

**BY ORDER OF THE
SECRETARY OF THE AIR FORCE**

**AIR FORCE INSTRUCTION 11-2C-146A,
VOLUME 3**



29 AUGUST 2014

Flying Operations

C-146A OPERATIONS PROCEDURES

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms are available on the e-Publishing website at www.e-publishing.af.mil for downloading or ordering.

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: HQ AFSOC/A3V

Certified by: HQ USAF/A3O
(Brig Gen Giovanni K. Tuck)

Pages: 74

This instruction implements Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations*, Air Force Instruction (AFI) 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, and AFI 11-202, Vol 3, *General Flight Rules*. AFI 11-2C-146A establishes procedures for the operation of C-146A aircraft employed by Air Force Special Operations Command (AFSOC) to accomplish their worldwide operational and training missions. Unless noted otherwise, instructions contained herein apply to AFSOC C-146A aircraft. It provides the most acceptable policies and procedures for most circumstances, but does not replace sound judgment. This instruction does not apply to the Air National Guard (ANG). This publication does apply to Air Force Reserve Command (AFRC) units. The Privacy Act of 1974 applies to certain information gathered pursuant to this instruction. The Privacy Act System Number F011 AF XOA, Aviation Resource Management Systems (ARMS) covers required information. The authority for maintenance of ARMS is 37 U.S.C. 301a (Incentive Pay), Public Law 92-204, Section 715 (Appropriations Act for 1973), Public Laws 93-570 (Appropriation Act for 1974), 93-294 Aviation Career (Incentive Act of 1974), Department of Defense (DOD) Instruction 7730.57 (Aviation Incentive Pays and Continuation Bonus Program); and Executive Order 9397. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force (AF) Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through the appropriate functional's chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force

Records Disposition Schedule (AF RDS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afrims/afrims/afrims/rimc.cfm>. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

Chapter 1—GENERAL INFORMATION	8
1.1. General.	8
1.2. Applicability.	8
1.3. Key Definitions.	8
1.4. Deviations and Waivers.	8
1.5. Supplements.	9
1.6. Development of New Equipment and Procedures.	9
1.7. Format.	9
Chapter 2—COMMAND AND CONTROL (C2)	10
2.1. General.	10
2.2. Operational Control (OPCON).	10
2.3. Mission Monitoring.	10
2.4. Mission Commander (MC).	11
2.5. Pilot in Command Responsibility and Authority.	12
2.6. Mission Clearance Decision.	12
2.7. Civilian Law Enforcement Support.	12
Chapter 3—AIRCREW COMPLEMENT AND MANAGEMENT	13
3.1. Aircrew Qualification.	13
3.2. Crew Complement.	13
3.3. Interfly.	13
3.4. Intrafly.	14
3.5. Flight Duty Periods (FDP).	14
3.6. Crew Rest.	14
3.7. Alert Duty.	14
Chapter 4—AIRCRAFT OPERATING GUIDELINES	15
4.1. Objectives.	15
4.2. Policy.	15

Chapter 5—AIRCRAFT OPERATING PROCEDURES	17
5.1. Checklists.	17
5.2. Duty Stations.	17
5.3. Seat Belts.	17
5.4. Aircraft Control.	18
5.5. Takeoff and Landing Guidance.	18
5.6. Aircraft Taxi Obstruction Clearance Criteria.	18
5.7. Takeoff and Landing Runway Criteria.	19
5.8. Landing Gear and Flap Operation.	20
5.9. Aircraft Navigation Systems.	20
5.10. Aircraft Lighting.	20
5.11. Advisory Calls During Instrument Flight Rules (IFR) Operations.	21
5.12. Communications Guidance.	22
5.13. Wake Turbulence Avoidance.	22
5.14. Landing Zone (LZ) Operations and Criteria.	22
5.15. Terminal Area Landing Procedures.	24
5.16. Stabilized Approach.	24
5.17. NVG Operations.	26
5.18. Aircraft Rescue and Firefighting (ARFF) Requirements.	26
5.19. Reverse Taxi.	26
5.20. Aircraft Maximum Operating Weight Policy.	27
5.21. Operations Over Arresting Cables.	27
5.22. Aircraft Recovery from Unprepared Surfaces.	27
5.23. Intersection Takeoffs.	27
5.24. Engines Running Onload or Offload (ERO).	27
Chapter 6—GENERAL OPERATING PROCEDURES	28
Section 6A—Pre-mission	28
6.1. Aircrew Uniforms.	28
6.2. Personal and Professional Equipment.	28
6.3. Survival and Protective Equipment.	29
6.4. Aircrew Publication Requirements.	29
6.5. Aircraft Mission Kits.	29
6.6. Route Navigation Kits.	30

