



# Aviation Investigation Final Report

<b>Location:</b>	ST. CLAIR SHORE, Michigan	<b>Accident Number:</b>	CHI99FA227
<b>Date &amp; Time:</b>	April 1, 1999, 12:30 Local	<b>Registration:</b>	N441CB
<b>Aircraft:</b>	Smith, Ted Aerostar AEROSTAR 601P	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	2 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation		

## Analysis

The airplane took off from Port Huron, Michigan, on April 1, 1999, at 1130 est. The airplane was scheduled to arrive in Freemont, Ohio. An employee of the pilot's company said that the pilot was going to meet a customer there. At 1230 est, the customer called the company inquiring about the pilot. The employee said that the pilot 'would have taken the shortest route, over [Lake] St. Clair, Ontario [Province], and [Lake] Erie,' to get to Freemont, Ohio. An ALNOT was issued at 1803 est. Search and rescue operations were conducted by the U. S. Coast Guard, Civil Air Patrol, and the Canadian Search and Rescue Center. The search was suspended on April 10, 1999, at 2125 est. The passenger's body was discovered on May 1, 1999, in the Lake St. Clair shipping channel, approximately 6.9 miles east of St. Clair Shores, Michigan. On July 2, 1999, the pilot's body was found in Lake St. Clair. Parts of the airplane identified from the make and model of aircraft were recovered with the bodies.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Undetermined as the aircraft was not recovered.

## Findings

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

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

## Factual Information

### HISTORY OF FLIGHT

On April 1, 1999, at 1230 eastern standard time (est), a Smith Aerostar 601P, N441CB, owned and operated by a private pilot, was reported missing. Pieces from the airplane were recovered from Lake St Clair, 7 miles east of St. Clair Shores, Michigan, on May 1, 1999. Visual meteorological conditions prevailed at the time the airplane would have been airborne. The business flight was being conducted under 14 CFR Part 91. No flight plan was filed. The pilot was recovered from Lake St. Clair on July 2, 1999. The passenger's body had been recovered from Lake St. Clair on May 1, 1999. The cross country flight departed the Port Huron, St. Clair County International Airport, Port Huron, Michigan, at 1130 est, and was en route to Freemont, Ohio.

A witness, employed by the pilot's company, said that the pilot "would have taken the shortest route, over [Lake] St. Clair, Ontario [Province], and [Lake] Erie," to get to Freemont, Ohio. The witness said that the pilot was supposed to meet a customer at Freemont Airport, at 1230 est. When the pilot did not show, the customer contacted the company.

### PERSONNEL INFORMATION

Federal Aviation Administration (FAA) Airman records indicate that the pilot held a private pilot certificate with airplane, single and multi-engine land ratings. A temporary airman certificate, issued on April 26, 1996, indicated that the certificate was issued on basis of Germany Pilot License, number BWKA-76-378, not valid for agricultural aircraft operations. The application for the certificate, dated April 25, 1996, indicated the pilot had 1,296 total flight hours, and 1,246 hours as pilot-in-command.

A notice of disapproval of application, dated April 1, 1996, indicated that the pilot failed (first failure) a flight examination for an instrument rating.

FAA medical records showed the pilot's last flight physical as being on November 14, 1996. At the time of the medical examination, the pilot reported having 1,550 total flight hours, and 48 hours in the preceding 6 months.

The pilot's wife said that the pilot carried his personal logbooks with him when he flew. No personal logbooks were located.

### AIRCRAFT INFORMATION

The airplane was owned and operated by the pilot and used primarily for business.

The airplane had undergone an annual inspection on March 15, 1999. According to the pilot's wife, the airplane was not flown between the time it returned from the annual inspection, until the day when it was reported as missing.

The company which performed the annual inspection, reported that at the time of the inspection, the total airframe time was 3,022.2 hours. Both engines had 167.6 hours on them, since factory overhaul.

#### METEOROLOGICAL INFORMATION

The weather conditions reported at the Detroit City Airport, Detroit, Michigan (8 miles southwest of St. Clair Shores, Michigan), at 1245 cst, were 4,300 feet overcast ceiling, 7 miles visibility and haze, winds 210 degrees magnetic at 8 knots, temperature 62 degrees Fahrenheit (F), and the dew point 54 degrees F.

The weather conditions reported at the Detroit Metropolitan Wayne County Airport, Romulus, Michigan (26 miles southwest of St. Clair Shores, Michigan), at 1254 cst, were 3,900 feet overcast ceiling, 7 miles visibility, winds 190 degrees magnetic at 6 knots, temperature 59 degrees F, the dew point 54 degrees F, and altimeter 29.91 inches of Mercury (Hg).

#### WRECKAGE AND IMPACT INFORMATION

Several small pieces of airplane wreckage were recovered from Lake St. Clair, with the body of the passenger, on May 1, 1999, at latitude 42 degrees, 27.82 minutes N, longitude 82 degrees 45.96 minutes W. The wreckage consisted of pieces of metal, fiberglass, an actuator, and copper wiring. A hand-held microphone was also recovered.

