

**NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Washington, D.C. 20594

June 22, 2018

**Group Chairman Field Notes**

**OPERATIONAL FACTORS / HUMAN PERFORMANCE**

**WPR18MA087**

**A. ACCIDENT**

Operator: Papillon Airways, Inc.  
Location: Peach Springs, AZ  
Date: February 10, 2018  
Time: 1719 MST  
Airplane: Airbus Helicopters EC130 B4, N155GC

**B. PARTICIPANTS**

Zoe Keliher  
Western Pacific Region  
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NTSB

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John Becker  
Director of Operations  
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## C. SUMMARY

On February 10, 2018, about 1719 mountain standard time, an Airbus Helicopters EC130 B4 helicopter, N155GC, was destroyed when it impacted a canyon wash while on an approach to land at Quartermaster landing zone near Peach Springs, Arizona. The commercial pilot and three passengers sustained serious injuries and three passengers were fatally injured. The air-tour flight was operated by Papillon Airways, Inc. under the provisions of 14 *Code of Federal Regulations* Part 136. The helicopter departed Boulder City Municipal Airport, Boulder City, Nevada at 1635 and had intended to land at Quartermaster landing zone, a group of landing pads within Quartermaster canyon. Visual meteorological conditions prevailed, and a company flight plan had been filed.

## D. DAILY ACTIVITIES

### June 18, 2018

The NTSB Operations and Human Performance (Ops/HP) group chairmen arrived at Papillon Airways for an in briefing at 1200 pdt<sup>1</sup> in the 2<sup>nd</sup> floor conference room of the Papillon Terminal building. Papillon attendees included the CEO, director of operations, director of safety, chief pilot, director of maintenance, and training director, and vice president of administration. The Airbus representative joined the group about 1230.

The director of operations gave the team a tour of the Papillon facilities and the following information was shared:

Papillon Airways had 5 bases, including 2 main bases - McCarran International Airport (LAS), Grand Canyon National Park Airport (GCN), Boulder City Airport (BVU), Grand Canyon West Airport (1G4), and Page Municipal Airport (PGA). The 2 main bases (BVU and GCN) also had maintenance facilities co-located. Most tour bookings were consumer direct either online or via telephone. The call center was located on the second floor of the Terminal.

Customers who booked tours would be picked up at their hotel about 2 hours prior to their tour and driven to Boulder City. The check in area was located on the first floor of the terminal. Upon check in, they were weighed with their belongings that would be taken onboard the aircraft. This information was used to generate the manifest in ALPRO. Any large belongings could be stored in lockers.

After check-in, passengers were directed to view a safety video (about 4 minutes long only available in English), which was the primary passenger safety briefing and could be supplemented by the pilot. The briefing room was to the left of the customer service check in desk. Passengers were told to not enter or exit the briefing room once the video started to ensure they watched the whole video. A retractable rope would close off the briefing room so passengers could not enter

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<sup>1</sup> All times Pacific daylight time (PDT) unless otherwise noted.

or exit once the video started. A customer service agent working closest to the briefing room would then provide a sticker to passengers indicating they had watched the video.

