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Safety recommendation: AIC 23-R15/22-1003

Addressed to: SIL Aviation

Date issued: 18 September 2023

Investigation link: AIC 22-1003

Action status: Issued

Introduction

On 5 October 2022 at 10:15 local time (00:15 UTC), the AIC was notified by CASA PNG about an occurrence which had occurred on 4 October 2022 at 15:10 local time (05:10 UTC). The occurrence involved a Bell 206 L3 helicopter owned and operated by the Summer Institute of Linguistics Aviation. The AIC immediately commenced an investigation in accordance with Civil Aviation Act 2000 (as Amended) and ICAO Annex13 standards and dispatched a team of investigators were dispatched to perform on-site activities on 07 October 2022.

Occurrence

On 4 October 2022, at about 15:10 local time, (05:10 UTC¹) a Bell 206L3 helicopter, registered P2-SIL, owned and operated by Summer Institute of Linguistics (SIL) Aviation, was conducting a VFR² charter flight from Aiyura National High School, in Ukarumpa, Eastern Highlands Province (EHP) to Nadzab Airport, Morobe Province, Papua New Guinea, when during its line-up for take-off, the tail rotor (TR) blades struck a powerline. The pilot subsequently landed the helicopter back onto the ground.

The accident flight had six persons on board: one pilot and five passengers. No injuries were reported.

Safety deficiency description

The investigation determined that during the pilot's ground assessment, prior to the passenger flight, the pilot walked out to about 20 m from the helicopter's parked position and identified and assessed a number of obstacles toward the North and Northwest. He observed a soccer goal structure, trees and suspended powerlines around that area.

Based on his assessment, the pilot concluded that the powerlines were positioned beyond the edge of the field and the area which he had nominated as his departure point. It was later confirmed after the accident that the perception that the pilot had, made his situational awareness and influenced decisions erroneous.

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, Papua New Guinea Time (Pacific/Port Moresby Time) is UTC +10 hours.

² Visual Flight Rules.

The AIC believes that the distance at which he viewed the powerlines from the ground was too far for the normal human eyes to accurately judge their distance. Unlike other larger obstacles, the powerlines are thin and difficult to see.

The investigation noted that the operator has a procedure to ensure the pilot visually checks the direction to which the tail rotor is travelling. However, in this case, the pilot did not identify any hazard when he was doing his assessment of obstacles in his taxi path, which the investigation determined that it allowed him to make a turn for his departure without paying attention to the tail rotor.

It is a safety concern that in such situation, when the perception of any obstacles is likely to be influenced, it is imperative for the pilot to ensure that appropriate action is taken to mitigate the likelihood of a hazard to develop and eventually jeopardise the flight operation during flight manoeuvres away from obstacle free lift off zone, and during assessment of obstacles.

Recommendation number AIC 23-R15/22-1003 to SIL Aviation.

The AIC recommends that the SIL Aviation should ensure its pilots are made aware of hazards associated with perceptions of existing obstacles such as powerlines and other smaller objects, which could easily be influenced by the surrounding environment or circumstances, when conducting pre-landing and pre-flight assessments and during flight manoeuvres.

Action requested.

The AIC requests that SIL Aviation notes recommendation *AIC 23-R15/22-1003* and provide a response to the AIC within 90 days, but no later than 17 December 2023, and explain including with evidence how SIL Aviation has addressed the safety deficiency identified in the *Safety Recommendation AIC 23-R15/22-1003*.



Capt. Aria Bouraga, MBE

Acting Chief Commissioner

18 September 2023

SIL Aviation Response

On 1 November 2023, SIL Aviation responded via email providing their corrective actions with evidence, to address the safety deficiency identified in AIC *Safety Recommendation AIC 23-R15/22-1003*, which was contained in an attached letter, dated 1 November 2023.

The letter stated that SIL Aviation acknowledges and agrees with the AIC's *Safety Recommendation AIC 23-R15/23-1003*, as a result the following changes have been made to their procedures and are documented as follows:

- 1) *The following addition has been made to the Helicopter Line Operations manual in the form of the attached "HLO TR5-2_Final Walk Around Inspection & LZ Assessment". Note: that 4.34.2 b and c refer particularly to addressing this accident by more clearly identifying the location of known hazards and providing clearance from them.*
- 2) *Further detail has been added to our internal training materials in the attached copy of TMF-Landing Zone Requirements and Assessment" to help pilots assess risks in the landing area during the airborne reconnaissance prior to landing.*
- 3) *Additionally, we have decided that all pilots flying helicopters for SIL Aviation will take the "Online Flying in the Wire and Obstruction Environment & Crew Resource management" Course offered by Utilities/Aviation Specialists. This course is widely recognized in the utility helicopter industry for providing aircrew with techniques for reducing risk in low level flying operations, including near and obstructions.*

Attached to the letter were the amended HLO TR5-2_Final Walk Around Inspection & LZ Assessment form and the TMF-Landing Zone Requirements and Assessment form.

PNG AIC assessment of SIL Aviation Response

The AIC reviewed the SIL Aviation response and notes that the preventative action addresses the safety deficiencies identified in the *Safety Recommendation AIC 23-R15/22-1003*.

The AIC also notes that SIL did not provide any evidence of all SIL helicopter pilots being made aware following the safety actions taken to address the safety deficiency identified in the safety recommendation.

The AIC assigned this response as *satisfactory intent rating*.

The AIC recorded the Status of the AIC Recommendation: **MONITOR**



Capt. Aria Bouraga, MBE
Acting Chief Commissioner

10 December 2023

SIL Aviation Response

On 30 November 2023, the AIC made a request, via email, for SIL Aviation to provide evidence of the implementation of the corrective actions taken to address the safety deficiency in the AIC *Safety Recommendation AIC 23-R15/22-1003*. There was no response received from SIL Aviation.

On 30 January 2024, the AIC made a courtesy follow up, via email on the request made on 30 November 2023 to SIL Aviation. On the same day, SIL Aviation responded and provided online training certificates of their three pilots, including the accident pilot, who attended the “Flying in the wire and obstruction environment & Crew Resource Management” course. The certificates showed that the three pilots attended the courses.

PNG AIC assessment of SIL Aviation Response

The AIC reviewed the SIL Aviation response and notes that the evidence of the implementation of the corrective actions to address the safety deficiencies identified in the *Safety Recommendation AIC 23-R15/22-1003*.

The AIC assigned this response as *fully satisfactory rating*.

The AIC recorded the Status of the AIC Recommendation: **CLOSED**



Maryanne J. Wal
Chief Commissioner

9 February 2024