Aviation Investigation Final Report

Location:	BORING, Oregon	**Accident Number:**	SEA97FA027
Date & Time:	November 15, 1996, 07:40 Local	**Registration:**	N7823K
Aircraft:	Cessna P210N	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The flight was initially conducted on an instrument flight rules (IFR) flight plan above an overcast layer of clouds. As the pilot neared the destination airport, he was told by air traffic control (ATC) that there would be a delay in issuing the pilot a clearance for an approach due to other traffic in the area. The pilot elected not to wait. He requested and received vectors to an area of known visual conditions, and then reported that he saw a 'big hole' in the clouds. He canceled his IFR clearance and told ATC that he was going to initiate a circling descent to get underneath the clouds. The airplane dropped below ATC's radar coverage and the pilot was cleared to the destination via his own navigation. About 7 minutes later, the airplane impacted rapidly rising terrain that was shrouded in thick fog.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's attempt to conduct visual flight into instrument meteorological conditions. A factor contributing to the accident was the presence of thick fog.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING

Findings
1. TERRAIN CONDITION - MOUNTAINOUS/HILLY

2. (F) WEATHER CONDITION - FOG
3. (C) VFR FLIGHT INTO IMC - ATTEMPTED - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On November 15, 1996, about 0740 Pacific standard time, N7823K, a Cessna P210N, operated by the owner/pilot, impacted mountainous terrain and was destroyed while maneuvering near Boring, Oregon. The commercial pilot, the sole occupant, was fatally injured. Instrument meteorological conditions prevailed. An instrument flight rules (IFR) flight plan had been filed and later canceled by the pilot, in flight, immediately prior to the accident. The personal flight departed from Roseburg, Oregon, at 0630 and was destined for Troutdale, Oregon. The flight was conducted under 14 CFR 91.

According to an acquaintance of the pilot, the purpose of the flight was so that the pilot could have some aircraft radio repair work performed on the accident airplane in Troutdale. The acquaintance also reported that the pilot was well-rested prior to the flight and did not complain of any personal or aircraft problems on the day prior to the flight.

According to Federal Aviation Administration (FAA) transcripts (attached), a man identifying himself as the pilot of N7823K telephoned the McMinnville Automated Flight Service Station (AFSS) at 0557 on the morning of the accident and received a weather briefing. The briefing lasted for about 4 minutes, and the briefer described IFR and marginal visual flight rules (VFR) conditions near the pilot's destination. After receiving the briefing, the pilot immediately filed an IFR flight plan from Roseburg to the Portland-Troutdale Airport. He also filed a flight plan for a return trip that same day.

The pilot contacted the McMinnville FSS again to receive clearance to depart from Roseburg at 0630. At 0659, the pilot transmitted a pilot report to the FSS, and he reported that he received "no ice on the climb" out of Roseburg.

According to radar data and voice recordings (radar data attached) obtained from the FAA Portland International Airport Air Traffic Control (ATC) facility, the pilot reported in with Portland Approach Control at 10,000 feet msl at 0716. The controller told the pilot that the Portland-Troutdale airport was "VFR" and he read the most recent reported weather conditions for the airport.

At 0719, the controller asked an Alaska Airlines pilot if he could "see Troutdale there about twelve o'clock and a mile?" The Alaska Airlines pilot responded with "Actually, no. Troutdale is under that low scattered deck I was telling you about. An we just entered the clouds at five thousand five hundred."

Three minutes later, at 0721, the controller told the pilot:

There's probably a couple of options for you sir. I don't think the NDB alpha to Troutdale would be available without a lengthy delay. There's lots of departure traffic lining up to come off of Portland. There are [airplanes] VFR south of Portland at three thousand five hundred. If you like, I can take you to that area for vectors for VFR conditions, then cancel to get underneath the layer to Troutdale. Or, if you want, we can go out for the [instrument landing system approach] to Portland. We can do the [instrument landing system approach] here at Portland and then cancel and go along north to Troutdale.

The pilot responded with "I like the VFR. Get me below the [cloud] deck so I can proceed VFR." At 0721, the controller provided vectors to an area of known VFR conditions and cleared the pilot to descend to 7,000 feet. At 0725, the controller cleared the pilot to descend to 3,000 feet. The pilot complied with the request.