6.7. Airfield Review. 30

6.8. Intelligence Briefing. 30

6.9. Classified Material. 31

6.10. International Procedures. 31

Section 6B—Predeparture 31

6.11. Briefing Requirements. 31

6.12. Flight Crew Information File (FCIF). 31

6.13. Flight Planning Systems. 32

6.14. Coordinates. 32

6.15. Flight Logs. 32

6.16. Weather Planning. 32

6.17. Lunar Illumination. 32

6.18. Fuel Planning. 32

6.19. VFR En Route Planning. 33

6.20. Objective Area Planning. 33

6.21. Aircraft Performance. 34

Section 6C—Preflight 35

6.22. Aircraft Maintenance Forms. 35

6.23. Aircraft Inspections and Ground Operations. 35

6.24. Required Equipment. 36

6.25. Required Forms. 36

6.26. Alert Aircraft Procedures. 36

6.27. Aircraft Servicing. 37

6.28. Life Support and Oxygen Requirements. 37

6.29. Cockpit Congestion and Loose Objects. 37

6.30. Preparation for Night Vision Goggles (NVG) Operations. 37

Section 6D—Departure 38

6.31. Departure Briefing. 38

6.32. On Time Takeoffs and Landings. 38

Section 6E—En Route 38

6.33. En Route Briefings. 38

6.34. Flight Progress. 38

6.35.	In-Flight Crew Duties and Responsibilities.	38
6.36.	Communication Instructions for Reporting Vital Intelligence Sightings (CIRVIS) and Other Reports.	39
6.37.	In-Flight Emergency (IFE) Procedures.	39
Section 6F—Arrival		40
6.38.	Arrival.	40
6.39.	Go-Around Calls.	40
Section 6G—After Landing		40
6.40.	Maintenance and Bed Down.	40
6.41.	Classified Material.	40
6.42.	Aircraft Impoundment.	41
6.43.	Clearwater Rinse Facility (Birdbath).	41
6.44.	Customs, Immigration, and Agriculture Inspections.	41
6.45.	Crew Debriefing/Post-Mission Actions.	42
Section 6H—Miscellaneous		43
6.46.	Electronic Devices.	43
6.47.	Jamming and Interference.	43
6.48.	Passenger Guidance.	43
6.49.	Utilization of Civilian Law Enforcement or Medical Personnel.	43
6.50.	Hazardous Material (HAZMAT) Procedures.	43
6.51.	Hazardous Medical Equipment.	45
6.52.	Transporting Narcotics.	46
6.53.	Dropped Objects.	46
Chapter 7—AIRCRAFT SECURITY		47
7.1.	General.	47
7.2.	Security Procedures.	47
7.3.	Aircraft Security Risk Assessment Matrix.	48
Table 7.1.	Aircraft Security Risk Assessment Matrix.	49
7.4.	Protective Standards for Aircraft Carrying Distinguished Visitors (DV).	49
7.5.	Arming of Crew Members.	50
7.6.	General Anti Hijacking Guidance.	50
Chapter 8—LOADMASTER SPECIFIC OPERATIONAL GUIDELINES		52

