**CIVIL AVIATION AUTHORITY OF THE PHILIPPINES**
**Aircraft Accident Investigation and Inquiry Board**
**Aircraft Accident Report**

## BASIC INFORMATION

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| Aircraft Registration No. | : | RP-C2550 |
| Manufacturer | : | Robinson Helicopter Corp. |
| Model / Serial No. | : | R44 Raven II/11689 |
| Owner/Name of Operator | : | Lionair Incorporated |
| Date/Time of Accident | : | 17 May 2010/1500H |
| Type of Operation | : | Commercial |
| Phase of Operation | : | Take-off (upwind) |
| Place of Accident | : | Jael Subdivision, Barangay Iyam, Lucena City (13°56' 18.0N, 121°36' 16.8E) |
| Type of Accident | : | Uncontrolled Flight Into Terrain (UFIT) |

## EXECUTIVE SUMMARY

The helicopter departed Manila Domestic Airport on or about 0730H, May 17, 2010 with one VIP passenger on board for Lucena City. After 35 minutes flight, it landed on the oval soccer field of the Alcala Sports Complex, Quezon National High School in Lucena City. The pilot joined the VIP passenger attending official activities in the city and returned to the parked helicopter in the afternoon at about 1500H. The pilot, a VIP and 2 other passengers immediately boarded the aircraft to catch up urgent appointment in Manila. From its parked position the helicopter taxied about 20 meters back and positioned for take-off. It made a normal take-off heading NNW. During the take-off process it was observed pitching up before clearing the tip of 50 feet obstacle located 80 meters from the take-off point. Afer clearing the obstacle, the aircraft was observed with "rotors slowing down" and moments later, it plummeted into a residential area about 500 meters from the take- off point. The aircraft hit a narrow, concrete road in Jael Subdivision on its right fuselage and nose oriented to the north. A post-crash fire instantly ensued upon impact. The fire was suppressed about 5 minutes later by the responding local firefighters. The helicopter was destroyed and burned with its 4 occupants. Also, 1 local resident was fatally injured and 3 more with minor injuries. Five residential structures close to the crash site were severely damaged by fire.

## PROBABLE CAUSE

- The Aircraft Accident Investigation and Inquiry Board determined that the probable cause of this accident was the pilot failed to plan and establish the desired safe parameters for take-off as they immediately boarded the helicopter to catch up urgent appointment in Manila. No 360 degrees visual inspection, securing luggage, identifying wind condition and computing the take-off performance for a safe flight in a strange field take-off area were conducted.

- His take-off was adversely affected by a tailwind component with intermittent 10-12 knots velocity and variable direction coming from SE, burdened by a 50 feet obstacle in front, high aircraft take-off weight on a limited take-off distance, and 37 deg C OAT.

- The pilot experienced physiological, psychological and psycho-social stress. Instead of taking crew rest and planning for the next sortie he joined the VIP in his activities in the city in the morning until afternoon where fatigue was most likely to happen. His lack of experience specifically on the recognition and recovery procedures which was necessary for this manifestation of abnormal flight condition of the aircraft contributed in the accident. Also, the VIP passenger who happened to be the PIC's direct employer served as stressor for him to act in haste in his desire for acceptability but unconsciously failed to ensure that the basic parameters for a safe take-off were met.

## SAFETY RECOMMENDATIONS

As a result of this investigation, the Aircraft Accident Investigation and Inquiry Board made the following safety recommendations:

- Rotary pilots shall strictly adhere to their Pilot's Operating Handbook giving special emphasis to the limitations and performance charts for take- off and the Safety Notices.

- All aircraft operators/pilots operating R22 and R44 type shall strictly comply with the Special Training and Experience Requirements and stipulated under Special FAR No. 73, Awareness Training.

- R22 and R44 pilots shall review Human Factors in Flight specifically on the avoidance of physiological, psychological and psycho-social stresses.