

Attachment 10

EXPLOSIVES ON OR NEAR AIRFIELDS

A10.1. Contents. All explosives locations, including locations where aircraft loaded with explosives are parked, must be sited in accordance with Department of Defense (DoD) Standard 6055.9, *DOD Ammunition and Explosives Safety Standards*, and with applicable service explosives safety regulations. Explosives site plans, approved through command channels to the DoD, ensure that minimal acceptable risk exists between explosives and other airfield resources. To prevent inadvertent ignition of electroexplosive devices (EEDs), separation between sources of electromagnetic radiation is required. Separation distances must be according to safe separation distance criteria. Grounding requirements, lightning protection, and further considerations for explosives on aircraft are presented below.

A10.2. Separation Distance Requirements. Minimum standards for separating explosives (Explosion Separation Distances and Quantity-Distance (Q-D) Relationships) loaded aircraft from runways, taxiways, inhabited buildings, and other loaded aircraft are established in Chapter 5 of AR 385-64, *Ammunition and Explosives Safety Standards*, for the Army, AFMAN 91-201 *Explosives Safety Standards*, for the Air Force, and NAVSEA OP-5, *Ammunition and Explosives Ashore, Safety Regulations for Handling, Storing, Production, and Renovation*, and NAVAIR 16-1-529, *Electromagnetic Radiation Hazards*, for the Navy and Marine Corps. These documents also establish Quantity-Distance (Q-D) relationships for separating related and unrelated Potential Explosion Site (PES) and explosive and nonexplosive Exposed Sites.

A10.3. Prohibited Zones. Explosives, explosive facilities, and parked explosives-loaded aircraft (or those being loaded or unloaded) are prohibited from being located in Accident Potential Zones I and II and clear zones as set forth in AR 385-64 Chapter 5 and AFMAN 91-201.

A10.4. Hazards of Electromagnetic Radiation to Electroexplosive Devices (EED). General. Electroexplosive devices (EED) on aircraft are initiated electrically. The accidental firing of EED carried on aircraft initiated by stray electromagnetic energy is a possible hazard on an airfield. A large number of these devices are initiated by low levels of electrical energy and are susceptible to unintentional ignition by many forms of direct or induced stray electrical energy, such as radio frequency (RF) energy from ground and airborne emitters (transmitters). Additional sources of stray electrical energy are: lightning discharges, static electricity or triboelectric (friction-generated) effects, and the operation of electrical and electronic subsystem onboard weapon systems. AFMAN 91-201 should be used as a guide in setting up safe separation between aircraft loaded with EED.

A10.5. Lightning Protection. Lightning protection must be installed on open pads used for manufacturing, processing, handling, or storing explosives and ammunition. Lightning protection systems must comply with DoD Standard 6055.9, AFM 88-9/TM 5-811-3 (Chapter 3), *Electrical Design, Lightning and Static Electricity Protection*, AFI 32-1065, *Grounding Systems*, and National Fire Protection Association (NFPA) 780, *Standards for the Installation of Lightning Protection Systems*.

A10.6. Grounding of Aircraft. Aircraft that are being loaded with explosives must be grounded at all times. Air Force grounding of aircraft will be in accordance with AFMAN 91-201 and applicable weapons systems technical orders.

A10.7. Hot Refueling. Hot refueling is the transfer of fuel into an aircraft with one or more engines running. The purpose of hot refueling is to reduce aircraft ground time, personnel and support equipment

requirements, and increase system reliability and effectiveness by eliminating system shut-down and restart. All hot refueling locations must be sited in accordance with Department of Defense (DOD) Standard 6055.9, *DoD Ammunition and Explosives Safety Standards*, and applicable service explosives safety criteria.