8.1.	General.	52
8.2.	Responsibilities of Aircraft Loading.	52
8.3.	Emergency Exits and Safety Aisles.	52
8.4.	Air Cargo Restraint Criteria.	52
8.5.	Preflight Duties.	52
8.6.	Passenger Handling.	53
8.7.	Troop Movements.	53
8.8.	Border Clearance.	53
8.9.	Weight and Balance.	54
8.10.	Fuel Weight Computation.	54
8.11.	Loadmaster Forms:	54
Chapter 9—TRAINING		55
9.1.	General.	55
9.2.	Instructor/Flight Examiner Briefings.	55
9.3.	Debriefing.	55
9.4.	Training Aircraft Not Capable of Flight.	55
9.5.	Simulated Instrument Flight.	55
9.6.	Confidence Maneuvers.	55
9.7.	Prohibited Maneuvers.	55
9.8.	Simulated Emergency Procedures.	56
9.9.	Touch-and-go/Stop-and-go Operations.	57
9.10.	NVG Operations.	57
Chapter 10—LOCAL OPERATING PROCEDURES		58
10.1.	General.	58
Chapter 11—OPERATIONAL REPORTS AND FORMS		59
11.1.	General.	59
11.2.	AFSOC IMT Form 97, Aircraft Incident Worksheet.	59
11.3.	AF IMT Form 457, USAF Hazard Report.	59
11.4.	AF IMT Form 651, Hazardous Air Traffic Report (HATR).	59
11.5.	AF IMT Form 711, USAF Aircraft Mishap Report Worksheet.	60
11.6.	Reports of Violations/Unusual Events or Circumstances.	61
Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION		63

Chapter 1

GENERAL INFORMATION

1.1. General. This volume provides guidelines and restrictions for AFSOC C-146A aircraft. It is a compilation of information from aircraft flight manuals, Flight Information Publications (FLIP), and other AF directives, and is an original source document for many areas. This volume supersedes all guidance in Air Force Tactics, Techniques, and Procedures (AFTTP). It is written for normal and contingency operations to reduce procedural changes at the onset of contingencies. Training procedures are included. HQ AFSOC Standardization/Evaluation (HQ AFSOC/A3V) has overall responsibility for the administration of this volume.

1.2. Applicability. This AFI is applicable to all individuals operating the C-146A. References to units, personnel, and aircraft in this instruction include all gained forces unless specifically exempted by this instruction.

1.3. Key Definitions.

1.3.1. “Must”, “Will” and “Shall” indicate a mandatory requirement.

1.3.2. “Should” indicates a recommended procedure.

1.3.3. “May” indicates an acceptable or suggested means of accomplishment.

1.3.4. “*WARNING*” indicates operating procedures, techniques, etc., which will result in personal injury or loss of life if not carefully followed.

1.3.5. “*CAUTION*” indicates operating procedures, techniques, etc., which will result in damage to equipment if not carefully followed.

1.3.6. “**Note**” indicates operating procedures, techniques, etc., which are essential to emphasize.

1.3.7. See **Attachment 1**, Glossary of References and Supporting Information for additional terms, definitions, and references.

1.4. Deviations and Waivers. Do not deviate from the guidance in this AFI except when the situation demands immediate action to ensure safety.

1.4.1. Although this publication provides guidance for aircraft operations under most circumstances, it is not a substitute for sound judgment. When it is necessary to protect the crew and aircraft from a situation not covered by this instruction and immediate action is required, the Pilot in Command (PIC) has ultimate authority and responsibility for the course of action to be taken. Report all deviations or exceptions to this instruction without a waiver through channels to HQ AFSOC/A3. (T-2)

1.4.2. Unless otherwise indicated, HQ AFSOC/A3 is the waiver authority for operational procedure requirements contained in this instruction. HQ AFSOC/A3 may delegate this authority to the Commander Air Force Special Operations Forces (COMAFSOF) for operationally assigned Special Operations Forces (SOF). Request waivers to this instruction through proper command and control channels. (T-2)

1.4.3. **Waivers.** Waiver authority for the contents of this document is AF/A3O. IAW AFI 11202, Vol 2, the MAJCOM/A3 is the waiver authority for individual aircrew

requirements on a case-by-case basis, but the MAJCOM/A3 may not approve blanket or group (two or more aircrew) waivers. Waiver requests should be submitted through MAJCOM Standardization and Evaluation channels to the A3. As applicable, MAJCOM/A3 will forward requests to AF/A3O, with an info copy to AF/A3O-AI.