An additional airplane part was recovered from Lake St. Clair with the pilot's body on July 2, 1999, at latitude 42 degrees, 27.746 minutes N, and longitude 082 degrees, 43.647 minutes W. The part was a "C-shaped" piece of ceramic encircled with thin copper wire.

The Macomb County Sheriff's Department made several dives in the area where the pieces were recovered. No additional wreckage was located. The airplane parts were retained for further examination.

#### MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy of the pilot was conducted by the Regional Coroner Ontario Province, Canada, at Windsor, Ontario Province, Canada, on July 3, 1999.

The condition of the pilot's body precluded FAA toxicology testing from being performed.

#### SURVIVAL ASPECTS

The Air Force Rescue Coordination Center (AFRCC) at Langley, Virginia, issued an alert notice (ALNOT) of missing aircraft on April 1, 1999, at 1803 est. A search for the missing airplane was conducted by the United States Coast Guard, the Ohio and Michigan wings of the Civil Air Patrol, and the Canadian Search and Rescue Center. The search began on April 2, 1999.

U. S. Coast Guard and Civil Air Patrol aircraft searched a block grid encompassing the eastern one-third of Lake St. Clair, described at the northwest corner as latitude 42 degrees 32' minutes N, longitude 82 degrees 40 minutes W, running south- southeast to within two miles of the north shore of Ontario Province at latitude 42 degrees 20 minutes N, longitude 82 degrees 42 minutes W, east to latitude 42 degrees 17 minutes N, longitude 82 degrees 26 minutes W, and north to Mitchell's Bay, Ontario at latitude 42 degrees 48.5 minutes N, longitude 82 degrees 24.5 minutes W.

The Coast Guard and Civil Air Patrol also searched a rectangular grid encompassing an 800 square mile area of western Lake Erie beginning near the south shore of Ontario at the town of Colchester, running south across the lake to 10 miles west of Port Clinton, Ohio, east to Sandusky, Ohio, and north across the lake to Point Pelee, Ontario.

Canadian Search and Rescue aircraft searched the area over Ontario Province beginning at Sarnia, Ontario, south-southeast to Chatham, south-southwest from Chatham to Port Alma, and west along the south shore to Colchester.

No evidence of the airplane, its pilot or the passenger was discovered during the 8-day search. The search was called off on April 10, 1999, at 2125 est.

## TESTS AND RESEARCH

Enroute radar display data recorded by the Federal Aviation Administration (FAA), Cleveland Air Route Traffic Control Center (ARTCC) was requested on April 10, 1999. Systematic Air Traffic Operations Research Initiative (SATORI) data, derived from the radar data, was observed at FAA Great Lakes Region, Quality Assurance Office, Des Plaines, Illinois, on May 26, 1999. Parameters for the run were set to search for all primary targets from the surface to 12,300 feet above ground level (agl), in an area within a 50 nautical mile radius of the Port Huron, St. Clair County International Airport, for April 1, 1999, between the hours of 1115:00 est and 1159:55 est. During the 44 minute, 55 second session only three, two-sweep targets were observed in the vicinity of the airport.

The recovered airplane parts were examined at the Aerostar Aircraft Company, Hayden, Idaho, on September 10, 1999. The parts were determined to be from an Aerostar model 601P airplane.

## ADDITIONAL INFORMATION

Parties to the investigation consisted of the FAA Flight Standards District Office, Belleville, Michigan.

### Pilot Information

<b>Certificate:</b>	Foreign; Private	<b>Age:</b>	59, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Expired	<b>Last FAA Medical Exam:</b>	November 14, 1996
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1550 hours (Total, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Smith, Ted Aerostar	<b>Registration:</b>	N441CB
<b>Model/Series:</b>	AEROSTAR 601P AEROSTAR 6	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	61P-0417150
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	March 15, 1999 Annual	<b>Certified Max Gross Wt.:</b>	6000 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	3022 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	IO-540-AA1A5
<b>Registered Owner:</b>	MANFRED W. ENGLER	<b>Rated Power:</b>	235 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	DTW ,633 ft msl	<b>Distance from Accident Site:</b>	26 Nautical Miles
<b>Observation Time:</b>	12:54 Local	<b>Direction from Accident Site:</b>	225°
<b>Lowest Cloud Condition:</b>	Unknown	<b>Visibility</b>	7 miles
<b>Lowest Ceiling:</b>	Overcast / 3900 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	190°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	15°C / 12°C
<b>Precipitation and Obscuration:</b>	N/A - None - Haze		
<b>Departure Point:</b>	PORT HURON , MI (PHN )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	FREEMONT , OH (14G )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	11:30 Local	<b>Type of Airspace:</b>	Class B

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>	1 Fatal	<b>Aircraft Fire:</b>	Unknown
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	Unknown
<b>Total Injuries:</b>	2 Fatal	<b>Latitude, Longitude:</b>	42.460689,-82.899581(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Bowling, David
<b>Additional Participating Persons:</b>	STEVEN C BUCHER; DETROIT , MI
<b>Original Publish Date:</b>	January 18, 2001
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=46997">https://data.nts.gov/Docket?ProjectID=46997</a>

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