

On May 3, 2019, at 2142 eastern daylight time, Miami Air flight 293, a Boeing 737-81Q, registration N732MA, departed the end of runway 10 at Jacksonville Naval Air Station (KNIP), Jacksonville, Florida, and came to rest in shallow water in St. Johns River. There were no serious injuries to the 142 passengers and crew onboard. The airplane was substantially damaged. The airplane was operated by Miami Air International as a Title 14 *Code of Federal Regulations* Part 121 supplemental non-scheduled passenger flight from Leeward Point Field (MUGM), Guantanamo Bay, Cuba, to KNIP.

The NTSB launched a go-team that included an investigator-in-charge and specialists in structures, systems, powerplants, air traffic control (ATC), survival factors, airplane performance, and meteorology. Specialists in operations, human factors, maintenance records, and flight recorders supported the investigation from other locations.

Parties to the investigation are the Federal Aviation Administration (FAA), Miami Air International, CFM International, Boeing, the International Brotherhood of Teamsters, the US Navy, the Association of Flight Attendants, and the National Air Traffic Controllers Association. The investigative team was also assisted by numerous federal, state, and local law enforcement and public safety agencies.

On the night of the accident, the KNIP automated surface observation system (ASOS) special weather observation at 2122 (20 minutes before the accident) indicated wind from 350° at 4 knots, 5 miles visibility, heavy rain and thunderstorms, mist, scattered clouds at 800 ft above ground level (agl), broken ceiling of cumulonimbus clouds at 1,800 ft agl, overcast skies at 3,000 ft agl, temperature 24°C, and dew point 22°C. The remarks noted that thunderstorms began at 2104, frequent lightning was overhead, the thunderstorms overhead were moving east, and 0.10 inch of precipitation fell since 2053.

The KNIP ASOS special weather observation at 2145 (3 minutes after the accident) indicated wind from 290° at 8 knots with gusts to 16 knots, 3 miles visibility, heavy rain and thunderstorms, mist, scattered clouds at 800 ft agl, broken ceiling of cumulonimbus clouds at 1,500 ft agl, overcast skies at 3,200 ft agl, temperature 24°C, and dew point 22°C. The remarks included that 0.63 inch of precipitation had fallen since 2053. Figure 1 shows the Jacksonville (KJAX) WSR-88D base reflectivity image for the 0.5° elevation scan initiated at 2143:17.

