

LORI VAN SANT
[REDACTED]
Albuquerque, New Mexico 87120
[REDACTED]

May 7, 2024

Jennifer L. Homendy
Chair, National Transportation Safety Board
NTSB Headquarters
490 L'Enfant Plaza SW
Washington DC 20594
VIA US MAIL and EMAIL correspondence@ntsb.gov

**RE: Petition for reconsideration or modification of findings
and determination of probable cause**
NTSB Accident No.: WPR24LA011
Date of Accident: October 8, 2023
Aircraft Registration No.: N105BM

Dear Ms. Homendy:

I respectfully request that the NTSB reconsider and modify the probable cause reached in its report of the above-described accident. I make this request pursuant to 49 C.F.R. § 845.32(a). I have a direct interest in this investigation in that I was the pilot in command of the subject aircraft.

For the reasons developed below, I believe the finding of probable cause is erroneous. In support of this position, I have enclosed my affidavit, which describes facts and circumstances of the accident in detail. I have also included excerpts of the Balloon Flight Manual for N105BM. I believe this information was not available prior to the adoption of the findings because the NTSB never asked me for it.

The NTSB should reconsider its conclusion that the probable cause of the accident was "[t]he pilot's failure to control the balloon's descent rate[.]" *Report* at 1. In fact, I controlled the descent rate in accordance with the flight manual.

I approached an open field that was adequate but relatively small, and there were no nearby alternates. Given the circumstances of the landing area, and a wind of 8 knots, this was a high wind landing. After clearing obstacles adjacent to the field, I initiated a deliberate descent to the ground. Once over the field, I used my burner to slow my descent. My balloon is equipped with a Smart Vent. A Smart Vent is more potent than a deflation panel or parachute. As soon as practical, and within 15 feet of the ground, I operated the Smart Vent. My actions brought the balloon to a proper and typical landing under the prevailing conditions. The landing was remarkable only due to the unfortunate injury.

Further, my actions in the approach and landing were in accordance with the balloon flight manual. See *Flight Manual*, §§ 2.8.5, 4.6, 4.7 (copies enclosed). I began my descent as soon as I cleared obstacles. I tailored my descent rate to the wind speed. The wind speed limited my time over suitable landing area because the wind dictates a balloon's ground speed. The manual specifies that the Smart Vent is not to be used unless within 15 feet of the ground. I ascertained we were within parameters before I activated the Smart Vent. Thus, I made a controlled landing, in accordance with approved and published landing procedures.

In light of the facts recited above, I respectfully request that the NTSB modify its Aviation Investigation Final Report to remove the conclusion that I failed to control properly the balloon's descent rate.

I am not aware of any other parties to the investigation on whom I should serve this petition. If there are such parties, I will serve this petition on them promptly upon discovering their identities.

Thank you for your consideration of this matter. Please advise me if there is any further information you require.

Sincerely,


LORI VAN SANT

AFFIDAVIT OF LORI VAN SANT

STATE OF NEW MEXICO §
 §
COUNTY OF BERNALILLO §

ON THIS DATE, Lori Van Sant, upon her oath, deposed and said:

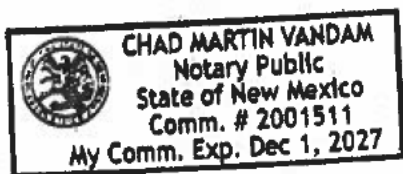
1. My name is Lori Van Sant. I am over the age of twenty-one years, of sound mind, and competent to make this affidavit. The facts recited in this affidavit are within my personal knowledge and are true and correct.
2. On October 8, 2023, I was involved in a balloon landing accident in Albuquerque, New Mexico. At the time, I was the pilot in command of balloon N105BM. This accident is described in the NTSB's Aviation Accident Investigation Final Report number WPR24LA011.
3. In preparation for landing, I approached an open field that was adequate but relatively small, and there were no nearby alternates. The wind speed was 8 nautical miles per hour. I regarded this as a high wind landing. After my balloon cleared obstacles adjacent to the field, I initiated a deliberate descent to the ground. Once over the field, I used my burner to slow my descent. My balloon is equipped with a Smart Vent. A Smart Vent is more potent than a deflation panel or parachute. As soon as practical, and within 15 feet of the ground, I operated the Smart Vent. My actions brought the balloon to a proper landing under the prevailing conditions.
4. I believe my actions during the approach and landing were in accordance with the balloon flight manual. I began my descent as soon as I cleared obstacles. I tailored my descent

rate to the wind speed. The wind speed limited my time over a suitable landing area because the wind dictates a balloon's ground speed. I ascertained we were within 15 feet of the ground before I activated the Smart Vent. I made a controlled landing, in accordance with approved and published landing procedures.