1.4.3.1. Tier requirements refer to waiver authority based on level of risk.

1.4.3.1.1. “Tier 0” (T-0) requirements are reserved for requirements that non-compliance is determined and waived by respective non-Air Force authority.

1.4.3.1.2. “Tier 1” (T-1) requirements are reserved for requirements that non-compliance may put airman, mission, or program strongly at risk, and may only be waived by the MAJCOM/CC or delegate with concurrence of publication approver. When multiple MAJCOMs are affected, then T-1 is appropriate.

1.4.3.1.3. “Tier 2” (T-2) requirements are reserved for requirements that potentially put the mission at risk or potentially degrade the mission or program, and may only be waived by the MAJCOM/CC or delegate.

1.4.3.1.4. “Tier 3” (T-3) requirements are reserved for requirements that non-compliance has a remote risk of mission failure, and may be waived by the Wing/CC but no lower than the OG/CC.

1.5. Supplements. Supplements or Local Procedures will not duplicate or be less restrictive than the provisions of this instruction or any other publication without prior authorization from HQ AFSOC/A3V. Forward supplements to HQ AFSOC/A3V for approval before publication. File supplements according to Air Force Instruction (AFI) 33-360, *Publications and Forms Management*. (T2)

1.5.1. Units may supplement this instruction. The purpose of the unit supplement is to document the process by which units implement the requirements of this instruction. Post the unit supplement behind the basic instruction and Major Command (MAJCOM) supplement.

1.5.2. Local Procedures Coordination Process. Units will send one copy of **Chapter 10** (Local Procedures) supplements to HQ AFSOC/A3V for validation. (T-2)

1.6. Development of New Equipment and Procedures. Units are encouraged to suggest new equipment, methods, tactics and procedures for training and worldwide operational missions. Coordinate these requirements through the MAJCOM.

1.7. Format. In order to adequately provide guidance for C-146A operations without restricting the overall mission, general operating procedures and administrative guidelines are presented in **Chapters 1** through **9**; local operating procedures or guidelines in **Chapter 10**; and operational forms and reports in **Chapter 11**. There is no substitute for sound judgment and the absence of guidance in this AFI does not constitute approval for operations that fall outside the realm of safe and sound decisions.

Chapter 2

COMMAND AND CONTROL (C2)

2.1. General. The AFSOC Command and Control (C2) system is based on the principles of centralized monitoring and decentralized command, control and execution. The result is a C2 mechanism which keeps the AFSOC/CC informed of the current status of AFSOC forces while enabling the Wing/CC, Group/CC, or Squadron/CC to exercise control over the day-to-day operations.

2.2. Operational Control (OPCON). AFSOC is designated as the controlling agency for United States Special Operations Command (USSOCOM)-assigned Air Force Special Operations Forces (AFSOF) aircraft, while the Theater Special Operations Commands (TSOC) have OPCON of theater-based assets. **Exception:** In practice, responsibility for planning and executing AFSOC missions is routinely delegated to the Wing/CC or Group/CC. The Wing/CC or Group/CC, in turn, exercises control of non-close-hold missions through command post supporting wing or group. In the event that assigned forces undergo a change in operation control (CHOP), responsibility for mission monitoring passes from the wing or group C2 facility to the gaining command. Changeover will be accomplished IAW the pertinent operational plan (OPLAN), operational order (OPORD), deployment order (DEPORD), or execution order (EXORD). **Note:** For certain close-hold activities, security considerations may compel the Wing or Group Commander to shift mission monitoring responsibilities from the command post to another wing, group, or theater agency. The Wing/CC or Group/CC will ensure procedures are established for the responsible agency to monitor mission progress and advise the HQ AFSOC/A3 or AFSOF/CC as appropriate. (T-2)

