

NATIONAL TRANSPORTATION SAFETY BOARD
Public Meeting of October 17, 2017
(Information subject to editing)

Impact with Power Lines, Heart of Texas Hot Air Balloon Rides, Balóny Kubíček BB85Z
N2469L, Lockhart, Texas
July 30, 2016
NTSB/AAR-17/03

This is a synopsis from the NTSB's report and does not include the Board's rationale for the conclusions, probable cause, and safety recommendations. NTSB staff is currently making final revisions to the report from which the attached conclusions and safety recommendations have been extracted. The final report and pertinent safety recommendation letters will be distributed to recommendation recipients as soon as possible. The attached information is subject to further review and editing to reflect changes adopted during the Board meeting.

Executive Summary

On July 30, 2016, about 0742 central daylight time, a Balóny Kubíček BB85Z hot air balloon, N2469L, operated by Heart of Texas Hot Air Balloon Rides, struck power lines and crashed in a field near Lockhart, Texas. The pilot and 15 passengers died, and the balloon was destroyed by impact forces and postcrash fire. The balloon was owned and operated by the pilot, and the flight was conducted under the provisions of 14 *Code of Federal Regulations (CFR)* Part 91 as a sightseeing passenger flight. The flight originated at 0658, just after sunrise, from Fentress Air Park, Fentress, Texas.

About 1 hour 50 minutes before launch, weather observations and forecasts that the pilot accessed indicated visual flight rules (VFR) weather for airports near the planned route of flight but included observations of clouds as low as 1,100 ft above ground level and a temperature/dew point spread of 1°C (which indicated the possibility of fog formation although fog was not forecast). The pilot did not check weather again before launch; updated observations and forecasts available at that time indicated deteriorating conditions. A ground crewmember stated that fog was seen near the launch site.

The balloon launched about 0658, and the ground crew stated that they watched the balloon fly in and out of the clouds as they followed it until losing sight of it for the last time as it went above the clouds. A passenger photograph taken about 4 minutes before the accident showed the balloon flying above a dense cloud layer that appeared to extend to the horizon. The balloon impacted power lines while descending, about 44 minutes after launch.

To be able to see and avoid obstacles during landing, balloon pilots must ensure weather conditions are compatible with the limitations of balloon maneuverability. The accident pilot had the opportunity to make decisions regarding the flight based on the weather conditions at three points on the morning of the accident: before launch, en route, and near the end of the flight. At

each of these points there were indicators that the weather may not be conducive to safe flight. Updated forecast information before launch showed that conditions were deteriorating; the pilot could have decided to cancel the flight. En route photographs showed that fog and low clouds were visible along the flight route; the pilot could have decided to select a suitable landing location while still in visual contact with the ground. Lastly, once above clouds that obstructed the view of the ground, the pilot decided to land in reduced visibility conditions that diminished his ability to see and avoid obstacles.

The National Transportation Safety Board (NTSB) identified the following safety issues as a result of this accident investigation:

- **Lack of medical oversight for commercial balloon pilots.** Commercial balloon pilots are not required to hold a medical certificate of any kind. The accident pilot had been diagnosed with medical conditions, including depression and attention deficit hyperactivity disorder, known to cause cognitive deficits that may affect decision-making and, ultimately, safety of flight. These conditions would likely have led an aviation medical examiner (AME) to either defer or deny a medical certificate. In addition, medications were found in the pilot's system that are known to cause impairment and are listed on the Federal Aviation Administration's (FAA) "Do Not Issue" and "Do Not Fly" lists. An AME would likely have deferred or denied a medical certificate to a pilot reporting use of these medications. The FAA stated the primary mitigator of risk in balloon operations is the commercial pilot certificate, yet there is no requirement for balloon pilots to hold a medical certificate to indicate that they are medically fit to fly.
- **Lack of targeted FAA oversight of potentially risky commercial balloon operations.** The FAA conducted 98% of its oversight of balloon operators at balloon gatherings between January 1, 2014, and December 15, 2016. Thus, those operators who do not attend the gatherings, such as the accident pilot, are likely not to receive any FAA oversight. Such focus on balloon gatherings does not support the FAA's risk-based, data-informed approach to oversight. It also does not provide the FAA with opportunities to educate all commercial balloon operators and mitigate risk before an accident occurs.

Findings

1. Postaccident examination of the balloon and its components found no evidence of any preimpact structural or system failures that would have precluded normal operation.
2. Although earlier forecasts, observations, and conditions present at the launch site indicated VFR weather, sufficient information was available (observed fog and a temperature dew point spread of 1° C) to anticipate that conditions might deteriorate. Thus, the pilot's failure to obtain updated weather information denied him information that indicated conditions were deteriorating and might not remain VFR, which resulted in his decision to launch when he should have cancelled.

3. The pilot exhibited poor decision-making (1) when he did not land the balloon despite having had suitable opportunities to land safely in visual conditions and (2) when he decided to climb above the clouds.
4. The pilot's decision to land in reduced visibility conditions that diminished his ability to see and avoid obstacles resulted in the balloon impacting power lines that were obscured by low clouds and/or fog.
5. The balloon's support cables struck power lines, causing separation of the basket from the envelope and burner assembly, the release of fuel, and the subsequent fire and ground impact.
6. The pilot was not under the influence of alcohol or illicit drugs at the time of the accident, and his high blood pressure, high cholesterol, diabetes, chronic back pain, and fibromyalgia did not affect his performance. Further, although he was taking other drugs that may have been impairing, the prescribed medications that the pilot used to treat his high blood pressure, high cholesterol, diabetes, and depression did not affect his performance.
7. Depression, attention deficit hyperactivity disorder, and the combined effects of multiple central nervous system-impairing drugs likely affected the pilot's ability to make safe decisions.
8. The FAA's exemption of balloon pilots from medical certification requirements eliminated the potential opportunity for (1) an aviation medical examiner to identify the pilot's potentially impairing medical conditions and medications and/or (2) Federal Aviation Administration awareness of his history of drug- and alcohol-related offenses, which could have led to certificate action until satisfactorily resolved.
9. The FAA's primary method of oversight—sampling balloon operators at festivals—does not effectively target the operations that pose the most significant safety risks to members of the public who choose to participate in commercial balloon sightseeing activities.

PROBABLE CAUSE

The National Transportation Safety Board determines that the probable cause of this accident was the pilot's pattern of poor decision-making that led to the initial launch, continued flight in fog and above clouds, and descent near or through clouds that decreased the pilot's ability to see and avoid obstacles. Contributing to the accident were (1) the pilot's impairing medical conditions and medications and (2) the Federal Aviation Administration's policy to not require a medical certificate for commercial balloon pilots.

RECOMMENDATIONS

New Recommendations

As a result of this investigation, the National Transportation Safety Board makes the following new safety recommendations:

To the Federal Aviation Administration:

1. Remove the medical certification exemption in 14 *Code of Federal Regulations* 61.23(b) for pilots who are exercising their privileges as commercial balloon pilots and are receiving compensation for transporting passengers.
2. Analyze your current policies, procedures, and tools for conducting oversight of commercial balloon operations in accordance with your Integrated Oversight Philosophy, taking into account the findings of this accident; based on this analysis, develop and implement more effective ways to target oversight of the operators and operations that pose the most significant safety risks to the public.

Previously Issued Recommendations Classified in This Report

Safety Recommendations A-14-11 and -12 are classified “Closed—Unacceptable Action/Superseded.” The recommendations are superseded by Safety Recommendation [2].