[REDACTED]

LORI VAN SANT

SUBSCRIBED AND SWORN TO BEFORE ME this 7th day of May, 2024, to certify which witness my hand and seal of office.



[REDACTED]

Notary Public in and for
The State of New Mexico

My commission expires: Dec. 1st, 2027

Cameron Balloons US
Model A-105

**CAMERON U
BALLOONS S**

FAA APPROVED

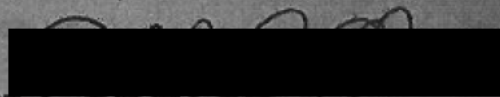
BALLOON FLIGHT MANUAL

CAMERON BALLOONS U S MODEL A-105

SERIAL NO. 6538

REGISTRATION NO. N105BM

This Flight Manual includes the material required to be furnished to the pilot by
FAR Part 31 and must be carried in the balloon at all times.

FAA APPROVED: 

Donald P. Michal, Manager
Chicago Aircraft Certification Office,
F.A.A. Central Region

Date:

April 10, 1989

Cameron Balloons US
P.O. Box 3672
Ann Arbor, Michigan 48106
Phone (313) 426-5525

FAA APPROVED: April 10, 1989

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CAMERON BALLOONS

Cameron Balloons US
Model A-105

Operating Limitations

It is strongly recommended that helmets be worn for the above conditions as a minimum. The final determination of such utilization remains with the pilot-in-command and he or she must apply these guidelines based on experience and each individual situation as it arises. Passengers must be briefed on their proper use prior to flight.

The type of helmet to be utilized is at the option of the pilot, but a helmet marketed by its manufacturer as intended for use with motorcycles, bicycles, mountain climbing or ice hockey is strongly recommended.

LEATHER GLOVES: leather gloves or equivalent must be provided for the pilot.

FIRE EXTINGUISHER: A fire extinguisher rated at least 1A:10BC, or, if HALON, rated at least 5B:C, must be on board. There must be a

FUEL TANKS: At least two tanks containing usable fuel must be on board. There must be a master tank containing usable fuel for each burner unit.

FUEL PRESSURE GAUGES: All burner pressure gauges must be operational.

IGNITION SOURCES: At least two ignition sources must be carried by the pilot in addition to igniters built into the burner unit(s).

2.7 KINDS OF OPERATION

VFR Only.

Unless fitted with approved night lighting equipment, also limited to Day Only.

2.8 OPERATION OF PARACHUTE VALVE (if fitted)

Operation of parachute valve is limited to three seconds in flight.

Except when landing, discharges through the parachute valve must not exceed 3 seconds duration each. The envelope must be allowed to reinflate fully between activations of the parachute valve. This limitation is based on a pull of about 6 feet (2 meters) on the parachute control line. If the parachute control line is pulled farther than this, the duration of the operation must be shortened.

2.8.5 OPERATION OF SMART VENT (if fitted)

The Smart Vent may not be opened more than 15 feet above ground level.

The standard parachute must be opened prior to take-off, and allowed to reseal completely. The Smart Vent must be opened at least slightly and reclosed by pulling the parachute line

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CAMERON BALLOONS

Cameron Balloons US
Model A-105

Section 2
Operating Limitations

Before take-off, as a pre-flight verification that Velcro tabs have released completely and that the parachute is seated properly.

Smart Vent operation step is marked as follows: "Smart Vent MUST be opened and reseated prior to take-off. Smart Vent may not be opened above 15 feet (5 meters) above ground level."

2.9 OPERATION OF VELCRO RIP PANEL (if fitted)

Operation in flight is prohibited except for emergency operation.

2.10 TETHERED OPERATION

Basket tether lines must be attached only to the snaplinks (carabiners) which attach the envelope cables to the burner frame. When more than one set of snaplinks (carabiners) is used, the tether line must be attached to the topmost carabiner, which also connects the envelope cables.

If top tether lines are used, the top lines may be attached to the aluminum crown ring only by using a rope or fibrous attachment device. No metal or hard plastic fitting which could scratch or otherwise damage the crown ring may be attached directly to the crown ring.

2.11 MAXIMUM TAKE-OFF ALTITUDE

The maximum altitude at take-off is 18,000 ft. MSL.

If using the MK III burner (part no. CB205), the maximum altitude at take-off is 10,000 ft. MSL.

2.12 FUEL TANKS AND MANIFOLD SYSTEM

Two independent fuel systems, each containing usable fuel, must be available.