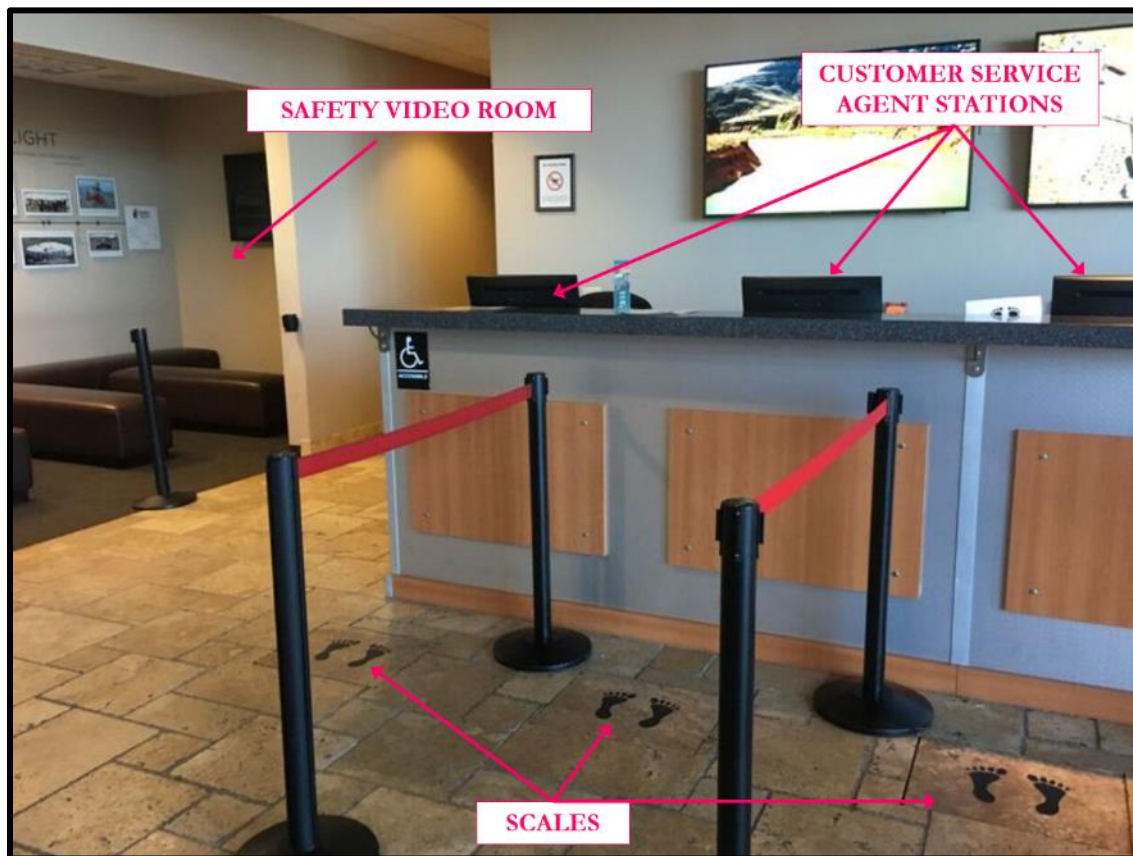


Photo 01: Customer Service Stations in Relation to Safety Briefing Room

There was a computer station and printer located across the terminal lobby from the customer service desk for pilots to access weather, schedules and obtain their manifests. After retrieving their respective manifest, pilots were to call their passengers by name and country of origin (both located on the manifest), gather passengers, then escort them to the helicopter. There was a professional photographer that would take pictures of passengers and if desired by the passengers, the pilot could also be in the picture. The photography was run by a separate company and passengers could buy the photo after their flight. Some helicopters were outfitted with video cameras that would capture images of passengers inside the helicopter and alternate with images from outside the helicopter. Passengers could buy this video immediately after the flight. There was no pilot input needed to operate the video, the cameras were triggered by GPS location; the director of operations wanted to ensure that the video did not interfere with flight operations.

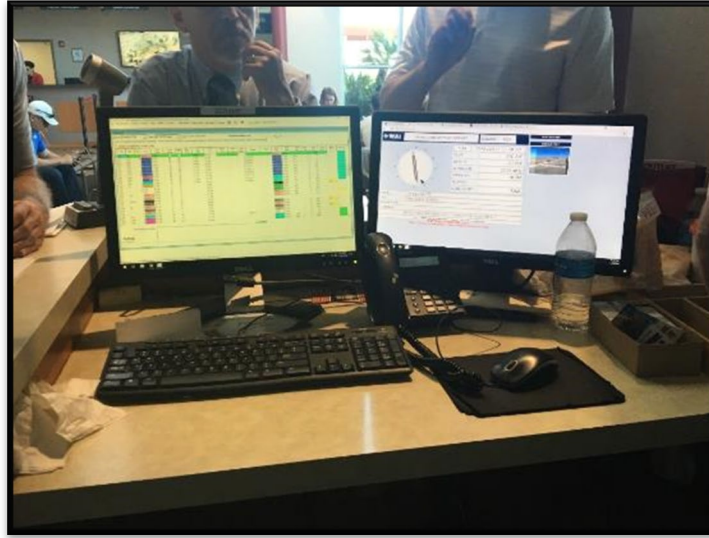


Photo 02. Pilot station in Terminal lobby.

