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Safety recommendation: AIC 19-R10/18-1004

Addressed to: Air Niugini Limited

Date issued: 18 February 2019

Investigation link: AIC 18-1004

Action status: Issued

Introduction

On 28 September 2018, the Federated States of Micronesia, Department of Transportation, Communications and Infrastructure (DTC&I) was notified of the aircraft accident referenced in this safety recommendation. DTC&I commenced an investigation and deployed investigators to Chuuk and invited the Papua New Guinea Accident Investigation Commission (AIC) to join the investigation in the capacity of the State of Registry and also a State providing experts and facilities for the investigation. The AIC team is comprised of an Accredited Representative and Technical Advisers. The US National Transportation Safety Board (NTSB) as the State of Manufacture of the aircraft and in response to FSM National Government's request for assistance also sent a team comprised of an Accredited Representative and Technical Advisers from the Federal Aviation Administration (FAA) and Boeing. Technical Advisers from the US National Weather Service are assisting the US Accredited Representative.

The Transportation Safety Board of Canada (TSBC) as the State of Manufacture of specific components appointed an Accredited Representative and Technical Advisers to download the data from the AFIRS.

The PNG AIC has identified a significant safety deficiency, which if not rectified could result pilots not being appropriately trained and checked in practical simulator exercises. This could contribute to an accident or serious incident.

Occurrence

On Friday 28 September 2018, a Boeing 737-8BK aircraft, registered P2-PXE, was being operated by Air Niugini Limited, on a scheduled passenger flight from Pohnpei to Chuuk, Federated States of Micronesia.

At 23:17:19 UTC¹ (09:17:19 local time) the aircraft impacted the water of Chuuk Lagoon about 1,443 ft (440 m) short of the runway 04 threshold, during its approach to runway 04 at Chuuk International Airport. As the aircraft settled in the water, it turned clockwise through 210° and drifted 460 ft (140 m) south east of the runway 04 extended centreline, with the nose of the aircraft pointing about 265°.

There were 12 crew members and 35 passengers on board. Six passengers were seriously injured, and one passenger was fatally injured.

The 12 crew members and 34 passengers exited the aircraft and were promptly rescued and brought to shore by U.S. Navy divers (who were the first on scene), Chuuk State Government boats, Red Cross, Transco, and more than twenty privately-owned boats. Local divers located the fatally injured passenger in the aircraft 3 days after the accident.

¹ The 24-hour clock, in Coordinated Universal Time (UTC), is used in this report to describe the local time as specific events occurred. Local time in the area of the accident, Pacific/Chuuk Time is UTC + 10 hours.

Safety deficiency description

The PIC and copilot had attended *Crew Resource Management (CRM) classroom training* in accordance with the Air Niugini CRM training program.

The *Air Niugini Training Policy and Procedures Manual (TPPM)* stated that the aim of the *Crew Resource Management* training is:

- Threat recognition and management;
- Error reduction; and
- Error recognition and management.

The *Air Niugini TPPM* states that the training is aimed at building crew performance required to reduce the number of errors, and building crew performance to effectively manage threats and errors.

Air Niugini provides guidance for pilots with respect to **Challenge and Response** requirements in *Section 2.5.1.4* of the *Standard Operating Procedures Manual*.

Section 2.5.1.4 Challenge and Response states:

When a crew member notices a significant deviation from standard procedures during a normal flight regime, he should communicate this immediately to the crew member flying. If he does not receive a response to his challenge either verbally or be [Sic] corrective action, he should immediately repeat the challenge.

If there is still no response to the second challenge, then he should take over control of the aircraft and restore safe flight condition while he obtains assistance to determine the cause of the problem.

All crew members are to be aware of this challenge and response philosophy. If they are challenged they must be prepared to respond immediately, either verbally or by taking corrective action.

The uniform or standard used by the International Civil Aviation Organization (ICAO) when desirable or recommended for safety of flight, the operating verb is “**should**”. When vital or necessary for safe flight the operating verb “**shall**” is always used.

The AIC investigation found that Air Niugini manuals tend to use the operating verb “**should**” instead of the imperative operating verb “**shall**” with respect to instructions for compliance with **vital and essential safety of flight actions**. The use of “shall” would ensure the importance of taking vital and immediate safety action is recognised.

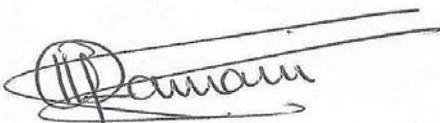
Recommendation number AIC 19-R10/18-1004 to Air Niugini Limited

The PNG Accident Investigation Commission recommends that Air Niugini Limited, should ensure that:

- (a) *Section 2.5.1.4* of the *Standards Operating Procedures Manual* is amended to use the operating verb “**shall**” for the instructions for compliance with the **vital and essential safety of flight actions**.
- (b) All Air Niugini Limited Operational and Training manuals are reviewed and revised as necessary and appropriate to use the operating verb “**shall**” when appropriate to ensure the importance of taking essential safety action is recognised.

Action requested

The Accident Investigation Commission requests that Air Niugini Limited note recommendation *AIC 19-R10/18-1004*, and provide a response to the PNG AIC within 60 days, but no later than 18 April 2019, and explain including with evidence how Air Niugini Limited has addressed the safety deficiency identified in *Safety Recommendation AIC 19-R10/18-1004*, **in particular with respect to part (a) of the recommendation**.



HUBERT NAMANI, LLB
Chief Commissioner

18 February 2019.

Air Niugini Safety Action

On 26 March 2019, Air Niugini Limited informed the PNG Accident Investigation Commission of its safety actions to address the safety deficiencies identified in *Safety Recommendation AIC 19-R10/18-1004*.

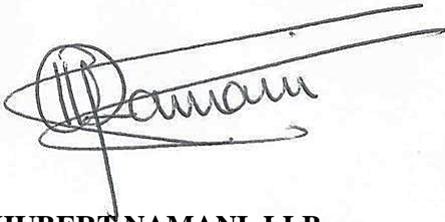
Air Niugini also provided documentary evidence of the safety action taken with the CASA PNG accepted² amendment of the Standards Operating Procedures Manual, Section 2.5.1.4 to use the operating verb “*shall*” for the instructions for compliance with the vital and essential safety of flight actions.

Air Niugini further advised the AIC that it is progressively revising all manuals to use the operating verb “*shall*” where appropriate to ensure the importance of taking essential safety action is recognised.

PNG Accident Investigation Commission (AIC) assessment of Air Niugini Limited response

The AIC has reviewed the Air Niugini Limited documents providing evidence to the AIC of the safety action taken with respect to the use of the operating verb “*shall*” for the instructions for compliance with the vital and essential safety of flight actions in order to address the identified safety deficiencies. The AIC is satisfied that the evidence addressed the safety deficiencies identified in the AIC *Safety Recommendation AIC 19-R10/18-1004 part (a)*, and that *Part (b)* will be progressively addressed.

The AIC has assigned the Air Niugini Limited response a *satisfactory intent* rating, and records the **Status of the AIC Recommendation: CLOSED RESPONSE ACCEPTED**

A handwritten signature in black ink, appearing to read 'Hubert Namani', is written over a horizontal line. The signature is stylized and somewhat cursive.

HUBERT NAMANI, LLB
Chief Commissioner

26 March 2019.

² CASA PNG does not *approve* the Air Niugini manuals, rather it *accepts* the Air Niugini manuals.