

United States Air Force Abbreviated Accident Investigation Board Report

Class-B Mishap, Ellsworth AFB, SD, 20 March 2008

EXECUTIVE SUMMARY

On 20 March 2008 at 1046 local time, a B-1B aircraft, serial number (S/N) 86-0099, departed Ellsworth Air Force Base, South Dakota to the southeast and immediately experienced an engine fire in the number three engine. The mishap occurred directly after takeoff and caused eight small grass fires, as well as damage to two fences on private property. There were no injuries, and the mishap crew was able to safely land the mishap aircraft without further incident. Damage to the aircraft was valued at \$923,213.05.

The mishap aircraft was assigned to the 34th Bomb Squadron, 28th Bomb Wing, Ellsworth Air Force Base, South Dakota. The 28th Bomb Wing is a fully combat-ready unit capable of providing B-1 bomber aircraft, along with mission ready pilots, Weapon Systems Officers (WSO), and support personnel, for short-notice worldwide deployment. The mishap crew consisted of: a pilot, an experienced B-1B instructor pilot; a co-pilot, a qualified pilot accomplishing Mission Qualification Training (MQT); a qualified Defensive Systems Officer; and an Offensive Systems Officer, an experienced instructor WSO. All crewmembers were current and qualified for the planned flight training. The mishap aircraft was part of a flight of two B-1B aircraft. The mission was planned as a MQT sortie

The Accident Investigation Board president found clear and convincing evidence that the mishap aircraft experienced an engine fire in engine number three due to foreign object debris (FOD) damage to an engine fuel spray bar. The FOD caused a hole in the spray bar that directed aircraft fuel between the exhaust duct and exhaust nozzle liner. That fuel ignited, burning through the exhaust duct into the engine outer shroud. A ground observer, the Supervisor of Flying, observed the takeoff and notified the mishap crew of the possible fire; the accompanying aircraft confirmed the fire. The mishap crew shut down the mishap engine which eliminated the fuel source, stopping the fire. The Board President was unable to determine the source of the FOD.

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.