



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/18)**

Montréal, 1 to 5 October 2018

- Agenda Item 3: Managing safety risks posed by the carriage of lithium batteries by air**
3.4: Consider measures to mitigate safety risks posed by lithium batteries carried and/or used by passengers, crew and the operator (Job card DGP.005.01)

PROVISIONS FOR INCIDENTS INVOLVING DANGEROUS GOODS IN THE COCKPIT

(Presented by J. Jin)

SUMMARY

This working paper invites the DGP-WG to consider the need to add provisions for dangerous goods incidents in the cockpit and a flight crew checklist for dangerous goods incidents in the cockpit to Sections 2 and 3 of the *Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods* (Doc 9481)

Action by the DGP-WG: The DGP-WG is invited to:

- a) evaluate the possibility of lithium battery equipment dangerously reacting in the cockpit; and
- b) discuss the need to add provisions and a flight crew checklist in Doc 9481 for flight crews to respond to dangerous goods incidents in the cockpit.

1. INTRODUCTION

1.1 With the extensive use of electronic flight bags (EEB) and other devices powered by lithium batteries, it becomes very common for flight crews to take portable electronic devices (PED) and power banks on flights, and there is a tendency to allow the EFB to be re-charged in the cockpit during flight.

1.2 The current provisions in the *Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods* (Doc 9481) do not provide any guidance for responding to incidents in the

cockpit caused by fire or smoke from PEDs. If the flight crew takes action in accordance with the checklists for dangerous goods incidents in the passenger cabin during flight provided in sections 3.3 and 3.4, there are potential risks as outlined below.

1.3 If the EFB catches fire and smoke is emitted in the cockpit and water or another non-flammable liquid is used to extinguish the fire or provide cooling, it would likely influence the normal operation of equipment in the cockpit, because the PED is usually placed near the windshield.

1.4 If the EFB catches fire or emits smoke in the cockpit and the fire is extinguished with Halon and the EFB is removed from the cockpit for cooling, there will be non-compliance with the principle of “to remove after cool it”.

1.5 If the PED in the baggage of flight crew members emits smokes, and there is an attempt to transfer it to cabin crew for action, there will be non-compliance with the principle of “to remove after the fire is extinguished”.

1.6 If the flight crew follows the procedures for extinguishing fire, cooling, and monitoring, this may result in a lack of human resources, unclear of the duties respectively, and insufficient monitoring.

1.7 On 19 May 2016, Egypt Air flight MS804 from Paris to Cairo crashed with 66 fatalities. Two years after the accident, the authority of France, Bureau of Enquiry and Analysis for Civil Aviation Safety (BEA), issued a statement that there may have been a fire in the cockpit when the flight was cruising over the Mediterranean Sea. The French investigators did not point to the cause of fire, but according to aviation experts, it is likely the fire was caused by a laptop computer.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to:

- c) evaluate the possibility of lithium battery equipment dangerously reacting in the cockpit; and
- d) discuss the need to add provisions in Doc 9481 to address dangerous goods incidents in the cockpit and a checklist for flight crews to respond to dangerous goods incidents in the cockpit.

— END —