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Doc 10147

Guidance on a Competency-based Approach to Dangerous Goods Training and Assessment

First Edition, 2021



Approved by and published under the authority of the Secretary General

INTERNATIONAL CIVIL AVIATION ORGANIZATION

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FOREWORD

A safe and efficient air transport system is dependent on a competent workforce. ICAO has recognized that this can be achieved through the implementation of a competency-based approach to training and assessment. The *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284, “Technical Instructions”) require that employers ensure personnel are competent to perform any function for which they are responsible prior to performing it. A competency-based approach to training and assessment is an effective way to ensure this requirement is met.

This document provides guidance in implementing a competency-based approach to dangerous goods training and assessment for personnel involved in the transport of cargo, mail, passengers and baggage by air. The *Procedures for Air Navigation Services — Training* (PANS-TRG, Doc 9868) contains greater detail on competency-based training and assessment.

BENEFITS OF COMPETENCY-BASED TRAINING AND ASSESSMENT FOR THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR

The main benefit of a competency-based approach to training and assessment is its potential to encourage and enable personnel to reach their highest level of capability while ensuring a basic level of competence as a minimum standard. It does this by:

- a) targeting specific training needs;
- b) supporting continuous learning and performance improvement;
- c) gearing towards learning rather than simply passing a test;
- d) ensuring the integration of the knowledge, skills and attitudes (KSA) needed to perform effectively; and
- e) establishing sufficient, well-trained and competent instructors.

Ensuring personnel are able to perform their functions competently is critical to any organization. A competent workforce reduces the costs caused by poor performance or miscommunication of job expectations. The consequences of employing an incompetent dangerous goods workforce can be especially damaging, as this could result in costs and delays in shipment, and even more critically, it could result in the introduction of safety risks. As an example, identifying, classifying, packing, marking, labelling and documenting dangerous goods for transport are critical to the safe transport of dangerous goods by air. The operator depends on these functions being performed competently by those preparing and offering a consignment for transport so that the operator in turn will be aware of the hazards posed and can take the necessary steps to mitigate the risk to the aircraft and its occupants. If personnel performing these functions are not trained to perform them competently, unknown risks may be introduced into air transport. Accepting dangerous goods for air transport requires an operator to verify that dangerous goods are properly prepared for transport through the use of a checklist. If personnel accepting dangerous goods are not trained to competently perform this function, they may accept improperly prepared shipments of dangerous goods into air transport thereby putting the aircraft and its occupants at risk. Alternatively, they may unnecessarily reject properly prepared shipments resulting in delays of shipments and increased costs to the shipper and the operator.