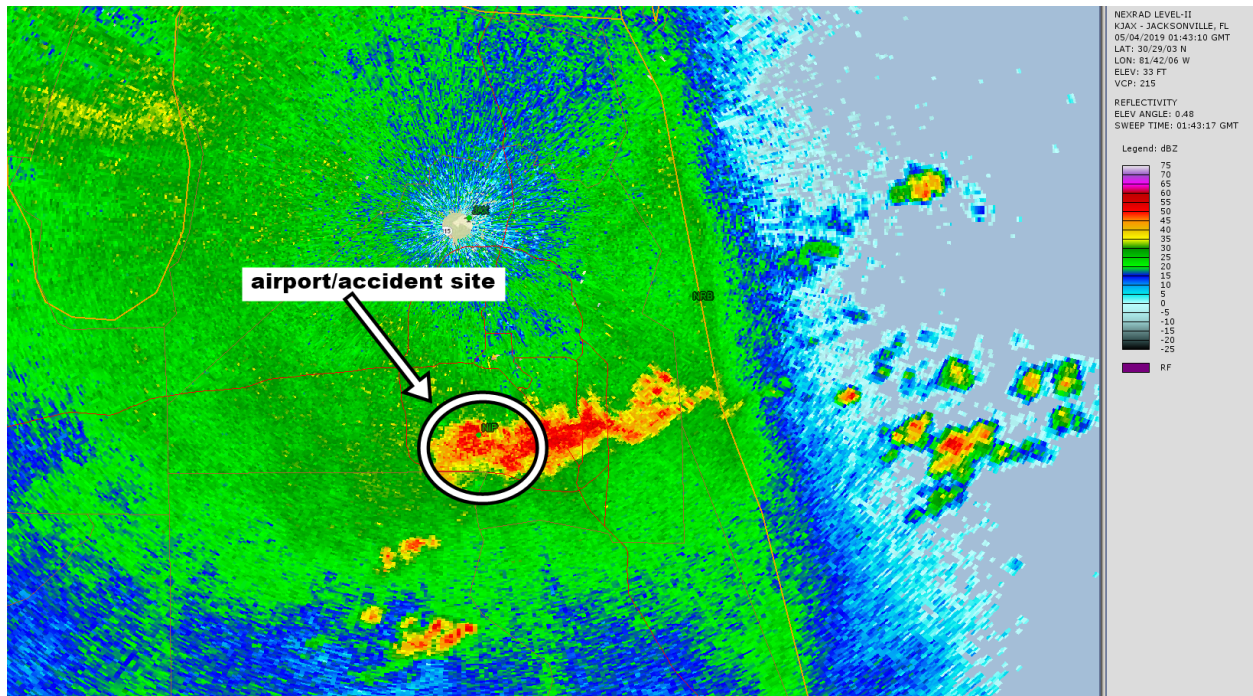


Figure 1. National weather Service NEXRAD weather radar at 2143. Airport is near the center of the circle.

ATC communications indicated that, at 2122:19, the pilot checked in with a Jacksonville approach (JAX) controller while level at 13,000 ft mean sea level (msl) and was provided the JAX altimeter setting; the controller advised the pilot to expect the RNAV RWY28 approach and moderate-to-heavy precipitation on the final approach to RWY28. The JAX controller then called the KNIP tower controller and asked for the current winds and precipitation out the window. The KNIP controller said the winds were from 350° at 4 knots, 5 miles visibility, heavy thunderstorms, rain, and mist.

At 2123:25, the JAX controller advised the pilot that the winds at KNIP were from 350° at 4 knots; the pilot then asked if there was any chance of getting RWY10 because it looked a little better. The JAX controller responded that he was showing moderate-to-heavy precipitation building over RWY10 starting about 5 miles on final. The pilot acknowledged and said he would stick with RWY28. He was then instructed to descend and maintain 5,000 ft.

At 2124:55, the JAX controller called the KNIP tower again and asked if RWY10 or RWY28 looked better out the window. The KNIP tower controller advised that both runways were “pretty rough,” the runways were “pretty soaked in,” and the winds favored RWY28. The JAX controller advised the pilot that the KNIP tower controller reported that both runways looked “pretty bad” and were “soaked in.” Additionally, he advised the pilot of moderate-to-heavy precipitation east and west of KNIP and asked if the pilot would like the RNAV RWY28 approach. The pilot responded that he would like that approach and would check how it was

when he got closer. At 2126:11, the JAX controller instructed the flight to turn right to a heading of 010° and to descend and maintain 3,000 feet. At 2127:56, the JAX controller instructed the flight to turn right to a heading of 040°. The pilot acknowledged the instructions.

At 2130:03, the JAX controller advised the pilot that the flight was heading northbound and the precipitation was moving eastbound; the controller then asked the pilot if he would like to try RWY10 since it might be better. The pilot acknowledged "yeah go ahead, let's do it." The controller then instructed the pilot to turn left to a heading of 270°, and the pilot acknowledged. Over the next several minutes, the flight was vectored for the approach to runway 10. At 2137:35, the JAX controller cleared the flight for the RNAV RWY 10 approach, and the pilot acknowledged. Shortly after, the flight was transferred to the KNIP radar controller.

