



National Transportation Safety Board

Aviation Accident Data Summary

Location:	Noxen, PA	Accident Number:	ERA13FA336
Date & Time:	07/27/2013, 2220 EDT	Registration:	N646AG
Aircraft:	ROBINSON R66	Injuries:	5 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The flight departed under visual flight rules (VFR) and then obtained VFR flight following before proceeding in a southeasterly direction. About 28 minutes after takeoff, while flying about 3,000 feet mean sea level over a sparsely populated and heavily wooded area with few ground reference lights, the flight likely encountered light rain. The pilot flew south of a wind turbine, initiated an approximate 180-degree left turn with 300 feet altitude loss, then began following a dirt road associated with the wind turbines. After completion of the turn he advised the controller, "...we're inadvertent IMC [instrument meteorological conditions], reversing..." and asked for a heading to the nearest airport. The controller asked the pilot if he wanted a vector to the nearest airport and also if the flight was in IMC, but there was no reply. The controller provided a heading for a vector to a nearby airport but the pilot did not respond. The flight continued in the same orientation following the course reversal, flying past another wind turbine before turning right; the controller again advised the pilot of the direction to the nearest airport. The pilot immediately responded that he was, "...having trouble maintaining control here." The controller informed the pilot that the nearest airport was heading 068 degrees and 8 miles away, and the recorded radar data indicates the pilot flew a north-northeasterly heading with changes in altitude noted. The comments from the pilot followed by the maneuvering (changes in altitude and heading) were consistent with the known effects of spatial disorientation. Radio and radar contact were lost; the helicopter descended on an east-northeasterly heading into trees and terrain in a heavily wooded area away from any nearby wind turbines. Postaccident examination of the helicopter revealed extensive impact damage, although there was no evidence of a preimpact failure with the flight controls, drive line, or structure. The engine was found to operate normally and data downloaded from the engine monitoring unit indicates no evidence of preimpact failure or malfunction.

While there was no record of an official preflight weather briefing before departure, a text message from the non-instrument rated pilot to his brother approximately 1 hour before departure stating, "...Waiting out weather to fly back to [Ocean City, MD] tonight" indicates that to some extent he was aware of the weather. Had the pilot obtained an official preflight weather briefing for the intended VFR flight, the briefing specialist likely would have advised him against VFR flight due to IMC (ceiling less than 1,000 feet and visibility less than 3 miles) and mountain obscuration that were forecast to exist in the accident area.

Although the left seat occupant was a student pilot, it is unlikely the pilot-in-command was giving him instruction during the accident flight. While operation of a helicopter with decreased ceiling and visibility can be safely performed, the environmental conditions in the accident site area consisting of a sparsely populated heavily wooded area with few ground reference lights and no illumination from the moon were indicators that VFR flight should not have continued.

Flight Events

Enroute-cruise - VFR encounter with IMC

Maneuvering-low-alt flying - Loss of control in flight
Uncontrolled descent - Collision with terr/obj (non-CFIT)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
The pilot's decision to continue VFR flight into night instrument meteorological conditions, which resulted in spatial disorientation and a loss of control.

Findings

Aircraft-Aircraft oper/perf/capability-Performance/control parameters-(general)-Not attained/maintained - C
Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Pilot - C
Personnel issues-Psychological-Perception/orientation/illusion-Spatial disorientation-Pilot - C
Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
Environmental issues-Conditions/weather/phenomena-Light condition-Dark-Decision related to condition
Environmental issues-Conditions/weather/phenomena-Ceiling/visibility/precip-Low ceiling-Decision related to condition

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	30
Airplane Rating(s):	None	Instrument Rating(s):	None
Other Aircraft Rating(s):	Helicopter	Instructor Rating(s):	Helicopter
Flight Time:	(Estimated) 1335 hours (Total, all aircraft), 35 hours (Total, this make and model), 1281 hours (Pilot In Command, all aircraft), 221 hours (Last 90 days, all aircraft), 49 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBINSON	Registration:	N646AG
Model/Series:	R66	Engines:	1 Turbo Shaft
Operator:	David E. Jenny	Engine Manufacturer:	Rolls-Royce
Operating Certificate(s) Held:	None	Engine Model/Series:	250-C300/A1
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	AVP, 2165 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	Broken / 1200 ft agl	Wind Speed/Gusts, Direction:	4 knots / , Variable
Temperature:	19° C	Visibility	1 Miles
Precipitation and Obscuration:	Heavy - Rain; Mist		
Departure Point:	Endicott, NY (CZG)	Destination:	Lehighton, PA (22N)

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	4 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	41.454722, -76.092222		

Administrative Information

Investigator In Charge (IIC):	Timothy W Monville	Adopted Date:	10/06/2014
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=87589		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.