



Aviation Investigation Final Report

Location:	FLEMINGTON, New Jersey	Accident Number:	IAD01LA080
Date & Time:	July 15, 2001, 20:00 Local	Registration:	N7106F
Aircraft:	Aerostar International Inc RXS-8	Aircraft Damage:	None
Defining Event:		Injuries:	3 Serious, 1 None
Flight Conducted Under:	Part 91: General aviation - Other work use		

Analysis

The pilot checked the weather at 1400 and 1700, and determined that there was no significant weather forecasted along the intended route of flight. He and his passengers departed around 1900 along with several other balloons for the sightseeing flight. The pilot said that clouds began to gather to the northwest during the flight, and "the cell became more ominous" and "apparent that it would overtake us." The pilot said that the wind shifted and increased in speed, and each attempt to land was aborted due to the high vertical wind shear. On the last attempt to land, the pilot said that "violent down drafts" were experienced and he was unable to abort the landing. The balloon made contact with a tree, and was momentarily tangled. Once free, the pilot observed power lines and a cell phone tower, and elected to "pull the top" about 30-feet above the ground. The balloon contacted the ground at a high rate of descent and forward airspeed, which resulted in the balloon being dragged about 70 feet. The pilot reported that the weather was overcast with light rain, and the winds were from the northwest at a speed greater than 10 knots. Examination of a radar summary chart revealed that the primary radar site for New Jersey was not available. However, the surrounding radar sites did deflect echoes in the northern New Jersey area, but only reported level 1 and 2 activity.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: pilot's continued flight into known adverse weather conditions, which resulted in a hard landing. A factor was the downdrafts.

Findings

Occurrence #1: HARD LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

1. (F) WEATHER CONDITION - DOWNDRAFT
2. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - CONTINUED - PILOT IN COMMAND

Factual Information

On July 15, 2001, at 2000 eastern daylight time, an Aerostar International, Inc. RXS-8 balloon, N7106F, was not damaged during a hard landing to a dry pond bed in Flemington, New Jersey. The certificated commercial pilot was not injured and the three passengers sustained serious injuries. Visual meteorological conditions prevailed and no flight plan was filed for the sightseeing flight conducted under 14 CFR Part 91.

In preparation for the flight, the pilot checked the weather conditions at 1400 and 1700, and reported that there was no significant weather forecasted along the intended route of flight. He gave a pre-flight briefing to his passengers, which included a landing scenario in high wind conditions. The balloon was launched about 1900, and the winds were out of the west-northwest at about 5 mph. In a written statement, the pilot said:

"Climbed to around 2,000 feet mol to take advantage of the NW breeze. During the flight, clouds began to gather to the NW. As time progressed the cell became more ominous and it became apparent that it would overtake us. At this time (apex. 07:40), dropped down to tree top to again get the WNW breeze. This would bring us into numerous housing developments where we were going to land. At about 07:50, wind direction changed to NW and speed increased significantly. Several attempts to land in this wind were met with severe vertical wind shear which pushed the balloon down at a high rate of speed. Each approach had to be aborted."

"The same violent downdrafts were experienced on the last attempt to land however, attempts to abort this approach failed. The balloon made contact with a tree, went through the tree, and continued down. Route 31, which is lined with power lines, borders the landing site to the east. There is also a cell tower just to the east of Rt. 31. Fearing a rebound into either one of these, the top was pulled around 30 feet (est.). Once landed, the balloon was dragged approximately 70 feet. Rate of descent was high. Forward speed was greater than 10 mph (est.)."

"The hard landing resulted in 3 passengers being injured."

The pilot reported that at the time of the accident, the weather was overcast with light rain. The winds were from the northwest greater than 10 knots.

In a telephone conversation, a passenger said that she and her parents were given a "quick briefing" by the pilot prior to the flight. This briefing included instruction on how to prepare for three possible landing scenarios.

The passenger said that approximately 15 balloons had launched that afternoon, and her balloon was one of the last to depart. She said the flight was uneventful until it was time to

land.

Toward the end of the flight, the passenger observed the other balloons land, but her balloon continued to fly over "suitable landing spots". She reported that the pilot never made any real attempts to land. They then crossed over a ridge, where she saw "miles of open farm land."

As the flight continued, the passenger said the pilot's demeanor changed. The pilot then asked the passengers, "Do you remember what the #3 landing is?" He told the passengers to put their heads down and face the direction of travel. The balloon then got momentarily snagged in a tree. As the balloon got clear of the tree, the pilot told the passengers that they were going to hit hard, and he counted down to when they would impact the ground.

When the balloon landed, the passenger was thrown from the basket as it tumbled. She then heard the pilot say, "There was a storm and I had to do what I had to do." However, she did not recall the pilot talking about a storm prior to the landing.

The passenger said that there was a storm on the horizon, but it was not "right on top of them."

The pilot reported a total of 249 flight hours, and that there were no mechanical deficiencies with the balloon.

A radar summary chart was issued on July 15, 2001, at 2015. Examination of the chart revealed that the primary radar site for New Jersey was not available. However, the surrounding radar sites did deflect echoes in the northern New Jersey area, but only reported level 1 and 2 activity.

Pilot Information

Certificate:	Commercial	Age:	53, Male
Airplane Rating(s):	None	Seat Occupied:	
Other Aircraft Rating(s):	Balloon	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	None	Last FAA Medical Exam:	
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	September 11, 1999
Flight Time:	249 hours (Total, all aircraft), 231 hours (Pilot In Command, all aircraft), 10 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aerostar International Inc	Registration:	N7106F
Model/Series:	RXS-8	Aircraft Category:	Balloon
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	RZS8-3054
Landing Gear Type:		Seats:	
Date/Type of Last Inspection:	January 26, 2001 Annual	Certified Max Gross Wt.:	2000 lbs
Time Since Last Inspection:	10 Hrs	Engines:	
Airframe Total Time:	269 Hrs at time of accident	Engine Manufacturer:	
ELT:	Not installed	Engine Model/Series:	
Registered Owner:	SUNNY DAY ESCAPES, INC	Rated Power:	
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	12N,583 ft msl	Distance from Accident Site:	20 Nautical Miles
Observation Time:	19:54 Local	Direction from Accident Site:	30°
Lowest Cloud Condition:	Clear	Visibility	
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.97 inches Hg	Temperature/Dew Point:	21°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	RARINTON, NJ (NONE)	Type of Flight Plan Filed:	None
Destination:	FLEMINGTON, NJ (NONE)	Type of Clearance:	None
Departure Time:	19:00 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	None
Passenger Injuries:	3 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Serious, 1 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	Rayner, Brian
Additional Participating Persons:	ROBERT FERRENCE; ALLENTOWN, PA
Original Publish Date:	October 23, 2002
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=52705

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