Aviation Investigation Final Report

Location:	Memphis, Tennessee	**Accident Number:**	MIA03LA012
Date & Time:	November 3, 2002, 17:43 Local	**Registration:**	N167MA
Aircraft:	Piper PA-46-350P	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

On the day of the accident at 0741, and 1345 (approximately 44 minutes before the flight departed) the pilot phoned the St. Petersburg, Florida, Automated Flight Service Station. During the first phone call he received an outlook briefing and he received a weather briefing and filed an instrument flight rules flight plan during the second phone call. The flight departed at 1429 eastern standard time, and after takeoff air traffic control (ATC) communications were transferred to several different facilities as the flight progressed towards the destination airport. At 1709:40, the pilot established contact with the Memphis Air Traffic Control Tower (Memphis ATCT) and advised that the flight was at 4,000 feet. The pilot was questioned as to what type of approach he would like at the destination airport and he replied global positioning system (GPS) runway 16. The controller advised the pilot there was no weather reporting facility at the destination airport. The flight remained in contact with the Memphis ATCT for the remainder of the flight, and was cleared to descend and maintain 3,000 feet, which the pilot acknowledged. The flight continued and the pilot advised the controller at 1724:49, that the flight was at 2,300 feet though no descent clearance from the previously assigned 3,000 had been given. The pilot was then asked what type of approach he wanted; he again advised GPS 16. The flight was vectored for the approach, advised of the weather conditions at the nearby Memphis International Airport, and cleared to descend to 2,000 feet. The flight continued, and the pilot was advised that the flight was 5 miles from the initial approach fix (IAF), vectored heading 180 degrees, and cleared for the GPS 16 approach. The pilot then responded that in the event of a missed approach, he would go to Memphis, to which the controller provided missed approach instructions, which the pilot acknowledged. Review of a plot of radar targets indicate that from that time, the airplane flew in a southerly direction, and intercepted the final approach course between the initial approach fix (IAF) and the final approach fix (FAF). The airplane flew west of the final approach course, then turned to the left flying in a southeasterly direction, and re-intercepted the final approach course approximately 3.5 nautical miles south of the FAF, which was between the FAF and the missed approach point (MAP). The airplane then flew east of the final approach course, turned to the right flying

in a southwesterly direction, and re-intercepted the final approach course near the MAP. The airplane flew west of the final approach course, then turned to the right towards the northwest, followed by a left turn to the west. The last recorded radar return occurred at 1743:09, indicating 900 feet, and was located at 35 degrees 12.5028 minutes North latitude and 090 degrees 04.1076 minutes West longitude, or .58 nautical mile southwest of the MAP, which is over the Mississippi River. The airplane, pilot and passenger have not been located and are presumed to be destroyed and fatally injured, respectively. Cowling plugs marked with the airplane's registration were found south of Helena, Arkansas, 2 days after the accident. The pilot had completed the FAA Wings level VIII in June 2002. A METAR weather observation taken at the Memphis International Airport (KMEM) at 1753 (approximately 10 minutes after the accident) indicates the wind was from 150 degrees at 5 knots, the visibility was 6 statute miles in mist, broken clouds existed at 700 feet, and overcast clouds existed at 2,100 feet. The temperature and dew point were 48 and 46 degrees Fahrenheit, respectively, and the altimeter setting was 30.08 inHg. The remarks section of the METAR indicates rain ended at 1702. The KMEM airport is located approximately 10 nautical miles south-southeast of the General Dewitt Spain Airport. Sunset occurred in the area at 1706, and the end of civil twilight occurred at 1732. Doppler weather radar depicted no significant severe weather echoes over the area between 1700 and 1800.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The cause of the accident is unknown as the airplane has not been located. A finding in the investigation was the fact that the pilot conducted an unstabilized approach; the flight was right, left, then right of the final approach course during the approach and the radar data reflects the pilot was correcting back to the final approach course during the entire approach.

Findings

Occurrence #1: UNDETERMINED
Phase of Operation: UNKNOWN

Findings
1. (C) REASON FOR OCCURRENCE UNDETERMINED
2. UNSTABALIZED APPROACH - CONTINUED

Factual Information

HISTORY OF FLIGHT

On November 3, 2002, about 1743 central standard time, a Piper PA-46-350P, N167MA, registered to CGS Equipment Leasing LLC., was lost from radar and crashed into the Mississippi River, in the vicinity of Memphis, Tennessee. Instrument meteorological conditions prevailed and an instrument flight rules (IFR) flight plan was filed for the 14 CFR Part 91 personal flight from the Orlando International Airport, Orlando, Florida, to the General Dewitt Spain Airport, Memphis, Tennessee. The airplane has not been recovered, is assumed to be submerged in the Mississippi River, and presumed to be destroyed. The private-rated pilot and a passenger are missing and presumed to be fatally injured. The flight originated about 1429 eastern standard time, from the Orlando International Airport.

