EXECUTIVE SUMMARY

AIRCRAFT ACCIDENT INVESTIGATION
MQ-1B, "PREDATOR," T/N 98-3047
SOUTH OF KABUL AB, AFGHANISTAN
20 APRIL 2009

On 20 April 2009, at 1131Z (Zulu time), the mishap remotely piloted aircraft (MRPA), an MQ-1B Predator, tail number 98-3047, crashed 90 nautical miles south of Kabul Air Base (AB), Afghanistan. The Predator was an asset of the 432 Air Expeditionary Wing and was flown by the 111 Reconnaissance Squadron (Texas Air National Guard), Ellington Field, Texas.

After a six hour departure delay, the MRPA departed from Jalalabad Airfield, Afghanistan at 0214Z to fly a sortie in support of Operation ENDURING FREEDOM. At 1131Z, the MRPA lost its return link (RL). RL refers to the data transmission capability from the aircraft to the Ground Control Station (GCS) via the Predator communication systems. Attempts to reestablish the RL were unsuccessful. In addition, no further transponder signal was received. The transponder is a device on board the aircraft that sends out a transponder code, or "squawk code" which other aircraft and air traffic controllers can receive. This helps to both identify and locate the aircraft.

The MRPA did not execute its pre-planned emergency mission (EM) nor did it return to its forward operating base and was presumed crashed. The wreckage of the MRPA was located on 21 April 2009 downwind of its last recorded position. The exact time of the crash is unknown. There are no known injuries, deaths, or reported property damage. The MRPA was carrying one AGM-114P Hellfire missile. The mishap loss is valued at approximately $4.7 million.

The post-mishap investigation revealed no anomalies with regards to the MRPA at the time of the lost link. The preflight and launch was performed with no reported discrepancies. Flight crews, reported no anomalies with the operation of the MRPA in the hours of flight prior to the lost RL event.

The Accident Investigation Board President determined by clear and convincing evidence that the cause of the mishap was a catastrophic electrical system failure. The failure was most likely caused by a short circuit somewhere along the 28 volt power lines. Because of the physical and fire damage to the aircraft, there is no way to pinpoint where the failure occurred. However, a catastrophic electrical failure is considered the only plausible failure mode because only such a failure could account for the lost RL to the GCS, the inability of the aircraft to perform its pre-programmed EM, and the loss of the transponder signal. The loss of electrical power resulted in loss of control of the MRPA and the subsequent crash.

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.