

EXECUTIVE SUMMARY

AIRCRAFT ACCIDENT INVESTIGATION MQ-1B PREDATOR, S/N 07-3200 CANNON AIR FORCE BASE, NM 28 JULY 2010

On 28 July 2010, at 1400 Zulu (Z) time, the Mishap Remotely Piloted Aircraft (MRPA), an MQ-1B Predator, serial number (S/N) 07-3200, crashed into a perimeter fence south of the Cannon Air Force Base (AFB) airfield. The Predator and Launch and Recovery Element (LRE) crew were assigned to the 3rd Special Operations Squadron, 27th Special Operations Wing, Cannon AFB, New Mexico. There were no injuries or deaths, but the mishap did result in minor damage to non-military property (corn). Damage to the MRPA and government property is valued at \$988,149.

The mishap occurred on day two of the Rapid Reaction Demonstration (RRD), which was intended to validate the feasibility of rapidly deploying the MQ-1 system and team. The MRPA taxied south from a parking location near the south end of Delta taxiway at 1355Z. Approximately four minutes into the taxi, the Mishap Crew (MC) experienced degraded signal strength and increased Datalink Delay (time for signal to travel from the control station to the aircraft) between the MRPA and the Containerized Deployable Control Station (CDCS) 6010. During this period, the MC noticed an uncommanded power increase (without accompanying throttle input) and corresponding increase in ground speed. Mishap Pilot 1 (MP1) commanded 100% brakes but the MRPA did not respond to the input. Following emergency procedures, the MC cut power to their Portable Ground Data Terminal (PGDT) in an attempt to stop the MRPA.

At the time the MC identified the problem, the MRPA was taxiing past a building that obstructed its Line Of Sight (LOS) communication link with the controlling PGDT. Mishap Pilot 2 (MP2) was operating (shadowing), without a Sensor Operator (SO), from another location that provided unobstructed LOS communication with the MRPA. While preparing CDCS 6006 to shadow the mission, MP2 deviated from a checklist item by turning her Ground Data Terminal (GDT) transmitter to the ON position. As the signal strength from CDCS 6010 dropped off, the shadow CDCS 6006 linked to the aircraft and took control. As a result, the aircraft experienced an increase in speed, departed the prepared surface and impacted a perimeter fence approximately 1,900 feet from the end of the runway.

The Accident Investigation Board (AIB) President determined, by clear and convincing evidence, the cause of the mishap was a loss of aircraft control due to MP2 deviating from checklist procedures by turning the GDT uplink transmitter to ON. The AIB President found, by a preponderance of evidence, the following three factors substantially contributed to the mishap: (1) failure to comply with required crew compliment; (2) absence of published directives for shadow operations; (3) failure to identify the limitations of the PGDT and the impact of LOS obstructions.

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.