At the completion of the tour, customers could leave feedback in the lobby using one of two touchscreen tablets; customer name was a required field. Comments were displayed on a screen in the lobby. Customers could also leave feedback on various websites (e.g., Yelp, TripAdvisor and Facebook) and the Papillon guest relations personnel would monitor that feedback.



Photo 03. Passenger feedback station.

The group then went to the tower located on the third floor of the terminal building. There were 2 Papillon staff initially in the tower; a third person joined part way through the tour. One station was assigned to do manifests (i.e., determining passenger loads, fuel, and meals) and remained in contact with the customer service agents; the other station was responsible for talking to the line

pilots, fuelers, and meal ramp agent (mule) on the ramp as well as the lead pilots. Pilots were in contact with flight following in Boulder City until entering the Canyon when radio contact was not possible because of terrain.

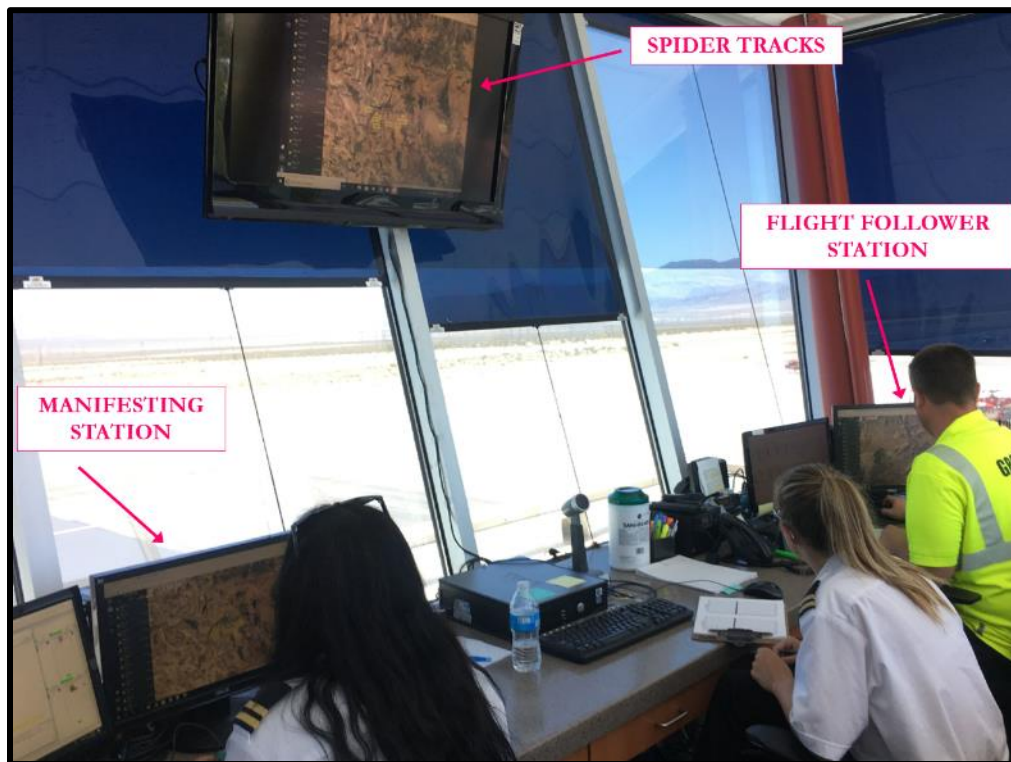


Figure 04: Tower Stations

The team walked across the flight line to the Maintenance and Flight Operations building. The lead pilot's desk was a large cubicle with desk space, a computer with 2 monitors, and radio for communications with pilots and tower. The lead pilot on duty walked the team through the various weather programs used to generate the morning safety briefing sheet by copy/pasting the website information into their template. These including National Weather Service (NWS) Aviation Weather Center (AWC) for area forecast ([aviationweather.gov](http://aviationweather.gov)); GCW AWOS for METARs ([awos.gcwnet.com](http://awos.gcwnet.com)), Boulder City AWOS, Ramada weather, current and forecasted wind trends, NWS 7 day forecast for max temps and hourly wind forecast ([forecast.weather.gov](http://forecast.weather.gov)), 1800wxbrief.com to check NOTAMS and other weather information. Regarding weather at GCW, the lead pilot said there was no Terminal Area Forecast (TAF) for GCW so it was hard to get forecast weather there and they would use Las Vegas. Papillon-pilot PIREPs<sup>2</sup> came in to flight operations via the FM radio; PIREPs were not recorded/documented anywhere.

