, such as loading staff, passenger handling staff and warehouse staff.
- D. In all circumstances, it is the responsibility of the company whose staff are to be trained to satisfy themselves that when they use training material from other companies it meets the applicable requirements and covers the appropriate areas.

### 8.2 DELEGATION TO CONDUCT TRAINING

- A. There are air operators who delegate to third parties some of the duties that are assigned to them in the ICAO Technical Instructions.
- B. This means that if an air operator contracts a third party to provide, for example, cargo handling, acceptance or loading activities, the approval program for training mandated by the ICAO Technical Instructions and carried out by RCAA-FSS, applies to those third party activities.



### 8.3 APPROVAL OF DG SERVICE & TRAINING PROVIDERS

- A. A service provider of DG training must be specifically included in the interim or operational approval of an organization in order to be able to provide that training in full or a portion.
- B. That approval may included in the original approval or requested as an add-on at a later time.
- C. A request for approval to use the service provider should be submitted, specifying the service provider and the services to be provided—
  - 1) Original submission: as an inclusion in the program; or
  - 2) Later request: In the form of a letter.
  - 3) The request should be submitted

It is the responsibility of the organization to request the use of the service provider. Failure to

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## APPENDIX A

### Rwanda Requirements for DG Training

| General Employee Grouping:  | Shippers and Packers |   | Freight Forwarders |   |   | Operators & Ground Handling Agents |   |   |   |    |    | Security Screener |
|---|----------------------|---|--------------------|---|---|------------------------------------|---|---|---|----|----|-------------------|
|   | 1                    | 2 | 3                  | 4 | 5 | 6                                  | 7 | 8 | 9 | 10 | 11 |                   |
| <b>Curriculum Numbers:</b>  |                      |   |                    |   |   |                                    |   |   |   |    |    |                   |
| <b>Curriculum Segments:</b>   |                      |   |                    |   |   |                                    |   |   |   |    |    |                   |
| A. Law & Regulations  | ●                    | ● | ●                  | ● | ● | ●                                  | ● | ● | ● | ●  | ●  | ●                 |
| B. General Philosophy   | ●                    | ● | ●                  | ● | ● | ●                                  | ● | ● | ● | ●  | ●  | ●                 |
| C. Limitations  | ●                    |   | ●                  | ● |   | ●                                  | ● |   | ● | ●  | ●  | ●                 |
| D. General Requirements for Shippers  | ●                    |   | ●                  |   |   | ●                                  |   |   |   |    |    |                   |
| E. Classification   | ●                    | ● | ●                  |   |   | ●                                  |   |   |   |    |    |                   |
| F. List of Dangerous Goods  | ●                    | ● | ●                  |   |   | ●                                  |   |   |   | ●  |    |                   |
| G. General Packing Requirements   | ●                    | ● | ●                  |   |   | ●                                  |   |   |   |    |    |                   |
| H. Packing Instructions   | ●                    | ● | ●                  |   |   | ●                                  |   |   |   |    |    |                   |
| I. Labeling & Markings  | ●                    | ● | ●                  | ● | ● | ●                                  | ● | ● | ● | ●  | ●  | ●                 |
| J. Shippers Declaration and other relevant documents  | ●                    |   | ●                  | ● |   | ●                                  | ● |   |   |    |    |                   |
| K. Acceptance Procedures  |                      |   |                    |   |   | ●                                  |   |   |   |    |    |                   |
| L. Recognition of Undeclared Dangerous Goods  | ●                    | ● | ●                  | ● | ● | ●                                  | ● | ● | ● | ●  | ●  | ●                 |
| M. Storage & Loading Procedures   |                      |   |                    |   | ● | ●                                  |   | ● |   | ●  |    |                   |
| N. Pilot's Notification   |                      |   |                    |   |   | ●                                  |   | ● |   | ●  |    |                   |
| O. Provision for Passengers   | ●                    | ● | ●                  | ● | ● | ●                                  | ● | ● | ● | ●  | ●  | ●                 |
| P. Emergency Procedures   | ●                    | ● | ●                  | ● | ● | ●                                  | ● | ● | ● | ●  | ●  | ●                 |
| <b>Required Curricula</b>   |                      |   |                    |   |   |                                    |   |   |   |    |    |                   |
| <ol style="list-style-type: none"> <li>1. Shippers and persons undertaking the responsibilities of shippers, including the operator's staff action as shippers, operator's staff preparing company materials (COMAT)</li> <li>2. Packers</li> <li>3. Staff of freight forwarder processing dangerous goods</li> <li>4. Staff of freight forwarder processing cargo, mail or stores (other than dangerous goods).</li> <li>5. Staff of freight forwarder handling, storage, and loading of cargo, mail or stores</li> <li>6. Operator's and ground handling staff accepting dangerous goods</li> <li>7. Operator's and ground handling staff cargo, mail or stores (other than dangerous goods)</li> <li>8. Operator's and ground handling staff responsible for cargo, mail, stores and baggage</li> <li>9. Passenger handling staff</li> <li>10. Flight crew members and load planners.</li> <li>11. Crew members (other than flight crew)</li> <li>12. Security staff who deal with the screening of passengers and their baggage, and cargo, mail and stores.</li> </ol> |                      |   |                    |   |   |                                    |   |   |   |    |    |                   |