The pilot contacted the KNIP radar controller, and, at 2139:49, the KNIP radar controller indicated the winds were from 240° at 10 knots; he then cleared the flight to land on runway 10. The pilot acknowledged the landing clearance when the airplane was about 5 nautical miles from the runway threshold. At 2141:10, the KNIP radar controller instructed the pilot to report the field in sight, to which the pilot immediately responded he had the field in sight. There was no further communications between the pilot and controller. At 2142:22, the emergency locator transmitter (ELT) was heard on the frequency.

The airplane impacted a rock embankment at the end of the runway 10 overrun area before coming to rest in the St. Johns River about 1,200 ft from the end of runway 10 (see figure 2). The center of the airplane was about 100 ft east of the river's shoreline and about 75 ft south of the runway 28 landing light pier. The water where the airplane came to rest was 3-5 ft deep, depending on the tidal conditions. The embankment had a distinct area of disturbed rocks, consistent with the engines and main landing gear impacting the embankment. The airplane was mostly intact, but both main landing gear had separated from the airplane and were also located in the river.



Figure 2. View looking west at the airplane and runway.

The two forward exits and the four overwing exits were used to evacuate passengers and crew from the airplane (see figure 3). The escape slide at the right forward door had deflated by the time the NTSB arrived on scene, and the escape slide at the left forward door was found fully inflated and attached to the airplane. Four rafts were deployed during the evacuation, and two sustained damage. Interviews with the flight and cabin crew have been conducted regarding the landing and evacuation.



Figure 3. Closeup view of the airplane showing several rafts and door slides.

Runway 10 is 9,000-ft long and 200-ft wide and has a 1,000-ft displaced threshold. The runway also has a paved runway overrun area that is 1000-ft long. Investigators surveyed tire marks on and beyond runway 10, extending from the airplane's estimated touchdown point to the embankment along the river. Light, white, landing gear tire marks were found on the pavement beginning at the touchdown point of the airplane, about 1,600 feet from the runway 10 displaced threshold, and continuing to the end of the pavement. (The touchdown point based on the tire marks is consistent with the estimated touchdown point based on initial review of the flight data recorder [FDR] data.) The tire marks also showed that the airplane touched down about 20 ft right of the runway centerline, returned to the centerline within about 1,000 ft of touchdown, then veered about 75 ft right of the centerline by the time the airplane had traveled about 6,200 ft from the runway 10 displaced threshold (about 4,600 ft from touchdown). The airplane then departed the runway surface about 60 ft right of the centerline onto the grass before striking the rock embankment.

The airplane was manufactured in 2001 and Miami Air International placed the airplane on its operating certificate on April 26, 2001. The airplane had accumulated 38,928.57 total flight

hours with 15,610 total flight cycles at the time of the accident. A review of Airworthiness Directive status lists for the airplane, powerplants, and appliances and found no discrepancies.

Company and FAA records indicated that the captain was qualified and current in the airplane and held an FAA airline transport pilot certificate with type ratings for the Boeing B727, Boeing B737, Fairchild-Swearingen SA-227, and the Saab SF-340. He had a current FAA first-class medical certificate with no limitations or restrictions. He had worked for Miami Air since March 2008 and had about 7,500 hours of total flight experience, with about 2,000 hours as second-in-command and 1,000 hours as pilot-in-command in the B737.

The first officer held an FAA airline transport pilot certificate with a Boeing B737 type rating. He had a current FAA first-class medicate certificate with no limitations or restrictions. He was hired by Miami Air in January 2019 and had about 7,500 hours of total flight experience with about 18 hours in the B737.

The accident flight was part of an operating experience trip for the first officer that began the day before the accident. On the day of the accident, the crew operated a flight from KNIP to MUGM, then operated the return flight to KNIP (accident flight).

The FDR and cockpit voice recorder (CVR) were returned to the NTSB recorders laboratory where they were downloaded. A CVR group was convened and will complete a transcript of the event. The CVR transcript will be released when the public docket is opened. Other groups include operations/human factors, ATC, weather, structures, systems, powerplants, survival factors, airplane performance, and maintenance records. Additional groups may be formed as the investigation progresses.

Further information will be released as warranted.