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Safety recommendation: AIC 19-R08/18-1004

Addressed to: Federated States of Micronesia, Division of Civil Aviation

Date issued: 8 February 2019

Investigation link: TC&I 18-1001 (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 safety deficiency, which if not rectified could result in injury or loss of life following an accident into water. The FSM DTC&I investigator in charge supports the PNG AIC issuing this safety recommendation.

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°.

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.

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.

Safety deficiency description

The investigation into this accident has found that the Chuuk International Airport, *Airport Emergency Plan (AEP)* and rescue and fire-fighting resources did not meet the *ICAO Annex 14 Volume 1, Standards* with respect to responding to accidents occurring in water adjacent to the aerodrome.

Paragraph 9.1.1

An aerodrome emergency plan shall be established at an aerodrome, commensurate with the aircraft operations and other activities conducted at the aerodrome.

Paragraph 9.1.2

The aerodrome emergency plan shall provide for the coordination of the actions to be taken in an emergency occurring at an aerodrome or in its vicinity.

Paragraph 9.1.3

The plan shall coordinate the response or participation of all existing agencies which, in the opinion of the appropriate authority, could be of assistance in responding to an emergency.

Paragraph 9.1.12;

The plan shall contain procedures for periodic testing of the adequacy of the plan and for reviewing the results in order to improve its effectiveness.

Note.— The plan includes all participating agencies and associated equipment.

Paragraph 9.1.13

The plan shall be tested by conducting:

- a) a full-scale aerodrome emergency exercise at intervals not exceeding two years and partial emergency exercises in the intervening year to ensure that any deficiencies found during the full-scale aerodrome emergency exercise have been corrected; or
- b) a series of modular tests commencing in the first year and concluding in a full-scale aerodrome emergency exercise at intervals not exceeding three years;

and reviewed thereafter, or after an actual emergency, so as to correct any deficiency found during such exercises or actual emergency.

Paragraph 9.1.14:

The airport rescue and fire-fighting services shall have a plan that shall include ready availability of coordination with appropriate specialist rescue services to be able to respond to emergencies where an aerodrome is located close to water/or swampy areas and where a significant portion of approach or departure operations takes place over these areas.

Paragraph 9.2.2:

Where an aerodrome is located close to water/or swampy areas and where a significant portion of approach or departure operations takes place over these areas, specialist rescue services and fire-fighting equipment appropriate to the hazards and risks shall be available.

Note 2.— The objective is to plan and deploy the necessary life-saving flotation equipment as expeditiously as possible in a number commensurate with the largest aeroplane normally using the aerodrome.

The *AEP* at the date of the accident was dated 9/11/2011. (11 September 2011)

The *AEP* did not meet documentation convention (Standards) as required by ICAO:

- It was not a controlled copy;
 - it did not have a version number and issue date on each page; and
 - there was no amendment sheet for listing amendments.

The *AEP* manual's procedures were inadequate for use in an emergency operation, especially during a rescue operation involving an aircraft accident in water.

The last emergency exercise conducted prior to the accident was in August 2017. It was on land and within the airport perimeter. The post-exercise report did not provide evidence that the airport emergency response equipment and personnel would be effective in handling an actual emergency situation that might occur outside the airport perimeter in water. The report mentioned the Pohnpei and Kosrae airports, but also did not address the exercising of the *AEP* outside the airport perimeter.

Article 38 to the *Convention on International Civil Aviation* imposes an obligation on Contracting States to notify ICAO of differences between their national regulations and practices and the *International Standards* contained in the *Annex* and any amendments thereto if the State cannot comply with a *Standard*.

Furthermore, the provisions of *Annex 15* require the publication of differences between a State's national regulations and practices and the related *ICAO Standards and Recommended Practices* through the *Aeronautical Information Service*, in addition to the obligation of States under *Article 38* of the *Convention*.

While immediately after this accident the lack of the specialist rescue personnel and equipment did not delay the rescue of the survivors due to the availability at that time of USA Navy personnel as well as local boats, effective rescue from any future accident into water may be seriously compromised due to:

- the lack of an appropriate *Airport Emergency Plan*;
- the lack of specialist rescue services (personnel and equipment); and
- the exercising of the full *AEP* plan, including the specialist rescue services.

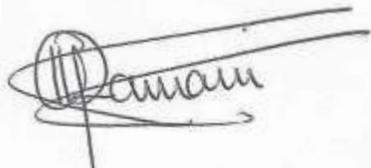
Recommendation number AIC 18-R08/18-1004 to Federated States of Micronesia, Division of Civil Aviation.

The PNG Accident Investigation Commission recommends that the Federated States of Micronesia, Division of Civil Aviation, as a contracting State to the *Convention on International Civil Aviation*:

- (a) should ensure that Chuuk International Airport meets *ICAO Annex 14 Standards* with respect to *Airport Emergency Planning* and specialist rescue services (equipment and personnel) for an emergency situation that might occur outside the airport perimeter in water; or
- (b) should ensure that if the State is unable to comply with the *Standards of Annex 14* as identified in (a) above, it will file the difference with ICAO between a State's national regulations and practices and the related *ICAO Annex 14 Standards and Recommended Practices*, and publish the filed difference(s) through the *Aeronautical Information Service*.

Action requested

The AIC requests that Federated States of Micronesia (FSM), Division of Civil Aviation (DCA) note recommendation AIC 19-R08/18-1004, and provide a response to the AIC no later than 7 May 2019 (within 90 days of the issue date), and explain including with evidence how the FSM DCA has addressed the safety deficiency identified in the safety recommendation.



HUBERT NAMANI, LLB
Chief Commissioner

Federated States of Micronesia, Division of Civil Aviation Safety Action

On 7 May 2019, the Federated States of Micronesia, Division of Civil Aviation informed the PNG Accident Investigation Commission of its safety action to address the safety deficiencies identified in *Safety Recommendation AIC 19-R08/18-1004*.

The FSM DCA provided copies of the *Notification of Differences* filed with the International Civil Aviation with respect to the State's inability to meet the *ICAO Annex 14 Standards for Airport Emergency Planning* and specialist rescue services (equipment and personnel) for an emergency situation that might occur outside the airport perimeter in water. The FSM DCA also notified ICAO of difference relating to the State's inability to meet the *ICAO Annex 14 Standard for Runway Safety End Area* at Chuuk International Airport runways 04/22.

On 8 May 2019, the FSM DCA informed the AIC that they were progressing having these differences publishing in the State's *Aeronautical Information Service* documents, and raising with the US FAA for issuing NOTAMs.

PNG Accident Investigation Commission (AIC) assessment of Federated states of Micronesia, Division of Civil Aviation response

The AIC has reviewed the Federated States of Micronesia, Division of Civil Aviation documents providing evidence to the AIC of the safety actions taken and proposed with respect the State's inability to meet these specific *ICAO Annex 14 Standards*. The AIC is satisfied that the evidence has addressed the safety deficiencies identified in the *AIC Safety Recommendation AIC 19-R08/18-1004* and the reference to the lack of *Runway End Safety Area* raised with FSM DCA during the investigation.

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



HUBERT NAMANI, LLB
Chief Commissioner

7 July 2019.