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## APPENDIX B

### Objectives for Curriculum Segments

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#### A. RWANDA LAW & REGULATIONS

The trainee shall demonstrate—

- 1) Competence in the knowledge of Rwanda law & regulations pertaining to transportation of dangerous goods by air;
- 2) An understanding of the responsibilities it places on the different participants in the process of shipping dangerous goods by air; and

#### B. DANGEROUS GOODS PHILOSOPHY

The trainee shall be able to—

- 1) Identify the general principles relating to the shipment of dangerous goods by air;
- 2) Locate specific information from the chapters and appendices of the ICAO Technical Instructions and IATA Dangerous Goods Regulations

#### C. DANGEROUS GOODS GENERAL LIMITATIONS

##### 1. Forbidden For Shipment

The trainee shall be able to—

- 1) Identify those dangerous goods that are totally forbidden for shipment by air; and
- 2) Ensure that they have not been shipped by air.

##### 2. Forbidden Unless Exempted

The trainee shall be able to—

- 1) Identify those dangerous goods which may be exempted and the conditions under which they may be shipped by air; and
- 2) Verify that those conditions were applied when they were shipped by air.

##### 3. Aircraft Operational & Airworthiness Equipment

The trainee shall be able to—

- 1) Identify those dangerous goods that may be installed on an aircraft for operational or airworthiness purposes; and
- 2) Determine the proper method of shipment by air of dangerous goods that are normally installed on an aircraft for operation or airworthiness purposes.

##### 4. Air Mail

The trainee shall be able to—

- 1) Identify those items of dangerous goods that may be shipped by air mail; and
- 2) Determine the proper method of preparing them for shipment; and
- 3) Confirm that items prepared for shipment by air mail were shipped in accordance with the correct conditions.

##### 5. Excepted Quantities of Dangerous Goods

The trainee shall be able to identify the requirements for excepted quantities and be able to use them to—

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- 1) Prepare the consignment for shipment; and
- 2) Confirm that such quantities have been prepared correctly.

### **6. Limited Quantities**

The trainee shall be able to identify the requirements for limited quantities and be able to use them to—

- 1) Prepare the consignment for shipment; and
- 2) Confirm that such quantities have been prepared correctly.

### **7. Variations with States and Operators**

The trainee will be able to identify the State and operator variations—

- 1) Be able to comply with them; and
- 2) Confirm that the shipment was prepared in accordance with the variations.

### **8. Hidden or Mis-Declared Dangerous Goods**

The trainee shall be able to—

- 1) Determine the types of general cargo that may contain hidden dangerous goods; and
- 2) Ensure that these dangerous goods have been offered for shipment correctly.