According to a chronological summary of communications, after takeoff the flight proceeded en route and air traffic control (ATC) communications were transferred to several air traffic control (ATC) facilities. At 1707, ATC communications were transferred from the Memphis Air Route Traffic Control Center to the Memphis Air Traffic Control Tower (Memphis ATCT). According to a transcription of communications with that facility, the pilot established contact at 1709:40, and advised that the flight was at 4,000 feet. The controller questioned what type of approach the pilot was expecting and he advised a global positioning system (GPS) approach to runway 16. The controller acknowledged the pilots transmission, provided an altimeter setting, and advised the pilot traffic and weather information was unknown at the intended destination airport. The flight continued, was cleared to descend and maintain 3,000 feet, and was provided a heading to fly, which was acknowledged by the pilot. The flight continued and remained in contact with the Memphis ATCT but ATC communications were transferred to different sectors of that facility as the flight continued. At 1724:49, the pilot advised the controller that the flight was at 2,300 feet, though clearance to descend from the previously assigned altitude of 3,000 feet was not given by the controller. The controller provided the altimeter setting and questioned what type of approach the pilot was requesting. The pilot replied at 1725:27, "gps one six dewitt spain for mike alpha if we can't make it we'll go into memphis."

The controller acknowledged the comment from the pilot and advised the pilot to fly heading 280 degrees, which he acknowledged. The controller then advised on the frequency of the weather conditions at Memphis which included few clouds at 500 feet, overcast clouds at 900 feet, wind calm, with light rain and 4 miles of visibility with mist; the pilot did not acknowledge this communication. At 1733:33, the controller then cleared the flight to 2,000 feet and advised the pilot to fly heading 310 degrees; the pilot initially acknowledged the heading and altitude but then questioned what altitude the flight was cleared to. The controller advised the pilot 2,000 feet, which he acknowledged. The flight was then vectored to fly heading 270

degrees, which the pilot acknowledged. At 1736:48, the controller advised the pilot that the flight was 5 miles from "VAGDY", to turn left to heading 180, maintain 2,000 feet until established on the final approach course, and was cleared for the GPS approach to runway 16 at the DeWitt Spain airport. The pilot acknowledged the transmission from the controller and concluded by stating, "...if we fail we'll go into memphis." The controller responded by stating that in the event of a missed approach, to turn right to heading 270 degrees and climb and maintain 2,000 feet, which was acknowledged by the pilot at 1737:20, by stating, "two seven zero ah two thousand is missed approach."

At 1739:42, the controller advised the pilot, "...i'm showing you a bit to the south of the approach course might be my map is off are you showing yourself established." The pilot responded at 1739:49 with, "i'm off to the left to the right rather", to which the controller questioned if the pilot wanted to "...come back around or do you want to correct on your own." The pilot responded with, "can i take a hard right hard left rather" to which the controller replied "roger let me know." At 1740:55, the controller advised the pilot that radar service was terminated and frequency change was approved. He also advised the pilot to cancel the IFR clearance while airborne or on the ground through flight service, and frequency change was approved. The pilot responded at 1741:07, with, "advisory call you if we miss." There were no further recorded radio communications from the controller or the pilot; the pilot did not communicate his intentions to conduct a missed approach.

Review of a NTSB Radar Study performed by personnel located in Washington, DC, revealed that from 1737:20, when the pilot repeated the missed approach instruction, the airplane flew in a southerly direction, and intercepted the final approach course between the initial approach fix (IAF) and the final approach fix (FAF). The airplane flew west of the final approach course, then turned to the left flying in a southeasterly direction, and re-intercepted the final approach course approximately 3.5 nautical miles south of the FAF, which was between the FAF and the missed approach point (MAP). The airplane then flew east of the final approach course, turned to the right flying in a southwesterly direction, and re-intercepted the final approach course near the MAP. The airplane then flew west of the final approach course, then turned to the right towards the northwest, followed by a left turn to the west. The last recorded radar return occurred at 1743:09, indicating 900 feet, and was located at 35 degrees 12.5028 minutes North latitude and 090 degrees 04.1076 minutes West longitude, or .58 nautical mile southwest of the MAP, which is over the Mississippi River.

The Air Force Rescue Coordination Center (AFRCC) located at Langley Air Force Base, Virginia, was notified of the presumed accident at 2315 eastern standard time (approximately 4 hours 32 minutes after the occurrence) by the Tennessee Emergency Management Agency (TN EMA). The AFRCC opened a mission number at 0034 hours, on the 4th of November, to have the Civil Air Patrol assist the TN EMA, who was in charge for the search for the missing airplane. The search for the airplane was called off on the 15th of November at 1637 eastern standard time.

PERSONNEL INFORMATION

The pilot-in-command was the holder of a private pilot certificate with ratings airplane single engine land, and instrument airplane which was issued on June 29, 1994. He was issued a third class medical certificate on December 19, 2000, with the restriction, "Must wear corrective lenses." The pilot indicated on the medical application for that medical certificate that his total time was 1,600 hours. The pilot's pilot logbook has not been recovered and was presumed to be in the airplane.