At 0727, the controller cleared the airplane to descend to 2,500 feet. The pilot complied with the request. Two minutes later, the controller told the pilot "...that's the lowest altitude I can give you ... if you're unable to cancel [IFR] in 5 to 6 miles, we';; take you out for another approach." The pilot responded with "Actually, I can see the Willamette River. What's the base of the layer below me?" The controller responded with "I'm not sure... [Troutdale] is reported at one thousand six-hundred overcast. Stand by, we're checking." The pilot immediately replied: "Well, I got a big hole here. I can go ahead and make a circle and go VFR." The pilot then canceled his IFR clearance with ATC and stated that he was going to "...circle to the left and get down below" the cloud deck. The controller acknowledged and cleared the airplane via the pilot's "...own navigation to Troutdale, VFR." The pilot acknowledged.

From 0731:11 until 0731:43 (a period of 32 seconds), the airplane descended from 2,000 feet msl to 1,200 feet msl at a rate of 1,600 feet per minute. During this time, the airplane's ground speed increased from 170 knots to 225 knots. The airplane then leveled out, and its ground speed gradually decreased back toward 170 knots.

About one minute later, at 0733:02, the controller advised: "...you've dropped below my radar coverage at this time. At the appropriate time, contact Troutdale tower." The pilot acknowledged; this was the pilot's last recorded transmission. At the time of the aircraft's last recorded radar hit at 0732:48, the aircraft was traveling at 157 knots along a ground track of 099 degrees magnetic while flying at an altitude of 1,100 feet msl. No distress calls had been transmitted by the pilot. According to personnel at the Portland-Troutdale ATC tower, the pilot never reported in.

The Safety Board personally interviewed (synopses attached) numerous witnesses who resided within 1/2-mile of the accident site. One witness was in his home when he heard an airplane flying overhead toward the northwest. He stated that the engine was "running perfectly," and then "just stopped." He also stated that there were "low clouds" at the time. Another witness, also inside of his house, stated that he heard an airplane flying "low." He said

the engine sounded "very normal" and the time was about 0730. A third witness stated he was in his home when he heard a "loud explosion followed by two mild explosions" at 0738.

A fourth witness, who was the property owner of the accident site, stated that he was outside of his home, about 300 feet from the accident site, when he heard an aircraft engine at "full bore..." about 0740. He then heard a "tremendous explosion" and he could see fire as he looked up. He saw that the trees were on fire. He stated that there was "no question [the airplane] had power" at the time of the accident, and that the engine sounded "steady." He stated that it was "foggy" throughout the "whole valley." He stated that the fog was "in through the trees" and he remembered seeing the fire through the fog.

The airplane wreckage was located in mountainous terrain 6.2 nautical miles from the Portland-Troutdale Airport at an elevation of about 1,100 feet msl. The accident occurred during the hours of daylight at the following coordinates: 45 degrees, 27.18 minutes North and 122 degrees, 27.14 minutes West.

PERSONNEL INFORMATION

The pilot, a 56-year-old retired dentist, was a certificated commercial pilot and was instrument rated in both single and multiengine land airplanes. According to FAA records, the pilot was issued an FAA Third Class Medical Certificate on July 21, 1995, with the limitation that he "must wear corrective lenses." The Safety Board was unable to recover the pilot's personal flight log books; however, the pilot's insurance company provided a copy of an application that the pilot completed 9 months prior to the accident. According to the application, the pilot had logged a total of 3,800 flight hours, including 800 hours in type.

AIRCRAFT INFORMATION

The airplane, a 1979 Cessna P210N, is designed as a six-place, all metal, high-wing, turbocharged, pressurized, single-engine airplane. The airplane's engine and airframe logbooks were not found and are presumed to have been destroyed in the aircraft accident.

METEOROLOGICAL INFORMATION

The following sky conditions and cloud layers were recorded by the Portland-Troutdale Airport about 7 minutes after the accident: scattered clouds 300 feet above ground level (agl); broken cloud ceiling at 500 feet agl; visibility 5 statute miles; temperature 43 degrees F; dew point 41 degrees F; calm winds; altimeter setting 29.89 inches. The airport is located 6.2 nautical miles north of the accident site at a ground elevation of 35 feet msl.

