Aviation Investigation Final Report

Location:	Vineyard Haven, Massachusetts	**Accident Number:**	NYC03LA019
Date & Time:	November 12, 2002, 19:53 Local	**Registration:**	N2165Y
Aircraft:	Mooney M20R	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot was performing a VOR Runway 6 approach over water during night instrument meteorological conditions. Radar data revealed that the airplane descended toward the airport, to an altitude of 200 feet, then began a climbing right turn to an altitude of 700 feet, before radar contact was lost. The pilot did not report any problems to air traffic controllers. Several small pieces of debris, which included portions of the airplane's interior and small pieces of sheet metal, were recovered during the days subsequent to the accident. A portion of the cabin forward of the wing spar and aft of the engine washed onto a beach area. The airplane's engine, wings, and empennage were not recovered. A pilot who landed 15 minutes prior to the accident, and also utilized the VOR Runway 6 approach, said he had no problems tracking the VOR, and "broke out" of the clouds at 700 feet, with 2 to 3 miles of visibility in moderate rain. He stated it was "windy, but down the runway." In addition, the pilot reported he felt the weather conditions he experienced while on approach were the same as the accident airplane, except that the rain had intensified. A review of the VOR Runway 6 approach revealed that the minimum decent altitude was 400 feet above the ground. In addition, the missed approach procedure included a climbing right turn to 2,500 feet. A weather observation taken at the airport, about the time of the accident, included: winds from 030 degrees at 15 knots; visibility 2 miles with heavy rain and mist; and a broken ceiling at 600 feet, with a broken cloud layer at 1,100 feet, and an overcast cloud layer at 1,800 feet.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's spatial disorientation during a missed approach, which resulted in a loss of control,

and the airplane's subsequent impact with water. Factors included clouds, rain, and night lighting conditions.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MISSED APPROACH (IFR)

Findings
1. (F) LIGHT CONDITION - NIGHT
2. AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
3. (C) SPATIAL DISORIENTATION - PILOT IN COMMAND
4. (F) WEATHER CONDITION - CLOUDS
5. (F) WEATHER CONDITION - RAIN

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
6. TERRAIN CONDITION - WATER

Factual Information

On November 12, 2002, about 1953 eastern standard time, a Mooney M20R, N2165Y, was destroyed when it crashed into the Atlantic Ocean, about 5 miles south of the Martha's Vineyard Airport (MVY), Vineyard Haven, Massachusetts. The certificated private pilot and a passenger were fatally injured. Instrument meteorological conditions prevailed and an instrument flight rules (IFR) flight plan had been filed for the flight that departed the Theodore Francis Green State Airport (PVD), Providence, Rhode Island. The personal flight was conducted under 14 CFR Part 91.

The pilot purchased the airplane in April 2002, and based it at MVY.

According to a representative of the pilot's family, the pilot was returning from a trip to Florida to visit friends. The day before the accident, the pilot flew to Savannah, Georgia, and on the day of the accident, the pilot flew to PVD. While at PVD, the airplane was refueled with 50 gallons of aviation gasoline. The pilot contacted the Bridgeport Automated Flight Service Station (AFSS) to obtain a standard and updated weather briefing for the flight, and then departed for MVY, about 1925.

According to information received from the Federal Aviation Administration (FAA), the airplane was cleared for the VOR Runway 6 approach at 1947:39. Radar data revealed the airplane descended toward the airport, to an altitude of 200 feet, and then began a climbing right turn to an altitude of 700 feet, before radar contact was lost. The pilot did not report any problems to air traffic controllers.

A pilot reported he landed at MVY about 15 minutes prior to the accident, and utilized the VOR Runway 6 Approach. The pilot said he had no problems tracking the VOR, and "broke out" of the clouds at 700 feet, with 2 to 3 miles of visibility in moderate rain. He stated it was "windy, but down the runway." The pilot said he was taxing out for takeoff when he heard the accident pilot report he was "2 miles out." The accident pilot then asked if someone could confirm that the runway lights were on. The pilot on the ground told the accident pilot that only the runway end lights were illuminated. The accident pilot then activated the runway lights and the pilot on the ground confirmed they were illuminated. The accident pilot thanked him, and the pilot on the ground did not hear any further communication from the airplane. In addition, the pilot reported he felt the weather conditions he experienced while on approach were the same as the accident airplane, except that the rain had intensified.

Several small pieces of debris, which included portions of the airplane's interior and small pieces of sheet metal, were recovered during the days subsequent to the accident. On February 5, 2003, a portion of the cabin forward of the wing spar and aft of the engine washed up onto a beach area. As of June 1, 2003, the airplane's engine, wings, and empennage had

not been recovered.

The airplane was manufactured in 1998, and had been operated for about 360 total hours. The airplane had been flown about 115 hours since its most recent annual inspection, which was performed on April 12, 2002.

The pilot held a private pilot certificated for single engine land airplanes and an instrument rating. The pilot's most recent logbook was not located. He reported 425 hours of total flight experience on his most recent application for an FAA third class medical certificate, which was dated December 3, 2001. On his application for an instrument rating dated March 8, 2001, the pilot reported 325 hours of total flight experience, which included 80 hours of instrument flight time. The pilot's instrument rating was issued on March 12, 2001.

Review of a VOR Runway 6 approach plate revealed that the minimum decent altitude was 400 feet above the ground. In addition, the missed approach procedure included a climbing right turn to 2,500 feet.

A weather observation taken at MVY, at 1953, included: winds from 030 degrees at 15 knots; visibility 2 miles with heavy rain and mist; and a broken ceiling at 600 feet, with a broken cloud layer at 1,100 feet, and an overcast cloud layer at 1,800 feet.

Pilot Information

Certificate:	Private	**Age:**	43,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	December 3, 2001
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	425 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	**Registration:**	N2165Y
Model/Series:	M20R	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	29-0174
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	April 12, 2002 Annual	**Certified Max Gross Wt.:**	3200 lbs
Time Since Last Inspection:	115 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	245 Hrs as of last inspection	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-550-G
Registered Owner:	Richard A. Colson	**Rated Power:**	280 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Night
Observation Facility, Elevation:	MVY,68 ft msl	**Distance from Accident Site:**	5 Nautical Miles
Observation Time:	19:53 Local	**Direction from Accident Site:**	10°
Lowest Cloud Condition:		**Visibility**	2 miles
Lowest Ceiling:	Broken / 600 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	15 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	30°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.94 inches Hg	**Temperature/Dew Point:**	10°C / 9°C
Precipitation and Obscuration:	Heavy - None - Rain		
Departure Point:	PROVIDENCE, RI (PVD)	**Type of Flight Plan Filed:**	IFR
Destination:	Vineyard Haven, MA (MVY)	**Type of Clearance:**	IFR
Departure Time:	19:25 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	MARTHAS VINEYARD MVY	**Runway Surface Type:**	Asphalt
Airport Elevation:	68 ft msl	**Runway Surface Condition:**	Wet
Runway Used:	6	**IFR Approach:**	VOR
Runway Length/Width:	5500 ft / 100 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	41.337776,-70.639167

Administrative Information

Investigator In Charge (IIC):	Schiada, Luke
Additional Participating Persons:	Ron Williams; Bedford, MA
Original Publish Date:	July 23, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=56041