An optional approved fuel manifold may be used in either or both fuel systems to simultaneously connect multiple fuel tanks to the system. No more than one fuel manifold may be used in each fuel system.

If a fuel manifold is used, each inlet hose and fitting (7141F) on the manifold must be connected to a tank liquid withdrawal valve and the manifold outlet connector (7141M) must be connected to the burner fuel hose. If fewer tanks than connectors will be used, the entire manifold must be disconnected and fuel must completely bypass the manifold. Under this circumstance, fuel will pass directly from the tank into the burner fuel hose.

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sunset. Some locales experience thermal turbulence or winds past sunset, and evening flying in these areas should be avoided.

4.6 APPROACH TO LAND

The landing is the most critical time in the flight. This is the time requiring the greatest attention and concentration of the pilot.

Before making a descent for landing, the pilot should assure that the passengers are briefed on how to hold on and where to stand during the landing, and warned about possible bouncing and impact shock. The passengers should also be briefed not to talk during the approach for landing, so the pilot may concentrate on the approach and landing. All loose gear should be stowed. Use of the radio should be avoided until after the balloon has landed. The fuel quantity should be checked to assure there is sufficient fuel in the tanks currently in use to make a controlled landing. The pilot should position himself for an unobstructed view ahead and for access to all controls. The deflation line should be in the pilot's hand before the descent is started, so there is no time lost searching for it at the last minute. If the balloon has a Velcro deflation panel system, the tie-off for the excess line at the lower pulley should be popped loose, and all slack line gathered into the pilot's hand. For a parachute or Velcro deflation system, all the slack should be gathered and stowed in such a way that it will not snag on passing trees or get tangled with the pilot/passengers during the landing.

Most important in landing is to **AVOID POWERLINES!** This means that in the period just before the final descent to land the pilot should familiarize himself with the surrounding powerlines, not just the powerlines which are directly in front of him. To locate the powerlines, look for the nearest buildings and trace the powerlines from the buildings back to their power source. If there is a road nearby, then there will most likely be a powerline near the road. In searching for the powerlines, look for both the lines and the poles. Search looking both right and left for what would be at least 2 pole separations to try to see any poles at all or places where poles could be hidden. While still at some altitude where visibility is not restricted by trees and other obstacles, determine the condition of the chosen landing field, including observing the nearby powerline pattern.

4.7 LANDINGS

SLOW-WIND LANDING: Allow the balloon to settle towards the earth after clearing all obstacles. Be cautious of "backing up" during the final landing into a possible obstruction. If the surface wind is considerably less than the winds aloft (as during inversion layer conditions), the wind may be moving very much slower than the winds aloft, and the descent slope will possibly cause the balloon to land short. If the FlexRigid™ poles are not fitted during a calm-wind landing, the burner may descend when the basket hits the ground. The pilot should keep a hand on the burner to deflect it forward, past the front of the basket.

HIGH-WIND LANDING: As the descent is made towards the landing field, the rate of descent should be reduced the closer the balloon comes to the ground. If at all possible the landing should be attempted behind high shelter, which will reduce the length of the drag. The rate of descent for the landing will depend on the size of the landing field and the altitude before the descent is started. The pilot should attempt to fly at a height just safely above obstacle height as the approach to the chosen field is made, then vent just as the final obstacle is cleared going into the landing field, then use the burner to almost stop the descent just before the touchdown. The deflation panel or parachute valve should be fully opened, the pilot braced and holding on both to the deflation line and the basket for impact, before ground contact is made. If possible the pilot should close the fuel tank shutoff valves before touch-down, and at least shut off the pilot light(s), at the burner or by popping the quick release fittings free at the pressure regulator(s). (NOTE: If the quick release fitting is popped off during the landing, be sure to inspect it before reconnecting to assure no dirt is in the end).

If the rate of descent at ground contact is high (say, above 250 feet per minute (about 1 1/4 meters per second)), the balloon will most likely rebound, and the momentum will carry the balloon upwards when the pilot most wants to be on the ground. At this point considerably more distance would be required to complete the landing. If the balloon has a parachute deflation system, the pilot may consider aborting the landing, provided the balloon has enough hot air left in it to reascend before downwind obstructions are encountered. For a Velcro deflation system, if the rip panel has been partially opened the landing should be completed at the current location; the pilot should turn off the fuel system and everyone should brace for a hard landing.

In making a high-wind landing, aim for the upwind side of the field. If ground contact cannot be assured before half the field is crossed, the pilot should strongly consider opening the rip panel or parachute fully and brace for a very hard landing. If the downwind obstacle is powerlines, the pilot should NOT consider trying to overfly the powerlines if there is even a slight doubt that the balloon will clear the lines.