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<sup>2</sup> Pilot report of actual weather conditions



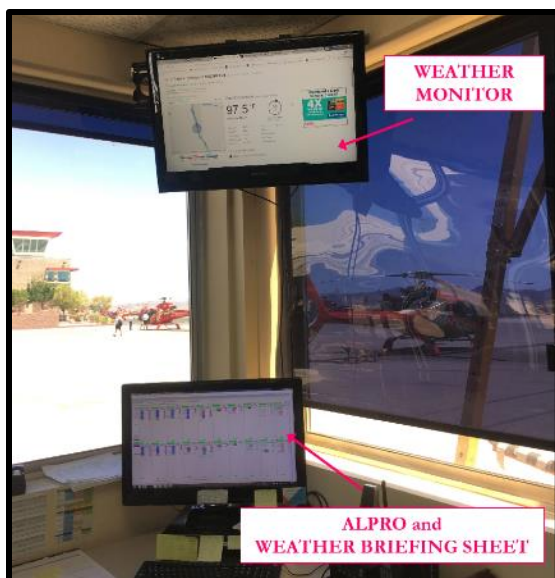


Photo 05: Monitors for Lead Pilots.

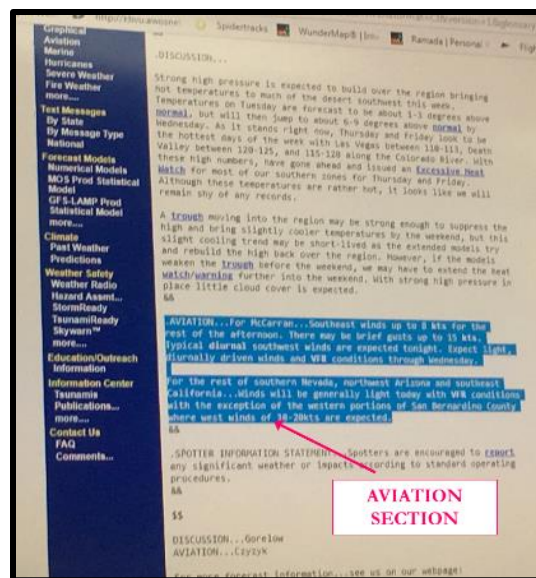


Photo 06: Area Forecast Website.

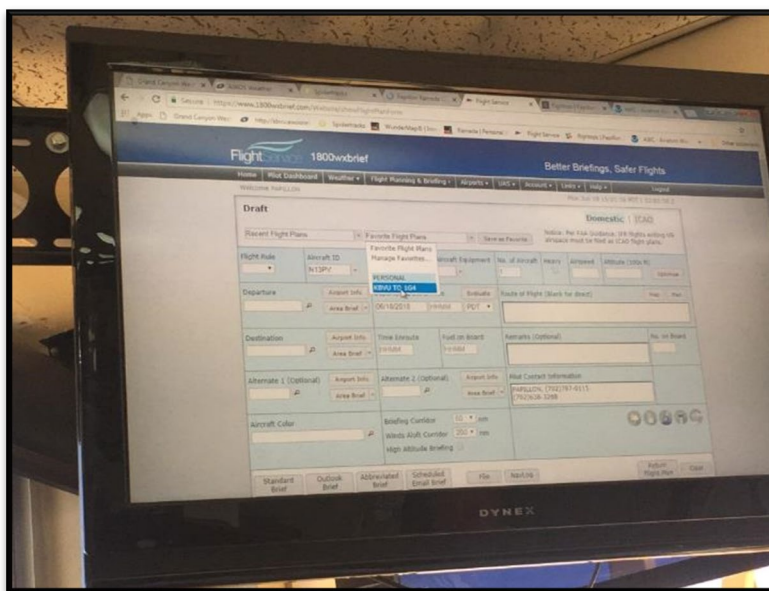


Photo 07. Screenshot of 1800wxbrief.com system.

