



Aviation Investigation Final Report

Location:	Luxor, Pennsylvania	Accident Number:	IAD02LA005
Date & Time:	October 20, 2001, 09:30 Local	Registration:	N63069
Aircraft:	Aerostar SA-60A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	4 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Aerial observation		

Analysis

After an uneventful sightseeing flight, and during an approach to a landing, the balloon struck powerlines on the windward side of the landing zone. The pilot stated that the balloon got caught in a downdraft and that it was impossible to gain enough altitude to clear the wires. Each of the four passengers reported that there was no downdraft, and that the pilot did not activate the burners, take any remedial action, or issue any warnings prior to collision with the powerlines. After the accident, the pilot reported to fire department personnel that his fuel tanks were empty. Weather at the time included visual meteorological conditions and winds at 8 knots.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate fuel consumption calculations, which resulted in fuel exhaustion, and his subsequent inability to avoid power lines.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: CRUISE

Findings

1. OBJECT - WIRE, TRANSMISSION
2. FLUID, FUEL - EXHAUSTION

3. (C) FUEL CONSUMPTION CALCULATIONS - INADEQUATE - PILOT IN COMMAND
4. MANEUVER TO AVOID OBSTRUCTIONS - NOT POSSIBLE - PILOT IN COMMAND

Factual Information

On October 20, 2001, at 0930 eastern daylight time, an Aerostar S60-A hot air balloon, N63069, was substantially damaged during a collision with transmission wires in Luxor, Pennsylvania. The certificated commercial pilot was not injured, and the four passengers received minor injuries. No flight plan was filed for the flight, which originated in Bovard, Pennsylvania. Visual meteorological conditions prevailed for the sightseeing flight conducted under 14 CFR Part 91.

According to the pilot, he flew over a power sub-station that was on top of a hill. At the bottom of the hill, there was a road, a farmhouse, and cattle in the field where he intended to land. When the balloon was approximately 600 feet altitude and descending on the approach to the landing area, he briefed the passengers on the landing procedure.

When the balloon was approximately 200 feet above, and approximately 300 yards from the landing area in a 6- to 7-knot winds, it turned slightly left, then was "forced down." Both burners were activated to arrest the descent, but the speed picked up horizontally toward power lines located along the road.

Because there was not enough time to rip out the top cap, the pilot turned off the fuel supply and cleared the fuel lines. He instructed the passengers to get all the way into the basket, then the balloon collided with the wires.

The pilot said that the balloon departed with about 40 gallons of propane and, based on the condition of the balloon and the duration of the flight, that approximately 20 gallons of propane were used.

According to one of the passengers, 18 people were divided between 3 balloons for the day's flight. There were eight people in one balloon, and five in each of the other two balloons. She, her husband, another couple, and the pilot were in the accident balloon.

After about 1 hour and 10 minutes of flight, the balloon approached the landing site, in a field near the Luxor Post Office. The other two balloons were ahead of them.

As the balloon approached the landing site, the passenger noticed the power lines ahead, but thought the balloon would rise and cross over them. Instead, the balloon struck the wires, the passenger was showered with sparks, and her hair caught fire. When asked about strong winds or downdrafts, she said that the winds were "fine" and that they had not experienced any problems.

A second passenger reported that he turned and looked at the wires a few seconds before the collision, and wondered why the pilot didn't respond or activate the burners. It was almost

"dead silent" in the balloon before they hit the wires, and nothing was said beforehand. The balloon had been pretty responsive, and he just kept wondering why the pilot didn't activate the burners.

According to a third passenger, the flight was uneventful until the balloon approached the wires. Everything was "going great" until they drifted directly into the lines. Afterwards, the pilot said he made a couple of attempts to add propane, and climb over the wires, but she does not think that happened. It was just a calm, peaceful landing into the wires. She added that the burners were loud, and she did not remember hearing them before wire contact. At the time, she wondered why the burners were not activated, and when they would clear the wires.

When asked about strong winds or downdrafts, she said that there were no wind gusts, and repeated that the burners were not activated. The pilot kept repeating, "Boy, what a wind gust. That was quite a wind gust," but she felt no gusts.

When the balloon struck the wires, there were loud pops, showers of sparks, and the basket, clothing, and hair caught fire.

According to the fourth passenger, there was no downdraft and the balloon just drifted into the wires. He never heard the burners, which were "really loud," and the pilot never activated them.

After the balloon came to rest, a fireman asked about the fuel situation and the pilot responded: "Don't worry about it, I have nothing, it's empty."

The pilot reported 2,130 hours of balloon experience, 200 hours of which were in make and model. He reported 34 hours of experience in the 90 days prior to the accident.

At 0845, the weather reported at Latrobe, Pennsylvania, 5 miles northwest of Luxor, included a broken ceiling at 5,600 feet with wind from 220 degrees at 8 knots.

Pilot Information

Certificate:	Commercial	Age:	62, Male
Airplane Rating(s):	None	Seat Occupied:	
Other Aircraft Rating(s):	Airship; 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:	Yes	Last Flight Review or Equivalent:	May 29, 2000
Flight Time:	2139 hours (Total, all aircraft), 2139 hours (Pilot In Command, all aircraft), 43 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aerostar	Registration:	N63069
Model/Series:	SA-60A	Aircraft Category:	Balloon
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	S60A-3141
Landing Gear Type:		Seats:	
Date/Type of Last Inspection:	February 23, 2001 Annual	Certified Max Gross Wt.:	1800 lbs
Time Since Last Inspection:	14 Hrs	Engines:	0
Airframe Total Time:	268 Hrs at time of accident	Engine Manufacturer:	
ELT:	Not installed	Engine Model/Series:	
Registered Owner:	Ragge and Willow USA	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:	KLBE, 1185 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	08:45 Local	Direction from Accident Site:	330°
Lowest Cloud Condition:		Visibility	20 miles
Lowest Ceiling:	Broken / 5600 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.1 inches Hg	Temperature/Dew Point:	12°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Bovard, PA	Type of Flight Plan Filed:	None
Destination:	Luxor, PA	Type of Clearance:	None
Departure Time:	08:15 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	4 Minor	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 Minor, 1 None	Latitude, Longitude:	40.299999,-79.5

Administrative Information

Investigator In Charge (IIC):	Rayner, Brian
Additional Participating Persons:	Henrik Vejlstrup; FAA; West Mifflin, PA
Original Publish Date:	May 13, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=53661

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