



WORKING PAPER

**ACCIDENT INVESTIGATION AND PREVENTION (AIG)
DIVISIONAL MEETING (2008)**

Montréal, 13 to 18 October 2008

**Agenda Item 1: Annex 13
1.2: Chapter 5 of Annex 13**

**INVESTIGATION OF ACCIDENTS AND SERIOUS INCIDENTS, THE DECISION TO
INVESTIGATE AND INVESTIGATION PRIORITISATION**

(Presented by Australia)

SUMMARY

This paper supports the upgrade of Recommendation 5.1.1 to a Standard. However, there should be better guidance on safety occurrences that must be investigated as a serious incident. The paper also argues that the definition and guidance for a serious incident requires modification. An example of a system for prioritising investigative resources is provided

Action by the meeting is in paragraph 3.

1. INTRODUCTION

1.1 AIG/08-WP/3 proposes upgrading Recommended Practice 5.1.1 to a Standard, while limiting the requirement to investigate serious incidents to aircraft with a maximum weight of over 2 250 kg. WP/3 also proposes a modification to Standard 5.4 that permits the Accident Investigation Authority (AIA) to utilise a limited fact finding investigation where there are limited benefits from a complete investigation, especially for repeat light aircraft accidents. Australia supports these proposals.

1.2 The WP/3 proposal to upgrade 5.1.1 to a Standard also raises the issue of whether the definition of a serious incident, and the guidance material provided by Attachment C, are adequate to enable States to comply with the proposed new Standard and whether Attachment C includes all relevant serious incidents, the investigation of which is likely to yield significant safety value.

1.3 Australia has for many years operated a system for prioritising accident and serious incident investigations to ensure maximum return from the allocation of limited resources. This system is proposed for inclusion as an Attachment for guidance of States in prioritising investigative activities.

2. DISCUSSION

2.1 Accident and Serious Incident Investigations

2.1.1 Australia supports the basic principle of mandating the investigation of all accidents and serious incidents as part of a total package. However, because standards are minimum requirements that all States are obliged to meet despite their varying institutional and financial capacities, the scope and extent of investigation needs to be clearer.

2.1.2 Australia believes that regulatory and investigative priority should be targeted primarily towards the fare-paying passenger on Regular Public Transport (RPT) and charter operations. Such passengers are not expected, or assumed, to have knowledge of, or control over, the risks they are exposed to in flying. Australia's regulatory and investigative focus is based on a risk-based hierarchy, where fare-paying passenger operations with their high degree of safety expectation, attract the greatest regulatory attention and investigative resource attention. Conversely, where an aviation activity is a relatively high risk but voluntarily undertaken, for example personal recreation, sports aviation, and experimental aircraft operations, then regulatory and accident investigation priorities contract.

2.2 Full Investigations and Limited Fact Finding Investigations

2.2.1 Australia strongly supports the proposed modification to Standard 5.4 in WP/3. Where there is limited or no safety value to be gained from a detailed investigation, a limited fact-finding investigation may be appropriate. However, Standard 5.4 a) should also be amended to read 'the gathering, recording and analysis of all relevant available information' because no investigation would otherwise meet the available standard. Based on WP/8, Standard 5.4 c) should read 'if possible, the determination of the causes/contributing factors'.

2.3 Australia's Priorities for Accident and Serious Incident Investigation

2.3.1 Australia's policy for allocating investigative resources is based on giving priority and resources to occurrences with greatest potential safety value, weighted by the type of operation involved. Investigative resources are allocated in line with the following hierarchy of priorities:

1. Article 26 aircraft (mandatory)
2. Passenger transport—large aircraft;
3. Passenger transport—small aircraft:
 - a. RPT and charter on small aircraft; and
 - b. Humanitarian aerial work;
4. Commercial (that is, fare paying) recreation (for example, joy flights);
5. Flying training;
6. Aerial work with participating passengers (for example, news reporters, geological surveys);
7. Other aerial work:
 - a. Non-passenger carrying aerial work (for example, agriculture, cargo); and
 - b. Private transport/personal business.
8. High-risk personal recreation/sports aviation/experimental aircraft operations.

2.3.2 The AIG should consider creating a new attachment that assists States in prioritising investigative resources. Australia commends to the AIG the system described above as a starting point.

2.4 The Definition of a Serious Incident

2.4.1 The proposed upgrade of 5.1.1 presupposes that the definition of a serious incident is sufficiently clear to enable States to confidently identify those safety events that fall under this category

and are therefore to be investigated. Attachment C provides guidance for identifying serious incidents through the provision of examples. The use of the word *nearly* and the examples provided do not adequately assist in identifying serious incidents. For example, how are the events ‘near collision requiring avoidance manoeuvre’ and ‘controlled flight into terrain only marginally being avoided’ to be considered when the aircraft involved is equipped with modern TCAS or EGPWS equipment. Further, Australia has investigated a number of breakdown of separation occurrences, including incidents involving RPT operations, that have identified safety deficiencies in the procedures of the air traffic service provider and/or aircraft operations. Investigations of such occurrences have resulted in significant safety actions, however, they do not fall under the definition of a serious incident or within the examples currently provided by Attachment C.

2.4.2 Whilst the definition of a serious incident focuses on the result, the events identified in Attachment C are in essence concerned with a serious increase in risk to the aircraft and/or its crew/passengers. The principle issue is, ‘was there a significant risk of an accident?’ Risk identification and minimisation are at the core of Safety Management System theory. For consistency, risk management terminology should also be adopted in the definition of a serious incident and in the guidance material. As the investigation of serious incidents is to be raised to a standard, there should be a more definitive list of serious incidents which are required to be investigated. Consideration should also be given to regularly amending this list because, as technology advances, existing events may require re-evaluation and new events may be required to be included.

3. ACTION PROPOSED

3.1 The meeting is invited to:

3.1.1 Consider Australia’s proposal to amend Standard 5.4 a) to read:

- a) the gathering, recording and analysis of all relevant available information on the accident or incident

3.1.2 Consider Australia’s proposal to amend Standard 5.4 c) to read:

- c) if possible, the determination of the causes/contributing factors; and

3.1.3 Consider modifying the definition of ***serious incident*** to reflect risk management principles, and to read:

Serious incident. An incident where there was a significant risk of an accident.

3.1.4 Consider upgrading Attachment C to provide a definitive list of events that are serious incidents for the purposes of Annex 13 investigation. The list should also identify that it will be regularly reviewed.

3.1.5 Consider the Australian policy for prioritising investigative resources, as detailed in this working paper, as guidance for inclusion as an Attachment to Annex 13.