## **D. GENERAL REQUIREMENTS FOR SHIPPERS**

### **1. Checks of the Shipment**

The trainee shall be able to identify—

- 1) All checks that a shipper must accomplish in order to ensure that the dangerous goods have been correctly offered for shipment; and
- 2) The responsibilities of a shipper for determining that a consignment has been correctly offered for shipment.

### **2. Particular Requirements for Radioactive Materials**

The trainee shall be able to—

- 1) Identify the requirements that must be met in order to ship radioactive materials; and
- 2) Verify that those requirements have been met.

## **E. CLASSIFICATION OF DANGEROUS GOODS**

### **1. Classes & Division Criteria**

The trainee shall be able to—

- 1) Identify the criteria for the classes of dangerous goods;
- 2) Use the knowledge to determine the proper class of a dangerous good; and
- 3) Verify when an item should be identified as a certain class of goods.

### **2. Packing Groups**

The trainee shall be able to—

- 1) Identify the criteria on the use of packing groups;
  - 2) Determine the correct packing group to use for an item of dangerous goods; and
  - 3) Verify the correctness of a packing group selected for an items consigned for shipment.
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### **3. Multiple Hazards**

The trainee shall be able to—

- 1) Identify the requirements for dealing with dangerous goods with more than one hazard;
- 2) Determine the correct identification of such goods; and
- 3) Verify the correct identification of such goods.

## **F. LIST OF DANGEROUS GOODS**

### **1. Arrangement of the List**

The trainee shall be able to—

- 1) identify the information in each column in the list;
- 2) Determine the correct method of preparing an items of dangerous good according to the requirements;
- 3) Verify that an item of dangerous goods has prepared correctly.

### **2. Proper Shipping Names & UN numbers**

The trainee shall be able to—

- 1) Identify the proper shipping name and UN number for an items of dangerous goods so that it can be correctly identified; and
- 2) Verify that it has been correctly identified.

### **3. Mixtures & Solutions**

The trainee shall be able to—

- 1) Identify the requirements that apply when dangerous goods are in a mixture or solution; and
- 2) Use them to correctly identify such goods and certify the correctness of such goods.

### **4. N.O.S. (Not Otherwise Specified)**

The trainee shall be able to—

- 1) Identify the proper shipping name and UN number for an item of dangerous goods not specifically listed by name so it can be correctly identified; and
- 2) Verify that it has been correctly identified.

### **5. Special Provisions**

The trainee shall be able to—

- 1) Identify special provisions;
- 2) Determine the correct requirements for an item of dangerous goods; and
- 3) Verify the correct requirements for an item of dangerous goods.

## **G. GENERAL PACKING REQUIREMENTS**

### **1. Requirements For Packages For Radioactive Materials**

The trainee shall be able to—

- 1) Identify the requirements concerning packaging and packages;
  - 2) Use them to ensure radioactive materials are put into the correct packaging; and
  - 3) Determine that packages comply with the requirements.
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## **2. Quality of Packaging**

The trainee shall be able to—

- 1) Identify the requirements concerning the quality of packaging;
- 2) Determine that only packaging which meet the quality requirements are used; and
- 3) Verify by external inspection that only such packaging meeting the quality requirements have been used.

## **3. Closure**

The trainee shall be able to—

- 1) Identify the requirements concerning closures;
- 2) Ensure packaging are correctly and securely closed; and
- 3) Verify that external closures are correctly and securely closed.

## **4. Use of Packaging (including Absorbent Material)**

The trainee shall be able to—

- 1) Identify what packagings are appropriate for an items of dangerous goods;
- 2) Select packaging that is appropriate for the intended contents and in accordances with any test certification; and
- 3) Verify externally that appropriate packagings has been used.

## **5. Compatibility**

The trainee shall be able to—

- 1) Identify the requirements concerning the compatibility of packaging with the intended contents; and
- 2) Use the requirements to select packaging that is compatible with the intended contents.

## **6. Ullage**

The trainee shall be able to—

- 1) Identify the requirements for ullage in packagings for liquid; and
- 2) Use the requirements for ensure there is sufficient ullage in a packaging containing a liquid.

