

## OFFICE OF THE CHIEF COMMISSIONER

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Safety recommendation: AIC 20-02/19-2001

Addressed to: National Airports Corporation (NAC)

Date issued: 18 May 2020

Investigation link: AIC 19-2001

Action status: Issued

Safety deficiency description

On 22 May 2019, at 07:11 UTC (17:11 local), a major power outage occurred at Jacksons International Airport, Port Moresby, National Capital District, which lasted for 13 hours and 29 minutes. During the power outage, four aircraft that conducted scheduled passenger operations (3 domestic and 1 international) under Instrument Flight Rules<sup>1</sup> (IFR) for Jacksons were affected. Two of the aircraft diverted to alternate airports. For the two-remaining aircraft, one was able to continue and land at Jacksons, while the international flight had to delay at the departure airport in order to arrive at Jacksons during daylight.

In the context of the occurrence, Jacksons International Airport was unable to maintain the provision of the services, operational baseline declared in the PNG AIP and required by national regulations and international standards for commercial aircraft operation, including landing and navigation aids, runway and taxiway landings amongst others, due to the failure of both the primary and secondary sources of electrical power.

The lack of services availability affected four aircraft conducting commercial air transport passenger operations. Only one of the aircraft that was informed about the power outage 19 minutes after it commenced was able to continue the approach and landing using other aids that remained available and visual references because the weather conditions showed no restrictions for VMC and natural lighting was still present.

The primary source of power for the airport facilities and services relies on the electrical grid feed by PNG Power Limited, and in the event of a failure of this system such as the one that happened in the context of

I IFR, Rules applied in cloud or whenever external cues are below VFR minima which prohibit non-IFR pilots/aircraft. Source: The Cambridge Aerospace Dictionary.

the investigated occurrence, the secondary power source is expected to enter into operation automatically to restore the operation of the critical facilities, services and aids required for air transport operations.

Nevertheless, at the time of the occurrence the secondary power source was unable to enter into operation as a consequence of faulty and failed essential operational components. The investigation documented that environmental conditions, prolonged use of obsolete components, improper and inadequate maintenance and servicing, lack of technical documentation and proper training for technical personnel contributed to the occurrence.

Additionally, it was determined that the power system configuration and components dated from early 1990's and were expected to be replaced after approximately 15 years, which to the date of this report was not yet achieved.

The investigation identified that there was a lack of documented processes and procedures for maintaining and operating the power supply system, as well as training to maintain the level of knowledge and expertise required to perform the appropriate tasks to ensure system operation.

## Recommendation number AIC 20-02/19-2001 to NAC

The PNG Accident Investigation Commission (AIC) recommends that the National Airport Corporation should ensure that documented procedures are in place on the following areas:

- 1) power system operations (Recommendation number AIC 20-02/19-2001a)
- 2) maintenance of the power systems (Recommendation number AIC 20-02/19-2001b)
- 3) training for technical officers responsible for the maintenance of the power systems (Recommendation number AIC 20-02/19-2001c)

## **Action requested**

The AIC requests that NAC note recommendation AIC 20-02/19-2001, and provide a response to the AIC within 90 days of the issue date, and explain (including with evidence) how NAC has addressed the safety deficiency identified in the safety recommendation.

## **Closing Statement**

On 17 August 2020, NAC provided response to the AIC 20-02/19-2001 stating that the operational manuals of the power system had been lost or destroyed and the power system was operated by technical officers with whatever knowledge, skills and experience they had gain with the past 20 years.

NAC further explained that the maintenance of the high voltage system, whether it be breakdown maintenance, corrective maintenance or preventative maintenance were all outsourced to competent and licensed electrical contractors. NAC estimates that since most of the repair and maintenance are outsourced, training of the technical officers for repair and maintenance was not required.

NAC established a preventative action to be developed in the future, subject to funding, consisting in upgrading the entire power system.

According to AIC assessment, NAC response and safety actions developed will not address the safety issues identified during the investigation and the safety deficiencies identified will remain until other actions are developed in the future. The AIC assigned this response as *unsatisfactory* and recorded the Status of the AIC recommendation: CLOSED RESPONSE NOT ACCEPTED.

**HUBERT NAMANI, LLB** 

Chief Commissioner 8 September 2020