POWERLINE CONTACT: The most serious accidents with powerlines result from trying to overfly the lines and subsequently contacting the lines with the most vulnerable part of the balloon system, which includes the suspension wires, the fuel system, and the occupants. The envelope has far better insulating qualities, and generally will not conduct electricity to the basket unless the thermistor cable comes into contact with the powerlines. Be sure no occupant touches any metal tanks, suspension cables, fuel hoses, instrument case or thermistor cable, which could be conducting electricity.

If contact with powerlines is inevitable, it is probably far better to allow the envelope to hit the lines rather than the basket and suspension cables. Once the basket is on the ground, each occupant should exit from the basket by jumping clear of the basket, making sure that no part of the body is in contact with the ground and the basket at the same time. If the powerlines are broken, avoid



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Albuquerque, New Mexico	Accident Number:	WPR24LA011
Date & Time:	October 8, 2023, 08:15 Local	Registration:	N105BM
Aircraft:	CAMERON BALLOONS US A-105	Aircraft Damage:	None
Defining Event:	Hard landing	Injuries:	1 Serious, 2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot of the balloon reported that during a landing, with wind about 8 knots, she used her smart vent system to land. The balloon landed hard, which resulted in one passenger breaking her ankle. The pilot reported that there were no mechanical malfunctions or failures that would have precluded normal operation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's failure to control the balloon's descent rate during a landing in windy conditions, which resulted in a passenger sustaining a broken ankle.

Findings

Personnel Issues	Aircraft control - Pilot
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Factual Information

History of Flight

Landing-flare/touchdown	Hard landing (Defining event)
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Pilot Information

Certificate:	Private	Age:	64,Female
Airplane Rating(s):	None	Seat Occupied:	None
Other Aircraft Rating(s):	Balloon	Restraint Used:	None
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	None	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	June 16, 2023
Flight Time:	573.1 hours (Total, all aircraft), 573.1 hours (Total, this make and model), 6.05 hours (Last 90 days, all aircraft), 0 hours (Last 30 days, all aircraft), 1.15 hours (Last 24 hours, all aircraft)		

Passenger Information

Certificate:		Age:	Female
Airplane Rating(s):		Seat Occupied:	None
Other Aircraft Rating(s):		Restraint Used:	None
Instrument Rating(s):		Second Pilot Present:	
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Passenger Information

Certificate:		Age:	Female
Airplane Rating(s):		Seat Occupied:	None
Other Aircraft Rating(s):		Restraint Used:	None
Instrument Rating(s):		Second Pilot Present:	
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	CAMERON BALLOONS US	Registration:	N105BM
Model/Series:	A-105	Aircraft Category:	Balloon
Year of Manufacture:	2008	Amateur Built:	
Airworthiness Certificate:	Balloon	Serial Number:	6538
Landing Gear Type:	None; Other launch/recovery system	Seats:	4
Date/Type of Last Inspection:	September 22, 2023 Annual	Certified Max Gross Wt.:	2100 lbs
Time Since Last Inspection:		Engines:	0 None
Airframe Total Time:	499.5 Hrs as of last inspection	Engine Manufacturer:	None
ELT:	Not installed	Engine Model/Series:	
Registered Owner:	On file	Rated Power:	
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	31 inches Hg	Temperature/Dew Point:	10.6°C / 3.9°C
Precipitation and Obscuration:			
Departure Point:	Albuquerque, NM	Type of Flight Plan Filed:	None
Destination:	Albuquerque, NM	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class C

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	None
Passenger Injuries:	1 Serious, 1 None	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Serious, 2 None	Latitude, Longitude:	35.163563,-106.62832

Administrative Information

Investigator In Charge (IIC):	Salazar, Fabian
Additional Participating Persons:	Michael Petrofes; Federal Aviation Administration; Albuquerque, NM
Original Publish Date:	January 10, 2024
Last Revision Date:	
Investigation Class:	<u>Class 4</u>
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=193228

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, "accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person" (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB's statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).

Lori Van Sant

Albuquerque, NM 87120

RECEIVED
NTSB MATLROOM
2024 MAY 16 A 9 28

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT
OF THE RETURN ADDRESS, FOLD AT DOTTED LINE
CERTIFIED MAIL



7022 1670 0002 8296 4770

RETURN RECEIPT
REQUESTED

Jennifer L. Homenely
Chair, National Transportation Safety Board
NTSB Headquarters
490 L'Enfant Plaza SW
Washington, DC 20544