2.3. Mission Monitoring. AFSOC Wing (or equivalent) command posts are the focal point for all assigned, non-CHOPed, not-close-hold aircraft flight and mission monitoring. Command post accomplishes this via the Air Mobility Command (AMC) C2 system, direct reporting from aircrew and communication from other command posts. Key components of the AMC C2 system are the Airlift Implementation and Monitoring System (AIMS), the Global Decision Support System (GDSS2), and various AMC C2 facilities at theater and other wing locations. Wings input AIMS data for all upcoming missions except local missions not scheduled to land outside the local flying area or close-hold missions that cannot be accommodated by classified J-coded AIMS setups. When aircraft are deployed in support of operations and exercises, the Command Post obtains additional information from Situation Reports (SITREP) and Deployed Status Reports (DSR). The wing command posts keep the AFSOC Operations Center informed on all non-CHOPed aircraft moving to, from, or between off-station locations. The following mission monitoring procedures primarily apply to missions that are not close-hold in nature and have not been CHOPed to another C2 agency: (T-2)

2.3.1. Wing (or equivalent) command posts directly monitor their aircraft movements in the continental United States (CONUS) and outside the CONUS (OCONUS) until a CHOP occurs. (T-2)

2.3.2. Information on aircraft movement (CONUS or OCONUS) comes to the wing command posts via GDSS and telephone/fax/e-mail notification directly from the aircrews or

via the Special Operations Command and Control Squadron or Element (SOCCS or SOCCE). (T-2)

2.3.3. Unclassified Missions at Bases with an AMC C2 Facility. The Mission Commander (MC) or PIC should ensure the following information is relayed to the AMC C2 facility at least 30 minutes prior to landing: call sign(s), mission number(s), estimated time of arrival (ETA), maintenance status, and additional service requirements. After landing, the MC or PIC will contact the C2 facility with ground handling requirements and departure information. In addition, CONUS-based crews operating within the CONUS must keep their home station command posts apprised of all actual takeoff and landing times, projected takeoff times, and other related information. (T-2)

2.3.4. Unclassified Missions at Bases without an AMC C2 Facility. The MC or PIC will report, as soon as possible, actual takeoff and landing times, maintenance status, projected takeoff times, and other pertinent data to their wing command post. Methods of communicating this information include aircraft mission communication systems, high frequency (HF) phone patch, Defense Switched Network (DSN), e-mail, fax, and commercial telephone. CONUS-based crews operating within the CONUS must also ensure that their home station command posts receive real-time reports on aircraft movements. (T-2)

2.3.5. J-coded AIMS Missions. When operating on J-coded missions, the MC or PIC will pass movement reports to the appropriate C2 facility. The MC or PIC will make arrangements with the theater command post/reporting agency or Air Force Special Operations Command (AFSOC) Command Center to pass pertinent flight information via secure voice or data communications. If necessary, call on an unclassified line and report. For example, "Loaded and ready to go. Estimated Time of Departure (ETD) is as fragged." **Note:** For missions requiring special handling above and beyond basic J-code procedures, C2 procedures will be outlined in the tasking directive. (T-2)

2.3.6. Close-hold or Sensitive Missions. These missions may operate without AIMS setups. Reference the note preceding this paragraph. (T-2)

2.4. Mission Commander (MC). A MC will be designated when more than one aircraft or crew are deployed away from home station for training, exercises, or other operations. Designated MCs must have attended the Special Operations Air Warfare Center (SOAWC) Mission Commanders Course. Waiver authority for this requirement is OG/CC. The MC will be a mission ready aircraft commander (AC) and should not be used as a primary crew member. In cases where it is necessary for the MC to fly, ensure a senior unit member or designated representative is delegated to fulfill MC duties. The MC's responsibilities include, but are not limited to: (T-2)

2.4.1. Briefing crews on local operating procedures.

2.4.2. Coordinating with Air Traffic Control (ATC), Combat Control Teams (CCT), Special Tactics Squadron (STS) teams, range control, users, and other agencies that may have an impact on the mission.