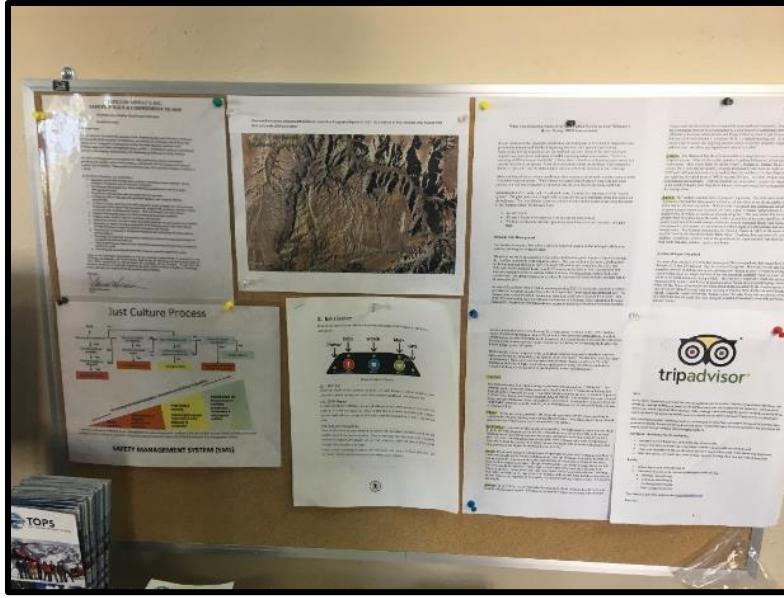


Photo 07. Postings in flight operations building.

The morning safety briefing was held at 0545 daily. All pilots were required to sign the briefing sheet to indicate they had received the weather information on the sheet. The sheet was on a clipboard and hung on the wall in the briefing room. If a pilot arrived after the briefing, s/he would review the sheet after arriving and initial the sheet next to their name, indicating that the information had been read. During the summer months when there were more flights (because there is more daylight), there was a second shift of pilots that would arrive in the afternoon and a second safety briefing would be held at 1245 which would discuss updated weather. The original morning safety briefing sheet generated for the 0545 briefing was not changed to reflect the updated weather.

Pilots were typically limited to 3 flights a day and if required, a 4<sup>th</sup> flight required management interaction prior to the pilot being released to take the flight. A typical duty day was 8 hours. According to the chief pilot, Simon Whiteley, when the data was looked at across the entire year, pilots averaged 9-9.1 duty hours per day.

The group also reviewed Spidertracks data, the aircraft satellite monitoring and tracking program, and was able to view the accident flight.

Spidertracks was discussed and was currently pinging every 8 minutes but the frequency could be changed. At the time of the accident, Spidertracks was set to ping every 15 minutes. The software was additionally configured to ping an aircraft as it accelerated above 40 kts and the again as it decelerated below 40 kts. After the accident it was changed to 8 minutes. Pings could be as frequent as every 2 minutes. Pilots could also self-monitor and set the Spidertracks to ping every two minutes on non-routine flights such as a charter flight or training flight. There was also an emergency button in the aircraft that a pilot could push in the event of an emergency which would send a ping every 15 seconds. The pings relayed the data of the aircraft's coordinates, heading, altitude and airspeed.

