

EXECUTIVE SUMMARY

AIRCRAFT ACCIDENT INVESTIGATION

C-5B, S/N 84-0059

512th Airlift Wing, Dover Air Force Base, Delaware

3 April 2006

On 3 April 2006, C-5B tail number 84-0059 (call sign Reach 4059), departed Dover Air Force Base (AFB), Delaware at 1021Z (0621L) on a routine strategic airlift mission to Ramstein Air Base (AB), Germany. There were 14 crewmembers and 3 passengers (PAX) on board. Reach 4059 was loaded with 105,000 lbs of palletized cargo and 250,000 lbs of fuel, for an estimated takeoff weight of 742,000 lbs. There was no cloud cover nor limits to visibility. After a normal takeoff and initial climb, the aircrew observed a number two engine "Thrust Reverser Not Locked" light, shut down the number two engine, and decided to return to Dover AFB. While maneuvering under Visual Flight Rules (VFR), east of Dover AFB, mishap pilot one (MP1) selected 40% flaps and reduced the three remaining engines to idle. MP1 then put the landing gear down and attained full flaps (100% extended) approaching 500 ft above ground level (AGL) at approximately 3.5 miles from the approach end of the runway. During the approach and landing, MP1 continued to move the number two throttle (shutdown engine), in concert with operating engines one and four, while leaving the number three throttle (fully operational engine) back in idle. MP1 mistakenly used the number two throttle (shutdown engine) instead of the number three throttle (operational engine) for the remainder of the flight. Approximately 1 mile from runway 32, at 150 ft AGL and 127 knots (approach speed should have been 146 knots, with a minimum control air speed [VMCA] of 133 knots), the flight engineers recommended, and pilots selected, 40% flaps, and the aircraft stalled. At this aircraft weight (735,000 lbs), flap configuration (100%), altitude (150 ft), distance to the runway (1 mile), and airspeed (127 knots), the mishap aircraft (MA) would have stalled and crashed short of the landing runway, even without the movement of the flaps from the 100 to 40% setting. At 0639L, approximately .74 statute miles short of runway 32, the MA's tail struck a telephone pole, and contacted the ground, followed by the main landing gear, right wingtip and then nose landing gear of the aircraft. During the crash, the complete empennage (tail section) separated from the aircraft. The MA skidded right and came to a rest with the left wingtip in contact with the ground, the number one engine separated from the pylon and the cockpit broke off just behind the aft flight deck crew relief area. The number one main and auxiliary fuel tanks were compromised and vaporized or spilled fuel at the crash site. Except for the initial contact with the telephone pole, all contact with the ground occurred, and wreckage remains, on Dover AFB property. The aircrew and passengers suffered varying degrees of injuries, with no fatalities. Flight deck personnel sustained the most severe injuries due to an estimated 30G (thirty times the force of gravity) impact upon crash landing. The Dover AFB crash recovery personnel were on site in minimal time, eliminating possible fires and aiding the safe recovery of MA personnel.

Based on clear and convincing evidence, the Board President determined the primary cause of the mishap was the pilots' and flight engineers' failure to use the number three, fully operational, engine; the instructor's and primary flight engineer's failure to brief, and the pilots' failure to consider or utilize a 62.5 or 40% flap setting (instead of a 100% flap setting); and the pilots'

attempt at a visual approach to runway 32, descending well below a normal glidepath for an instrument-aided approach or the normal VFR pattern altitude of 1,800 ft. There is substantial evidence that a contributing factor to this mishap was MP1's failure to give a complete approach briefing, in that, nonstandard factors, configuration, landing distance, and missed approach intentions were not addressed.

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 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.