

## EXECUTIVE SUMMARY

On 11 February 2011, at 2017 Central Standard Time, the Mishap Aircraft (MA), a T-38C, serial number 65-0337, sustained damage during an attempted landing on Runway 22 at Ellington Field, Houston, Texas. The MA and Mishap Pilot (MP) were assigned to the 14th Flying Training Wing, Columbus Air Force Base (AFB), Mississippi. The MP suffered minor injuries. The MA sustained damage to the landing gear, engines, right wing, and tail section totaling \$2,139,672. The impact caused minor damage to the runway, but no damage to private property.

The MP was flying his fourth sortie of the day as a night solo continuation training sortie into Ellington Field on a squadron cross-country mission. The MP requested a visual approach to runway 17 Right. He did not sufficiently monitor his position and became geographically misoriented. As a result, when he was three miles from the airfield, the MP misidentified runway 22 as runway 17 Right. Due to Channelized Attention on the mismatch between what he was seeing outside and what his instruments indicated, he allowed his airspeed to decrease well below a safe airspeed and descended at an insufficient rate, placing him well above a normal glidepath. In an attempt to fix his glidepath, he developed an excessive sink rate. He did not detect his slow airspeed or excessive sink rate in time to prevent a runway impact of sufficient force to cause catastrophic damage to the MA's landing gear and right wing. The MP was unable to prevent the MA from departing the runway, incurring further damage. The MA came to rest 2,500 feet from the point of impact. The MP accomplished a safe ground egress.

The 50th Flying Training Squadron Commander originally approved the MP's cross-country plan to remain overnight at Charleston, South Carolina, to support a Reserve Officer Training Corps (ROTC) event he had organized for The Citadel. One week prior to the mishap, the commander changed his policy to require all cross-country pilots to remain overnight at Ellington. The commander informed the MP of the new policy; the MP could still support the Citadel event if his plan allowed him to stay at Ellington. The commander did not consider cancelling the MP's ROTC event. The MP still wanted to support the ROTC event and believed that his planned timeline, while aggressive, would allow him to safely arrive at Ellington. This policy change, combined with the MP's ROTC commitment, led to the MP flying a high-risk mission of a fourth sortie, solo, single-ship, for his first night arrival to Ellington.

The Accident Investigation Board (AIB) President found by clear and convincing evidence this accident was caused by the following: (1) Geographic Misorientation of the MP in relation to the landing runway, which led to a series of perception and performance errors that ultimately resulted in the runway impact; (2) the authorization and execution of a mission profile having an unnecessarily high level of risk relative to the real benefits. Operational Risk Management (ORM) was inadequate on three fronts: inadequate risk analysis of the overall cross-country weekend plan as well as the MP's individual plan, an inadequate risk assessment matrix, and a culture of risk tolerance in the squadron. Inappropriate supervisory policy, combined with inadequate ORM, led to the MP flying a high-risk mission profile. The AIB President also found by a preponderance of the evidence that the MP's fatigue substantially contributed to the mishap.

*Under 10 U.S.C. §2254(d) the opinion of the accident investigators as to the cause of, or the factors contributing to, the accident set forth in the accident investigation report, if any, may not be considered as evidence in any civil or criminal proceeding arising from the accident, nor may such information be considered an admission of liability of the United States or by any person referred to in those conclusions or statements.*