## **7. Pressure Differential, Temperature & Vibration Resistance**

The trainee shall be able to identify—

- 1) The requirements for a packaging to withstand the difference in pressure and the effects of temperature variations and vibration occurring in normal condition in flight; and
- 2) Use the requirements to select a packaging that will withstand the pressure and temperature differences and vibration.

## **8. Different Dangerous Goods in One Package**

The trainee shall be able to—

- 1) Identify the restrictions on more than one item of dangerous goods in a package according to those restrictions;
  - 2) Prepare a package according to those restriction; and
  - 3) Verify by external inspections that the restrictions have been met.
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**9. Assembly of a Package**

The trainee shall be able to—

- 1) Identify the requirements for assembling a package and;
- 2) Use the requirements to assemble a package.

**10. Specifications for Packagings**

The trainee shall be able to—

- 1) Identify the specifications for packaging;
- 2) Confirm that packaging conforms to the required specifications; and
- 3) Verify by external inspection that packaging conforms to the required specification.

**11. Excepted Packages of Radioactive Materials**

The trainee shall be able to—

- 1) Identify the requirements for excepted packages of radioactive material; and
- 2) Use the requirements to prepare an excepted package of radioactive material for transport.

**12. Activity Limits for Radioactive Materials**

The trainee shall be able to—

- 1) Identify the activity limits for packages for radioactive material;
- 2) Use the limits to ensure the quantity of material in a package does not exceed the requirements. and
- 3) Verify by external inspection that the limits have not been exceeded.

**13. Types of Radioactive Materials (e.g. LSA, Special Form)**

The trainee shall be able to—

- 1) Identify the different types of radioactive material;
- 2) Ensure that they meet the requirements and are correctly prepared for transport by air; and
- 3) Convey details for correctly preparing different types of radioactive materials to other persons.

**14. Determination of Transport Index for Radioactive Materials**

The trainee shall be able to—

- 1) Determine the transport index for a package of radioactive material;
- 2) Use the information to ensure the correctness of a package; and
- 3) Verify the correctness of a package.

**15. Category of Packages for Radioactive Materials**

The trainee shall be able to—

- 1) Identify the criteria on categories of packages;
  - 2) Use the criteria to determine the correct category of a package; and
  - 3) Verify the correctness of a package offered for transport.
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**16. Design & Testing of Radioactive Materials Packagings**

The trainee shall be able to—

- 1) Identify the design and testing requirements for packaging; and
- 2) Use them to confirm packaging conforms to the required design.

**17. Test of Packaging**

The trainee shall be able to—

- 1) Identify what are the tests for packagings; and
- 2) Determine if a packaging has been tested.

**18. Packaging Specification Markings**

The trainee shall be able to—

- 1) Identify the meaning of the packaging specifications markings;
- 2) Determine if a packaging is appropriate for the intended contents; and
- 3) Verify that a packaging is appropriate for its contents.

**H. PACKING INSTRUCTIONS****1. Format & Contents**

The trainee shall be able to—

- 1) Identify the types of packing instructions and what they contain;
- 2) Prepare a package according to the applicable packing instruction; and
- 3) Verify externally that a package meets the applicable packing instruction.

**2. General Packing Provisions for Explosives**

The trainee shall be able to—

- 1) Identify the additional provisions for the packing of explosives; and
- 2) Use them to correctly pack explosives.

**3. General Packing Provisions for Radioactive Material**

The trainee shall be able to—

- 1) Identify the general packing provisions for packing of radioactive materials; and
- 2) Use them to correctly pack radioactive material.

**4. Particular Packing Requirements**

The trainee shall be able to—

- 1) Identify particular packing requirements in the packing instructions; and
- 2) Determine those that apply to the preparation of a package.

**I. LABELING & MARKING****1. Labeling - General & Specific**

The trainee shall be able to—

- 1) Identify the labels required on packages;
  - 2) Correctly label a package; and
  - 3) Verify that a package is correctly labeled.
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## **2. Marking - General & Specific**

The trainee shall be able to—

- 1) Identify the markings required on packages;
- 2) Correctly mark a package;
- 3) Personally accomplish the correct marking of packages; and
- 4) Verify the markings by external inspections.