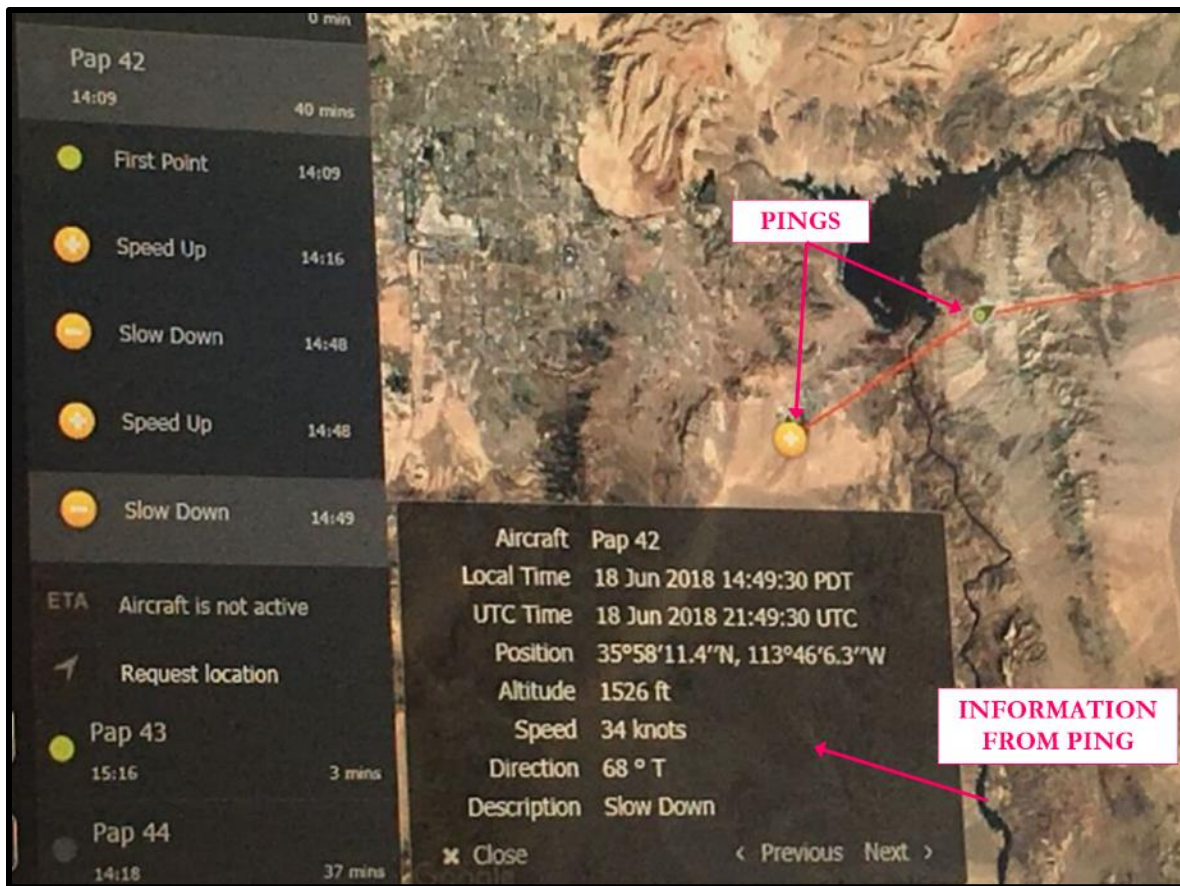


Photo 08: Example of Information Provided from Spidertracks

Pilots were directed to complete an irregularity report for situations where they departed and subsequently deviated from the intended flight path (e.g., a weather deviation or mechanical anomaly), even if it was the lead pilot that called the flights back to base. If a flight had not departed or had not been accepted by the pilot and was cancelled due to weather, an irregularity report would not be filed.

The company recently completed its TOPS and IS-BAO audits.



