



**Australian Government**  
**Civil Aviation Safety Authority**

OFFICE OF THE DIRECTOR OF AVIATION SAFETY

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Senator the Hon Bill Heffernan  
Chair  
Senate Rural and Regional Affairs  
and Transport References Committee  
Parliament House  
CANBERRA ACT 2600

Dear Senator Heffernan

**Request for clarification of evidence**

Thank you for your letter of 22 November 2012 requesting clarification of evidence I gave at the public hearing of the Senate Rural and Regional Affairs and Transport References Committee inquiry into aviation accident investigations (Pel-Air) on 22 October 2012.

Your letter cited my statement:

*I know of no regulatory environment in the world—and there may be one, but I do not know of it—where there is a prescribed set of circumstances such that when the weather gets below the alternate planning minima you should divert the aeroplane.*

Your letter refers to extracts from Annex 6 to the *Convention on International Civil Aviation* and Hong Kong Civil Aviation Department (CAD) document 360. As indicated below, I believe there is nothing in either of these documents that is inconsistent with the evidence I gave.

**Annex 6**

Whilst Australia is a signatory to the *Convention on International Civil Aviation* nothing in the Annexes to that Convention is binding on an Australian operator unless a standard or recommended practice specified in an Annex has been adopted by and under Australian law.

In any event, paragraph 4.3.4.3 of Annex 6 requires that one destination alternate aerodrome be selected in a flight plan. Paragraph 4.3.5.2 of Annex 6 prohibits a flight under the IFR being commenced unless information is available which indicates weather at the destination or alternate aerodromes is above the *aerodrome operating*

*minima*. These provisions relate to pre-flight planning requirements and are not relevant to the evidence I gave which related to in-flight decision making. Paragraph 4.4.1.1 of Annex 6 states that a flight shall not be continued towards the destination aerodrome, unless the latest available information indicates a landing can be effected in compliance with the *operating minima* established in accordance with paragraph 4.2.8.1 [which requires Australia to establish aerodrome operating minima]. The aerodrome operating minima is the published instrument approach minima for a particular instrument approach at an aerodrome. This deals with a different issue to that of diversion if the weather is below the alternate planning minima.

### **CAD 360**

CAD 360 entitled '*Air Operator's Certificates Requirements Document*' is a manual of the CAD that sets out its requirements for the issue of an Air Operator's Certificate. Non-compliance with the fuel management provisions in Part 8.9 of CAD 360 is not, of itself, a regulatory breach or an offence.

In any event, paragraph 8.10.4 of CAD 360 provides alleviation when inflight fuel is insufficient to meet the normal fuel requirements specified in paragraph 8.9.2, so that the flight can continue to the destination without the need for an alternate. The minimum fuel required to be on board on landing in this situation is also required by paragraph 4.3.6.3.2 (a) of Annex 6 and paragraph 1.255 1.5 (b) of EU-Ops Appendix 1 (that is, essentially enough fuel to hold for 30 minutes at 1500ft). CAD 360 has additional operational requirements including specific runway geometry and weather conditions to be at, or above, the alternate planning minima.

Whilst paragraph 8.10.4 of CAD 360 does specify when an aircraft must divert, this relates to a fuel issue. Moreover, it relates to a very limited set of circumstances, which were not relevant to those encountered by the pilot in the Pel-Air accident. Based on a fuel check, if the pilot determines the fuel is below a specified required amount (in this case the Company Minimum Reserve), then the pilot has to determine specific operational conditions at the destination prior to the pilot deciding to continue flight to the declared destination. The pilot involved in the Pel-Air accident did carry out some regular in-flight fuel checks but not of the kind discussed in the CAD 360 scenario or in determining the last point of safe diversion as the weather deteriorated, as per the operator's procedures manual.

### **Example of potential flight diversion**

In my evidence I also referred to a particular incident where the flight crew were required to make an in-flight decision regarding an alternate destination and also involved the failure of the aircraft wing leading-edge flap. In that case, the crew decided to divert; but having made that decision, they then became uncertain as to whether they could reach the diversion aerodrome, as they were unable to retract the leading edge flap and this had the effect of reducing the aircraft range. The cabin crew were requested to action the ditching drill. Fortunately the flight crew were eventually able to partially retract the leading edge flap, reducing drag and increasing the aircraft range, so the flight was able to land at the diversion aerodrome with fuel reserves intact. This case highlights the fact that aviation operates in a dynamic

environment and that regulations therefore provide for a heavy emphasis on planning.

However, while pre-flight planning assists the decision-making process for the crew, given the variables that can occur in flight, the crew must have flexibility to make proper in-flight decisions, as regulations cannot be crafted to foresee every circumstance, emergency or unexpected event that may arise. To take away crew decision-making through overly prescriptive regulations on diversion choices would be illogical and could negatively impact on safety. The European Aviation Safety Agency takes a similar approach and does not prescriptively regulate inflight decision-making.

I trust this information is of assistance.

Yours sincerely

John F. McCormick  
Director of Aviation Safety