EXECUTIVE SUMMARY
AIRCRAFT ACCIDENT INVESTIGATION
B-2A, T/N 89-0127
ANDERSEN AIR FORCE BASE, GUAM
23 FEBRUARY 2008

On 23 February 2008, at 1030 hrs local (0030 hrs Zulu), a B-2A, T/N 89-0127, assigned to the 509th Bomb Wing, Whiteman Air Force Base (AFB), Missouri crashed during initial takeoff from Andersen AFB, Guam. The Mishap Mission was a scheduled return from Andersen AFB to Whiteman AFB concluding a 4-month continuous bomber presence deployment. The Mishap Aircraft (MA) was number two on takeoff behind the lead aircraft, using standard one-minute formation spacing between bomber aircraft. The two-person crew consisting of Mishap Pilot 1 (MP1) and Mishap Pilot 2 (MP2) successfully ejected from the aircraft during the mishap. MP1 sustained minor injuries, was treated locally and then released. MP2 suffered a spinal compression fracture and was treated at Tripler Army Medical Center in Hawaii before returning to Whiteman AFB. He is expected to reach full recovery. The MA was destroyed at a total loss of $1,407,006,920. Andersen AFB addressed environmental remediation associated with the mishap.

The Board President found, through clear and convincing evidence, that distorted data introduced into the MA flight control computers caused an uncommanded, 30 degrees nose-high pitch-up on takeoff resulting in a stall and subsequent crash.

Moisture in the MA port transducer units (PTUs) during an air data calibration caused an unnecessarily large "bias" or correction to the air data system. Using this "moisture distorted" data, the MA flight computers calculated inaccurate airspeed and a negative angle of attack (AOA) which contributed to an early rotation and uncommanded pitch-up on takeoff. Loss of all air data resulted in degraded flight controls response and stability of the MA.

The nose-high attitude and heavy gross weight of the MA resulted in deterioration of airspeed. The end result was a low-altitude stall, culminating in a roll and yaw to the left. The lack of airspeed and altitude denied MP1 the ability to recover the MA. As the left wing made contact with the ground, the Mishap Crew successfully ejected. The MA impacted the ground and was destroyed by fire.

Moisture in the PTUs, inaccurate airspeed, a negative AOA calculation and low altitude/low airspeed are substantially contributing factors in this mishap. Another substantially contributing factor was the ineffective communication of critical information regarding a suggested technique of turning on pitot heat in order to remove moisture prior to performing an air data calibration.

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