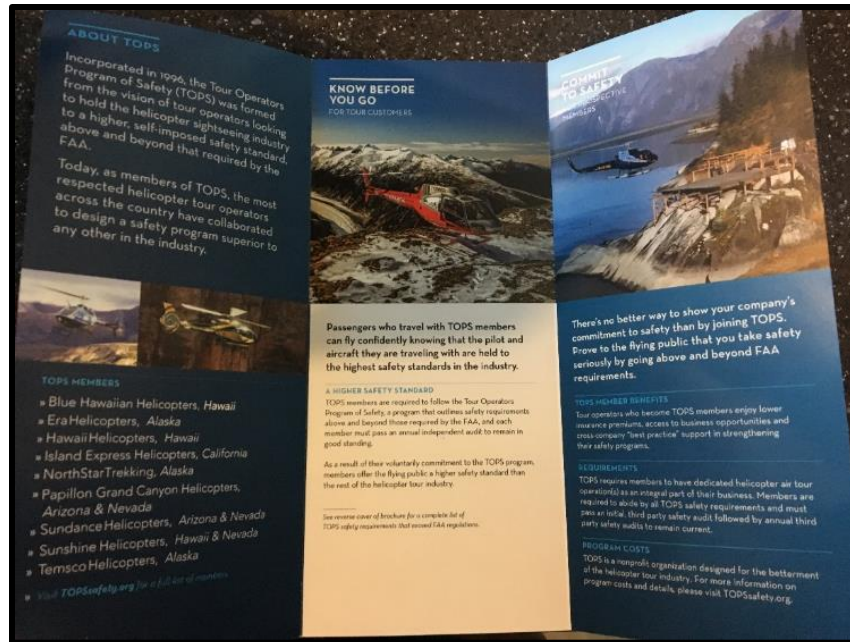


Photo 09. Inside panels of TOPS brochure.

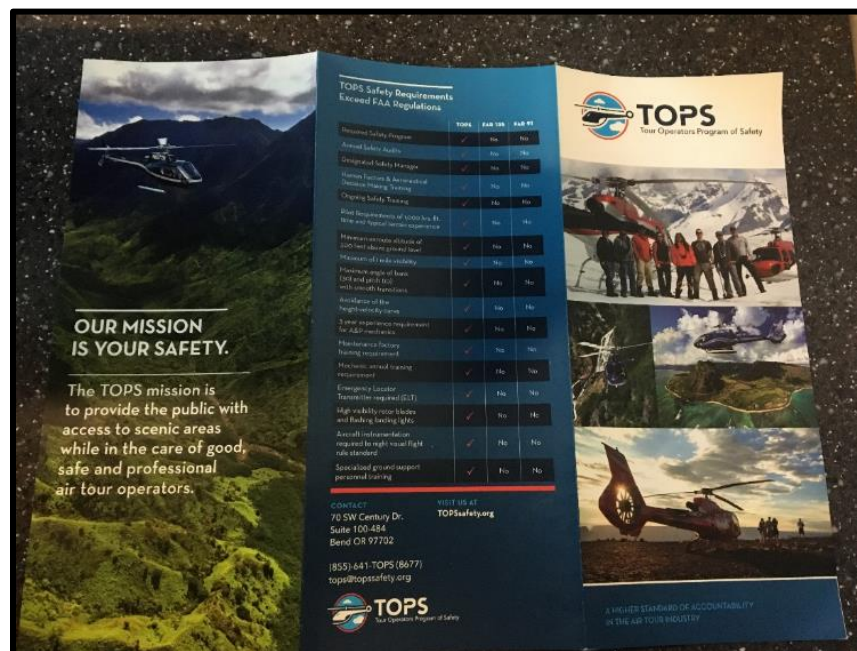


Photo 10. Outside panels of TOPS brochure.

The Ops/HP group chairmen reviewed Mr. Booth's training records and "Smith" file, which consisted of the pilots' outdated records as well as communications received from the pilot about employment issues.

Prior to departing for the day about 1730, the Ops/HP group met the Papillon president.

June 19, 2018

The HP investigator and the Airbus representative met at the Papillon Maintenance and Flight Operations building at 0530 to attend the 0545 Morning Safety Briefing. In attendance were the lead pilot, line pilots, a tower representative, a customer service representative, the director of operations and the training director/transitioning chief pilot. The lead pilot took roll call for the line pilots and then reviewed the weather briefing sheet which included current weather conditions (people write on their forms) and forecasted conditions; one training aircraft; no weddings; and sunset, landing, air only and strip tour times. In addition, the lead pilot reviewed the “notes” and specifically mentioned that if there any issues with passengers to give tower or the lead a call to deal with the issue so flights could try to stay on time; also that the A8 was closed and pilots were to use the A3 or the flight line if the A3 was full. The temperature was discussed and that it was heating up in Boulder City then the maximum temperatures were given for each aircraft type. Next any aircraft issues were discussed such as a position light issue and whether maintenance had been alerted. It was then opened up for any comments or questions. Tower said just what was in the notes about passengers, customer service had nothing to report and the director of operations and training director mentioned POTUS coming to Vegas this coming weekend and how that might affect flight operations.



