



**NOTE DE TRAVAIL**

**GROUPE D'EXPERTS SUR LES MARCHANDISES DANGEREUSES (DGP)**

**VINGT-NEUVIÈME RÉUNION**

**Montréal, 13 – 17 novembre 2023**

**Point 2 : Gestion des risques de sécurité propres au transport aérien et détection des anomalies  
(Réf. : REC-A-DGS-2025)**

**2.2 : Élaboration, s'il y a lieu, de propositions d'amendement des *Instructions techniques pour la sécurité du transport aérien des marchandises dangereuses* (Doc 9284) à introduire dans l'édition de 2025-2026**

**DISPOSITIONS RELATIVES À LA TRANSMISSION DE DONNÉES ÉLECTRONIQUES  
AU PILOTE COMMANDANT DE BORD**

(Note présentée par D. Brennan)

**RÉSUMÉ**

Dans la présente note de travail, il est proposé de réviser la disposition concernant les renseignements à fournir au pilote commandant de bord afin de permettre la transmission de données électroniques en remplacement des renseignements imprimés.

**Suite à donner par le DGP :** Le DGP est invité à convenir des amendements apportés au § 4.1 de la Partie 7, présentés dans l'appendice de la présente note de travail.

**1. INTRODUCTION**

1.1 There has been discussion at the panel on permitting the provision of the information on dangerous goods carried as cargo to the pilot-in-command electronically, in lieu of a paper document, for over 6 years, dating first to the Dangerous Goods Panel Working Group Meeting in 2016 (DGP-WG/16) (see paragraph 3.2.7.1 of the DGP-WG/16 report).

1.2 This discussion has continued over multiple meetings of the panel as well as separate discussions with operators through the International Air Transport Association (IATA) Dangerous Goods Board and with flight crew through International Federation of Air Line Pilots' Associations (IFALPA) and jointly through an IATA/IFALPA informal working group.

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\* Seuls le résumé et l'appendice (les appendices) sont traduits.  
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1.3 There is broad agreement that allowing operators to provide the information to the pilot-in-command electronically would improve the accuracy and safety level and enhance the usability of information. For instance, by enabling the transmission of electronic data, operators could consider capturing data directly from the electronic dangerous goods transport document to produce the electronic notification to the pilot-in-command (e-NOTOC) upon completing the mandatory acceptance checks. With the application of electronic data, it also becomes feasible for pilots to search electronically and precisely for the necessary information without going through pages of printed NOTOC, particularly for freighter operations, where the size of the NOTOC may be extensive.

1.4 A revised proposal to permit the use of electronic data, in lieu of paper, for the information to the pilot-in-command was presented at the DGP Working Group Meeting in 2023 (DGP-WG/23) (see paragraph 4.9.1.1 of the DGP-WG/23 Report). This proposal made the use of electronic data in lieu of paper by the operator contingent on the agreement of the appropriate national authority of the State of the Operator.

1.5 While there was overwhelming support from the panel members for the proposal, the member nominated by IFALPA still had concerns that the proposed wording did not ensure that the information would be available to pilot-in-command during an emergency, even when electrical systems may be lost. He also suggested that as the “expert working group” had not completed its work it would be premature to agree to any proposal and that there should be input from airport rescue and firefighting (ARFF) services given the importance of the information to emergency responders.

1.6 In the subsequent discussions at DGP-WG/23 of the proposal, comments were also provided by several members that the procedures for the provision of information should be included into the operator’s Operations Manual or another appropriate manual; that the reference to electronic data processing (EDP) or electronic data interchange (EDI) techniques was too limiting and that the provisions should be more performance-based.

1.7 To address the issue of the availability of the information, the proposal has been revised to include a requirement that the information to the pilot-in-command must be available “at all times during flight”. This is quite unambiguous and would require that the operator satisfy their authority that this can be achieved regardless of any in flight emergency or abnormal operation.

1.8 As far as the “expert group”, to IATA’s knowledge there has been no meetings or discussions, and if there has, then operators and IATA have not been involved or consulted.

1.9 For the needs of the emergency responders, here it is believed that the actual risk posed by dangerous goods carried as cargo to emergency responders in the event of an aircraft incident or accident needs to be considered.

1.10 The primary object of emergency responders, at least in the initial phase of an incident or accident, is the preservation of human life, i.e. evacuation of the occupants of the aircraft. In probably 99.999% of incidents or accidents, the aircraft will pose the greatest risk to the emergency responders, i.e. the fuel, cylinders of compressed gas, pressurised hydraulic or pneumatic systems and so on. The potential for any dangerous goods carried as cargo to add to the risk to emergency responders is very, very low.