Ground witnesses located near the accident site stated that it was "very foggy" throughout the "whole valley" and at the site.

WRECKAGE AND IMPACT INFORMATION

The airplane wreckage was examined at the accident site on the day of the accident, and again on the following day. The wreckage scatter path (diagram attached) was oriented along magnetic north and was measured to be about 220 feet in length along heavily wooded terrain. The accident site was located at an elevation of about 1,100 feet and 6.2 nautical miles due magnetic south of the Portland-Troutdale Airport. The terrain was sloping upward from a valley toward the initial impact site. The initial slope of the terrain rising from the valley was about 20 degrees, then gradually flattened to an upslope angle of about 10 degrees at the accident site.

The initial impact point was identified by pieces of aircraft aluminum found imbedded in a 16-inch-wide tree at a point 60 feet above the ground. The outboard section of the right wing was found on the ground about 50 feet from this tree, followed by the left horizontal stabilizer and rudder, left wing sections, engine, cockpit area, propeller, engine, cowling pieces, and nose landing gear. Evidence of a ground fire was found encompassing the central portion of the accident site.

All primary and secondary flight control surfaces were accounted for at the accident site. No evidence was found to indicate a flight control deficiency. The wing flaps were found extended in the 10 degree position. The landing gear was found in the retracted position. Both wing fuel tanks and associated fuel lines were compromised. The cabin area and instrument panel were destroyed by fire and impact forces.

The engine underwent an external examination at the accident site, and was then airlifted to an area where it could be inspected in detail. The external examination and detailed inspection did not reveal evidence of any preimpact mechanical malfunctions.

All three propeller blades were found attached to the hub. The hub had separated from the engine and was located at the accident site. Blade no. 1 was secure in the hub and exhibited slight "S" bending near its tip. Blade no. 2 was found broken in the hub; its tip also exhibited a slight "S" bend, and it had numerous scratches that ran about 45 degrees to its chordwise direction. Blade no. 3 was clean, intact, and secure in the hub; it exhibited less damage than the other two blades.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot by Dr. Larry V. Lewman, M.D., of the State of Oregon Medical Examiner Division, Portland, Oregon, on November 15, 1996. The cause of death was listed as "Head and Chest Trauma." A toxicological analysis was ordered and performed on specimens taken from the pilot by the FAA Civil Aeromedical Institute in Oklahoma City, Oklahoma. According to their report (attached), results were negative for carbon monoxide, cyanide, alcohol, and all screened drugs.

ADDITIONAL INFORMATION

The aircraft wreckage was released to Mr. Edward F. Stewart, Assistant Vice President, United States Aviation Underwriters, Seattle, Washington, on November 16, 1996. Mr. Stewart was representing the registered owner of the airplane at the time of the release.

Pilot Information

Certificate:	Commercial	**Age:**	56,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	July 21, 1995
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	4000 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N7823K
Model/Series:	P210N P210N	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	P21000432
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	4000 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	TSIO-520-P(6)
Registered Owner:	SCHMID, THOMAS J.	**Rated Power:**	310 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	TTD ,35 ft msl	**Distance from Accident Site:**	6 Nautical Miles
Observation Time:	07:47 Local	**Direction from Accident Site:**	3°
Lowest Cloud Condition:	Scattered / 300 ft AGL	**Visibility**	5 miles
Lowest Ceiling:	Broken / 500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	6°C / 5°C
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	ROSEBURG , OR (RBG)	**Type of Flight Plan Filed:**	IFR
Destination:	TROUTDALE , OR (TTD)	**Type of Clearance:**	None
Departure Time:	06:30 Local	**Type of Airspace:**	Class G

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Valley/terrain following

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	On-ground
Total Injuries:	1 Fatal	**Latitude, Longitude:**	45.419803,-122.370651(est)

Administrative Information

Investigator In Charge (IIC):	Guzzetti, Jeffrey
Additional Participating Persons:	JERRY BAAS; HILLSBORO , OR RANDY L VANDENHUL; WICHITA , KS SCOTT BOYLE; ARVADA , CO
Original Publish Date:	March 31, 1998
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=42486