

AVIATION RISKS

1. Aviation Operational Hazards.

a. Environment (Brownouts, Dust, Sand, Weather and Wind). Operating in harsh flight environments increases the risk of accidents. This risk is increased by failing to prepare, poor decision-making and inexperience. There is no substitute for frequent and realistic training in environments that are similar to those where the actual mission will be executed. Know your limitations.

b. Weather Issues.

(1) Visual Flight Rules (VFR) Versus Instrument Flight Rules (IFR). Intentionally flying into bad weather, improper flight planning, inadequate in-flight decision-making and failing to maintain adequate terrain clearance all increase the probability of aviation accidents. A controlled flight into terrain (CFIT) accident is likely to occur when a crew chooses to continue a VFR flight after encountering instrument meteorological conditions or low ceiling and limited visibility.

(2) Brownouts. Brownouts generally occur over an area where loosely packed dirt, dust, or sand accumulates. Aircraft may encounter brownout conditions when taking off or landing. Pilots must also training adequately in the proper techniques for operating in this type of environment and exercise extreme caution and judgment regarding mission accomplishment and safety.

(3) Restrictions to Visibility. Fog, low clouds, rain showers, blowing dirt, dust, and sand all reduce visibility. These environmental and weather phenomena also restrict the pilot's ability to maintain visual reference and situational awareness. Sustained or frequent operations under these conditions significantly increase the potential for weather-related accidents and must be avoided. Strict compliance to ceiling and visibility requirements outlined in applicable regulations is imperative. Leaders must brief weather abort criteria and emergency recovery procedures when weather is a factor.

c. Aviation Life-Support Equipment (ALSE). ALSE must be inspected, functional and available to crewmembers during missions conducted in extreme temperatures. The severity of forced landings and accidents may increase if proper precautions are not taken.

d. Obstructions (Towers and Wires). Aviation leaders at every level must emphasize this in classrooms, in the cockpit, and during safety and mission briefings.

e. Blade Strikes. We must always maintain situational awareness while operating in and around running aircraft. Aviation personnel must police areas for foreign object debris (FOD). Likewise, pilots must always maintain clearance while prop blades are turning. We must reemphasize this requirement to crewmembers and maintenance personnel.

f. Airfields. Airfields must be established and maintained according to applicable regulations. Airfields can fall into disrepair as a result of disuse or complacency. Aviation safety officers (ASOs) must survey these sites and maintain current hazard logs regarding safety issues. Reintegration into locations that have been closed temporarily may require more preparation and maintenance.

g. Maintenance (Towing and Ground Handling). Maintaining situational awareness is important for reducing the hazards involved in towing and ground-handling operations. Conducting walk-arounds, adhering to speed limits for towing and always using the required number of ground guides will help eliminate these hazards.

2. Challenges and Prevention.

a. Accurate Reporting and Data Collection (Challenge). The collection of accurate and timely accident information is necessary in order to analyze the data, identify trends and target prevention measures. Without accurate reporting, we cannot make informed prevention decisions; however, we should not simply be a "clearinghouse" for accident information. ASOs must be diligent in collecting, documenting and reporting unit accidents.

b. Trend Analysis (Accident Causes). Identifying trends and systemic problems is imperative in order to target prevention measures that are proactive and preventive in nature. For this reason, we must collect data from an historical perspective, analyze it and determine what types of accidents are occurring and what is causing them. ASOs must access the United States Army Safety Center Risk Management Information System (RMIS) and collect and analyze long-term historical accident data (including abbreviated aviation accident reports (AAARs)), identify trends and identify prevention measures.

c. Human Error (Leadership and Individual Failure). The most effective tools for eliminating failures of leaders and individual Soldiers are as follows:

(1) Command Emphasis and Support. Aviation leaders from the top level down must advocate and enforce standards. We must empower our subordinate supervisors to act on our behalf and with the full weight of our convictions. Mission first, but safety always.

(2) Ownership (Accountability and Direct Oversight). Aviation leaders must assume ownership and personal responsibility for the safety of their personnel. These leaders must provide direct supervision during daily operations and make spotchecks during the preparations, training and execution phases of missions. "Soldiers do what leaders check."

(3) Identify Risk-Takers -- Intervention. Leaders must not accept behavior that is inconsistent with standards. Allowing substandard performance can lead to accidents. There are risk-takers and those who take shortcuts. Identify these individuals and other personnel who omit or compromise a standard and intervene. Make corrections and make these personnel aware of your expectation of their performance. Make them accountable and reeducate and retrain them to standard. Leaders, peers and subordinates must show "tough love" to our fellow Soldiers. We must develop a willingness to tactfully yet deliberately correct inappropriate

behavior before an accident occurs. We cannot afford to look back and say, "I knew this would happen."

