EXECUTIVE SUMMARY
AIRCRAFT ACCIDENT INVESTIGATION

F-15E, T/N 90-0231
BAGRAM AIRFIELD, AFGHANISTAN
18 JULY 2009

On 18 July 2009, at 0233 local time (L), an F-15E aircraft, tail number 90-0231, impacted the terrain 30 miles west of Ghazni, Afghanistan, while participating in a combat mission. The mishap aircraft (MA) was based at Bagram Airfield, and assigned to the 336th Expeditionary Fighter Squadron. The mishap pilot (MP) and mishap weapon systems officer (MW) died upon impact. The MA was destroyed. Financial loss of the MA and other government property totaled $55,373,351.90. No other injuries or damage resulted from the mishap.

The mishap crew (MC) was part of a two-ship F-15E flight. The mishap flight (MF) departed Bagram Airfield at 2237L to begin a close air support (CAS) mission. At 0209L, they completed the CAS mission. The MF delayed their return to base to practice high angle strafe (HAS), an air-to-surface attack firing 20 millimeter rounds (firing is simulated on practice attacks). The MF selected a strafe target area where they routinely practiced HAS. While en route to the target area, the flight lead (FL) referenced control panels in their cockpits to determine the mean sea level (MSL) elevation of the intended target. The FL assessed the intended target elevation as 4,800 feet (ft). The MF calculated a 6,000 ft minimum safe altitude and open and cease fire altitudes of 8,500 and 7,500 ft for their HAS attack. All flight members were flying with night vision goggles. The FL called for low illumination attack parameters.

The MF arrived at the target area at 0220L. Multiple displays in both front and rear cockpits showed the elevation of the intended target as approximately 10,200 ft MSL. Neither crew noticed the 5,000 ft discrepancy in the previously assessed target elevation. The MF prepared to practice HAS based on the 4,800 ft MSL elevation. The FL initiated their attack first. During the attack, the FL realized that they were at too low of an attack angle and aborted. Next, the MC initiated their attack. The MP lowered the nose of the MA at 18,000 ft and achieved the correct HAS attack angle. The airspeed of the MA was approximately 470 knots calibrated airspeed. The MC continued on their attack for approximately 10 seconds until impact. There was no attempt to recover the aircraft, and neither the MP nor the MW attempted to eject.

The Accident Investigation Board (AIB) President found by clear and convincing evidence that the cause of the mishap was the flight lead weapon systems officer's incorrect assessment of the target elevation and the mishap crew's reliance on this inaccurate number. These actions resulted in calculating open and cease fire altitudes below the actual ground level of the target. Additionally, the AIB President found five factors that substantially contributed to the mishap: misperception of the operational conditions in the target area; an erroneous expectation for a typical night strafing attack; inexperience by the flight lead and the mishap crew at executing night strafing; channelized attention; and an improper cross check during the attack.