1.11 It is recognized that there will be a very small number of flights where the dangerous goods being carried do pose an additional risk to emergency responders, such as Division 1.1 or 1.2 explosives being carried under an exemption or radioactive materials under special arrangement. However, a system should not be designed to require all flights to address the 0.001% of events when additional requirements could be developed to address these limited circumstances.

1.12 If there is a view of the panel that provisions must be developed for flights when dangerous goods being carried could pose an unacceptable risk to emergency responders, then that should be a separate consideration. For example, there could be a requirement that dangerous goods carried under an exemption must include the provision of information in advance of the flight on the type and quantity of the dangerous goods being carried. This could be required to be sent to the airport of destination, of transit and all airports nominated as alternates.

1.13 To the other concerns raised, it is the author's view that the operator's procedures for the provision of information to the pilot-in-command, by paper or as data, and the need for this to be in the Operations Manual or other appropriate manuals is already addressed in Part 7;4.2 and no additional specification is required.

1.14 As for EDP or EDI being too limiting, these are generic descriptions and there is no system or technology specified or implied. The reference to "EDP" and "EDI" has been in the Technical Instructions in Part 5;4 permitting the transmission of the data on the dangerous goods transport document in lieu of a paper document for over sixteen years without any suggestion of these terms being too limiting or that there is a particular technology or system that is required.

1.15 As for the provisions not being performance-based, the specific requirement that exists today is for the data elements that must be included on the information to the pilot-in-command. That is the "what". There is nothing in the Technical Instructions today, or in the proposal in this working paper, that specifies the "how". Therefore, it is believed that the proposal is completely performance-based. The operator is required to provide the pilot-in-command with specific information when dangerous goods are carried as cargo. How the operator achieves that is up to the operator to determine. The only clear specification is that the information must be available at all times during flight.

**2. ACTION BY THE DGP**

2.1 The DGP is invited to consider the amendments in Part 7;4.1 as shown in the appendix to this working paper.

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## APPENDICE

### PROPOSITION D'AMENDEMENTS DE LA PARTIE 7 DES INSTRUCTIONS TECHNIQUES

#### Partie 7

#### RESPONSABILITÉS DE L'EXPLOITANT

(...)

#### Chapitre 4

#### RENSEIGNEMENTS À FOURNIR

(...)

##### 4.1 RENSEIGNEMENTS À FOURNIR AU PILOTE COMMANDANT DE BORD

4.1.1 Dès que possible avant le départ de l'aéronef, mais en aucun cas après que l'aéronef a commencé à se déplacer par ses propres moyens, l'exploitant d'un aéronef dans lequel des marchandises dangereuses doivent être transportées doit :

- a) remettre au pilote commandant de bord des renseignements écrits ou imprimés précis et lisibles concernant les marchandises dangereuses à transporter comme fret ;
- b) remettre au personnel ayant des responsabilités relatives au contrôle opérationnel de l'aéronef (par exemple l'agent technique d'exploitation, le *dispatcher* ou le membre du personnel au sol désigné chargé des opérations aériennes) les mêmes renseignements que ceux qui doivent être fournis au pilote commandant de bord (par exemple une copie des renseignements écrits fournis au pilote commandant de bord). Les exploitants doivent préciser dans leur manuel d'exploitation ou dans tout autre manuel approprié à quel membre du personnel (titre de poste ou fonction) ces renseignements doivent être fournis- ;

c) si une entente a été conclue avec l'autorité nationale compétente de l'État de l'exploitant, l'exploitant peut transmettre les renseignements au pilote commandant de bord par les techniques TED ou EDI au lieu de lui fournir des renseignements écrits ou imprimés.

(...)

4.1.4 Les renseignements fournis au pilote commandant de bord doivent aussi contenir une confirmation signée, ou quelque autre indication, venant de la personne responsable du chargement, qu'il n'y avait pas de signe que les colis chargés à bord de l'aéronef étaient endommagés ou fuyaient, ou que les unités de chargement fuyaient.

4.1.5 Les renseignements fournis au pilote commandant de bord doivent lui être facilement accessibles **en tout temps** pendant le vol.

4.1.6 Ces renseignements devraient être fournis au pilote commandant de bord sur un formulaire spécial et non au moyen de lettres de transport aérien, de documents de transport de marchandises dangereuses, de factures, etc.

4.1.7 Le pilote commandant de bord doit indiquer sur une copie des renseignements qui lui sont fournis, ou de toute autre manière, que les renseignements ont été reçus.

(...)