(4) Collect, Evaluate and Apply Lessons Learned. Those who do not learn from their mistakes are doomed to repeat them. We do not have to make the same mistakes that our predecessors made. There are enough sources of information in terms of lessons learned regarding our diverse mission. This information must be collected and exploited to the fullest extent possible. There are no new accidents. We continue to hurt ourselves and damage our equipment in the same ways over and over. We must capture and apply applicable lessons learned in a proactive manner in terms of implementing control measures to reduce identified and potential hazards. We also must document our experience and share it with other organizations.

3. Guidance. The following guidance is specific to aviation commanders and other leaders; aviation safety, standardization, and maintenance officers; and aviation support personnel. This guidance is designed to enhance safety awareness, increase the unit safety posture and prevent aviation accidents.

a. Aviation commanders will:

(1) Sustain the current unit safety posture and reduce hazards by continuously applying active risk-management principles as necessary during preparation, movement, reintegration and sustainment operations.

(2) Ensure that clear, concise and functional guidance is in place for expected mission requirements and direct leaders at every level to supervise and enforce standards.

(3) Ensure that deliberate risk assessments are performed for all applicable mission and task scenarios particular to the various phases of operation (for example, preparation, movement, reintegration). Hazards identified during the risk assessment and the review of relevant safety literature will be documented and mitigated according to the five-step risk-management process.

b. Aviation safety and standardization personnel will consider flight hazards associated with the imminent operational environment before deployment and reintegration. Special emphasis must be placed on the review of applicable Army regulation, pamphlet, field manuals, training circulars, technical manuals, aircrew training manuals ATMs, APGs and SOPs in terms of identifying, knowing and adhering to standards.

c. Aviation leaders will obtain and review applicable lessons learned, accident trends and other information applicable to the operational hazards expected while en route, on a mission, and at home station.

d. Aviation leaders and standardization personnel must ensure that training and mission execution are comparable in terms of strict compliance with task, condition and standard. Creatively interpreting or modifying established standards and continuing to use flight techniques not sanctioned or published are unacceptable.

e. Aviation safety, standardization and maintenance personnel will establish and maintain a deployment library that includes essential maintenance, training, operational and safety publications.

f. Aviation leaders and maintenance supervisors must place special emphasis on proper "by-the-book" maintenance and ground handling of aircraft at all times. Reemphasize hook-up procedures, speed limits, and the number and position of ground guides.

g. Aviation safety and standardization personnel will consider and reduce mission challenges specific to the expected flight environment. Areas requiring special attention include but are not limited to the following:

(1) Environmental considerations (for example, blowing dirt, dust, and sand; brownouts).

(2) Performance planning considerations, especially in high-altitude and extremely hot environments.

(3) Visual limitations in terms of contrast and depth perception in the desert and over poor contrast terrain.

(4) Obstacles, wires and hazards to flight.

h. Aviation units should:

(1) Modify training, revise existing procedures and implement additional control measures as necessary to mitigate hazards and mission challenges that are specific to the expected operational environment.

(2) Make optimal use of training opportunities during reception, staging, onward movement, and integration (RSOI) and mission-rehearsal exercises, concentrating on realism in terms of modeling the training environment and tasks commensurate with the expected mission environment.

i. Aviation units will:

(1) Establish and revise their Emergency Recovery Procedure for their current area of operation considering such things as the terrain, the threat, mission-briefing requirements, crew duties, crew-coordination requirements, radio-communication procedures and recovery airfield requirements.

(2) Conduct operational and safety surveys in order to identify hazards to flight specific to their area of operation. The aviation flight operations section will establish and continuously update a unit hazard map that includes restricted flight areas and natural and manmade hazards and obstacles. Aviation crewmembers will update their individual hazard maps and brief hazards before every mission.

(3) Establish and update their pre-accident plan, which provides guidance, information and procedures to follow in case of an aviation accident. Pre-accident plans will be specific to the area and include such things as notification procedures, emergency support services, POC contact numbers, local telephone listings, notification requirements, witness identification, accident-response coordination, records and logs, medical requirements and support, and accident-site security.

(4) Develop and implement crew-endurance and fighter-management programs. These programs must include duty-day considerations while preparing for deployment, movement, reintegration, and continuous or sustained operations while deployed or at home station. Individual crew-rest plans also will include effective controls for aviation crewmembers conducting nighttime operations in terms of protecting night vision and provisions for adequate rest.

Tab A to Encl 2