The pilot completed the Piper PA-46-350 "Initial Course" at SimCom Training Center on November 27, 2001. According to the SimCom Training Center Manager of the Vero Beach, Florida, facility, their records reflect that the accident pilot completed all training requirements for a full completion certificate. The pilot also completed level VIII of the FAA Wings program on June 4, 2002. He also completed the AOPA Air Safety Foundation safety seminar on October 24-26, 2002.

AIRCRAFT INFORMATION

The Piper PA-46-350P airplane, was manufactured in 2000, and was designated serial number 4636267. It was certificated in the normal category as a 6-place airplane, and was equipped with a 350 horsepower Lycoming TIO-540-AE2A engine, and a Hartzell HC-I3YR-1E constant speed propeller.

Review of the maintenance records revealed the airplane was inspected last in accordance with a 50-Hour inspection on March 18, 2002; at that time the airplane total time was 498.9 hours. An entry in the engine logbook dated March 18, 2002, indicates the engine was removed and sent to Lycoming for compliance with airworthiness directive (AD) 2002-04-51. The entry further indicates the engine was returned, and reinstalled in the airplane. The bi-annual check of the transponder, encoder, and static system was performed last on March 20, 2002.

METEOROLOGICAL INFORMATION

On the day of the accident at 0741 est, and again at 1345 est (approximately 44 minutes before the flight departed), the pilot phoned the St. Petersburg, Florida, FAA Automated Flight Service Station. He received an outlook weather briefing during the first call to the facility and he received a weather briefing and filed an IFR flight plan for the flight during the second call to the facility.

A METAR weather observation taken at the Memphis International Airport (KMEM) at 1753, (approximately 10 minutes after the accident) indicates the wind was from 150 degrees at 5 knots, the visibility was 6 statute miles in mist, broken clouds existed at 700 feet, and overcast clouds existed at 2,100 feet. The temperature and dew point were 48 and 46 degrees Fahrenheit, respectively, and the altimeter setting was 30.08 inHg. The remarks section of the METAR indicates rain ended at 1702. The KMEM airport is located approximately 10 nautical

miles south-southeast of the General Dewitt Spain Airport.

Sunset occurred in the area at 1706, and the end of civil twilight occurred at 1732. Doppler weather radar depicted no significant severe weather echoes over the area between 1700 and 1800.

COMMUNICATIONS

The pilot was last in contact with the Memphis Air Traffic Control Tower, there were no reported communication difficulties at the time of the accident.

AIRPORT INFORMATION

The General Dewitt Spain Airport is equipped with a single asphalt runway designed 16/34, which is 3,800 feet long by 75 feet wide. The airport is served in part by a GPS approach to runway 16. There is no weather reporting facility at the airport.

Review of the GPS runway 16 instrument approach procedure revealed the straight in minimum descent altitude for runway 16 is 1,000 feet mean sea level, or 776 feet above ground level. The missed approach point is "YIBPE" which is located 1/2 nautical mile from the approach end of runway 16.

WRECKAGE AND IMPACT INFORMATION

The airplane has not been located. Engine cowling plugs with the accident airplane's registration number marked on them were located 2 days after the accident south of Helena, Arkansas.

MEDICAL AND PATHOLOGICAL INFORMATION

The bodies of the pilot and passenger were never recovered.

ADDITIONAL INFORMATION

The NTSB did not examine any recovered items/components.

Pilot Information

Certificate:	Private	**Age:**	56,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Unknown
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--w/ waivers/lim	**Last FAA Medical Exam:**	December 19, 2000
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	March 1, 2002
Flight Time:	2500 hours (Total, all aircraft), 150 hours (Total, this make and model), 2000 hours (Pilot In Command, all aircraft), 20 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N167MA
Model/Series:	PA-46-350P	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	4636267
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	March 18, 2002	**Certified Max Gross Wt.:**	4300 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	498.9 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	TIO-540-AE2A
Registered Owner:	CGS Equipment Leasing, LLC.	**Rated Power:**	350 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:	MEM,332 ft msl	**Distance from Accident Site:**	
Observation Time:	17:53 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:		**Visibility**	6 miles
Lowest Ceiling:	Broken / 700 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	150°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.98 inches Hg	**Temperature/Dew Point:**	9°C / 8°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Orlando, FL (MCO)	**Type of Flight Plan Filed:**	IFR
Destination:	Memphis, TN (M01)	**Type of Clearance:**	IFR
Departure Time:	14:29 Local	**Type of Airspace:**	Class B

Airport Information

Airport:	General DeWitt Spain MO1	**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	Unknown
Runway Used:		**IFR Approach:**	Global positioning system
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	
Ground Injuries:	N/A	**Aircraft Explosion:**	
Total Injuries:	2 Fatal	**Latitude, Longitude:**	35.194999,-90.088607

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	Dick Wieland; FAA FSDO ; Memphis, TN
Original Publish Date:	July 29, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=56009