Photo 11. Morning safety briefing.

After the morning briefing, the HP investigator, Airbus representative and director of operations walked across the ramp to the terminal to observe passenger check in. Pilots were observed preflighting their aircraft and ground personnel loaded each helicopter with a cooler and food basket. Inside, the terminal was busy with passengers for both Grand Canyon Airways and Papillon departures. Passengers were delineated based on a sticker they wore on their shirt. Papillon passengers watched the safety video in a room to the left of the check in desk. The room was roped off to prevent passengers from exiting or entering while the video was playing. Upon exiting, a

representative working the check in desk gave passengers a sticker indicating they had watched the video.

The investigative group then observed Papillon pilots retrieve their manifest from the printer located in the terminal and call their passengers over the loud speaker. Once passengers were gathered with their pilot, the pilot greeted them and informed them to stay together on the ramp, that a professional photographer would take their picture and not to take personal pictures until in the aircraft and the doors were closed. The pilots then walked their passengers out to their respective helicopters.

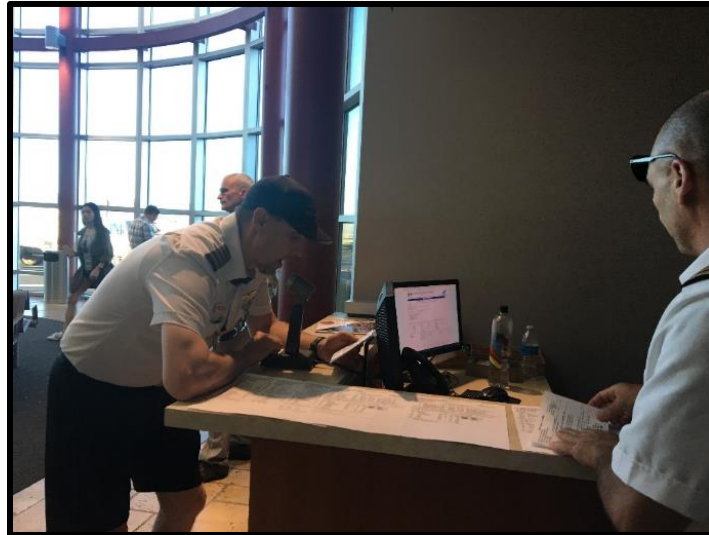


Photo 12. Pilot calling passengers from manifest in Terminal.

The investigative team then headed to the second floor of the terminal to observe pilots and passengers on the ramp. While walking passengers to the aircraft, some pilots walked backwards, others did not. Once at the aircraft, pilots were observed passing out PFDs<sup>3</sup> to passengers who put them on around their waists. The pilots were observed demonstrating how to use the headsets, sick bags, and seatbelts, specifically the pilot climbed into the rear seat and put the seatbelt on and took it off. Passengers had their pictures taken in front of the helicopter and then were loaded per the manifest. The pilots started the aircraft engines then departed the pads, hover taxied to the departure point, did a traffic check and then departed to the southeast. All flights departed by 0645.

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<sup>3</sup> Personal flotation device



Photo 13. Pilot giving supplemental safety briefing at aircraft.

The Ops/HP group then interviewed 7 Papillon staff including 2 lead pilots, the training director, and 4 line pilots. These interviews will be transcribed. The group departed Papillon about 1730.

June 20, 2018

The Ops/HP group convened at 0800 in the 2<sup>nd</sup> floor conference room in the Terminal building. The group conducted 7 interviews, including the director of operations, director of safety, customer service manager, tower flight-line manager, flight follower, Boulder City base manager and a line pilot. These interviews will be transcribed. The Ops/HP group chairmen reviewed the accident pilot's personnel file and Spidertracks screenshots. The group departed Papillon about 1830.

Photo 14. Screenshot of Unsafe Condition or Hazard Report Form with anonymous checkbox.