## **J. DANGEROUS GOODS TRANSPORT DOCUMENTS**

### **1. Completion of the DG Transport Document**

The trainee shall be able to—

- 1) Identify the requirements for completion of a dangerous goods transport document (Shipper's Declaration);
- 2) Correctly prepare a document/declaration;
- 3) Personally accomplish its correct completion;
- 4) Verify by external inspection that the document has been correctly completed; and
- 5) Convey details for proper completion of a shipper's declaration to other persons.

### **2. Completion of the Air Waybill (or Similar Document)**

The trainee shall be able to—

- 1) Identify the requirements for the completion of an air waybill;
- 2) Personally add the correct details to such a document; and
- 3) Verify by external inspection that all required information has been shown.

### **3. Additional Documents (Competent Authority Approvals or Certificates)**

The trainee shall be able to—

- 1) Identify when any additional documents are required;
- 2) Ensure that these documents are provided;
- 3) Identify additional documents that may need to be provided; and
- 4) Verify that those documents are required;

## **K. ACCEPTANCE PROCEDURES**

### **1. Acceptance for Transport**

The trainee shall be able to Identify what procedures are applied by the operator for the acceptance of dangerous goods for air transport.

### **2. Acceptance Inspection & Use Of A Checklist**

The trainee shall be able to—

- 1) Identify when an acceptance check is required; and
- 2) Carry out a check using an acceptance check to confirm that all applicable requirements have been met.

## **L. RECOGNITION OF UNDECLARED DANGEROUS GOODS**

The trainee shall be able to Identify and detect undeclared dangerous goods through external inspection.

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**M. STORAGE & LOADING PROCEDURES****1. Operator's Requirements**

The trainee shall be able to identify the procedures to be applied by specific operators for the storage and loading of dangerous goods.

**2. Handling, Loading & Storage**

The trainee shall be able to—

- 1) Identify the appropriate handling, loading and storage procedures for—
  - (a) Orientation of packages;
  - (b) Placing and securing them;
  - (c) Replacing labels;
  - (d) ULD identification;
  - (e) Radioactive materials; and
  - (f) Protection of organic peroxides and self-reactive substances
- 2) Use those procedures either to ensure dangerous goods are handled, loaded and stowed according to them.

**3. Segregation of Dangerous Goods**

The trainee shall be able to—

- 1) Identify appropriate procedures for segregating—
  - (a) Incompatible dangerous goods
  - (b) Explosives
  - (c) Radioactive materials; and
  - (d) Toxic and infectious substances.
- 2) Use those procedures to ensure dangerous goods are segregated according to them.

**4. Inspections for Damage & Leakage**

The trainee shall be able to—

- 1) Identify what requirements apply to inspections for damage or leakage; and
- 2) Use those requirements to ensure packages are inspected for signs of damage or leakage.

**5. Dealing with Leaking or Damaged Packages or Contaminated Baggage or Cargo**

The trainee shall be able to—

- 1) Identify what action to take if a leaking or damaged package, or contaminated baggage or cargo, is found; and
- 2) Take the correct initial action to deal with the leakage, damage or contamination.

**N. PILOT NOTIFICATION (NOTIFICATION TO THE CAPTAIN)****1. Notification to the Captain**

The trainee shall be able to—

- 1) Identify the information which has to be or may be, provided to the captain and in what circumstances; and
  - 2) Provide the correct information in the correct manner.
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**2. Retention & Dissemination of Information**

The trainee shall be able to—

- 1) Identify the information which has to be retained and where and when it has to be retained; and
- 2) Provided to provided the correction information.

**O. PROVISIONS FOR PASSENGERS & CREW**

The trainee shall be able to Identify what dangerous goods passengers and crew are permitted to take on an aircraft.

**P. EMERGENCY PROCEDURES**

The trainee shall be able to—

- 1) Identify the information for locating actions that need to be taken in emergencies;
- 2) Identify the initial actions that may need to be taken in those emergencies; and

*End of Advisory Circular*

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