2.4.3. Ensuring Landing Zones (LZ) have current surveys (when necessary).

2.4.4. Ensuring personnel have ample and adequate billeting, eating, and transportation arrangements.

2.4.5. Ensuring maintenance personnel know of aircraft and fuel requirements.

2.4.6. Submitting timely reports on aircraft movements and mission SITREP.

2.5. Pilot in Command Responsibility and Authority. AF Form 4327A, *Crew Flight Authorization (FA)*, designates a PIC for all flights. The PIC is:

2.5.1. In command of all persons aboard the aircraft.

2.5.2. Responsible for the welfare of their crew, Mission Essential Personnel (MEP), passengers, and the safe accomplishment of the mission.

2.5.3. Vested with the authority necessary to manage the crew and accomplish the mission.

2.5.4. The final mission authority and will make decisions not specifically assigned to a higher authority.

2.5.5. The final authority for accepting a waiver affecting the crew or mission.

2.5.6. Charged with keeping the applicable commander informed of mission progress and difficulties.

2.5.7. Responsible for the timely reporting of aircraft movements in the absence of a MC.

2.6. Mission Clearance Decision. The final decision to delay a mission may be made either by the agency with OPCON or the PIC when, in the opinion of either, conditions are not safe to start or continue a mission. Final responsibility for the safe conduct of the mission rests with the PIC. If the PIC refuses a mission, it will not depart until the conditions have been corrected or improved so that the mission can operate safely. Another PIC and aircrew will not be alerted to take the same mission under the same conditions. (T-2)

2.6.1. Diverting or rerouting a mission should be authorized by the commander with OPCON, except in an emergency or when required by en route or terminal weather conditions or facilities. In the event of an emergency or weather-related divert or reroute, the MC or PIC must notify the controlling authority as soon as possible. (T-2)

2.6.2. The controlling agency directing the diversion or rerouting is responsible for ensuring destination requirements or facilities are adequate for the aircraft and aircrew. (T-2)

2.6.3. The PIC will notify the controlling agency of any aircraft or aircrew limitations that may preclude diverting or rerouting the mission. (T-2)

2.6.4. When directing an aircraft to an alternate airfield, the controlling agency will ensure the PIC is provided existing and forecasted weather for the alternate. If the planned alternate is unsuitable upon arrival at destination, the controlling agency will advise the PIC of other suitable alternates. (T-2)

2.7. Civilian Law Enforcement Support. It is the policy of the Department of Defense (DOD) to cooperate with civilian law enforcement officials to the maximum extent practicable. AFI 10-801, *Defense Support of Civil Authorities (DCSA)*, incorporates the appropriate directive and provides uniform policies and procedures service members must follow when supporting federal, state, and local civilian law enforcement agencies. It establishes specific limitations and restrictions on the use of Air Force personnel, equipment, facilities, and services by civilian law enforcement organizations. Report all requests for assistance and coordinate all requests from civilian law enforcement authorities through the appropriate C2 channels. (T-0)

Chapter 3

AIRCREW COMPLEMENT AND MANAGEMENT

3.1. Aircrew Qualification. Each person assigned as a primary crew member must be qualified or in training for qualification in that crew position and mission. (T-2)

3.1.1. Basic proficiency crew members may perform primary crew duties on any non-mission sortie and on mission sorties (including unilateral training, joint training, and exercises) when receiving mission qualification training or evaluations under the supervision of a qualified instructor or flight examiner in their respective crew position. (T-2)

3.1.2. Noncurrent (NC) or Unqualified (UNQ) crew members may perform crew duties only under the supervision of a qualified instructor or flight examiner in their respective crew position. (T-2)

3.1.2.1. Refer to AFI 11-401, *Aviation Management*, for guidance on transporting passengers with NC or UNQ crew members.

3.2. Crew Complement. The minimum crew complement for flight operations is two pilots and one loadmaster. The squadron commander may add crew members to enhance mission accomplishment or maximize training. During cases when no loadmaster is available, the minimum crew complement is two pilots. The squadron commander or deployed mission commander is the approval authority for such operations. This option should only be authorized in exceptional circumstances and not for matter of convenience. (T-2)

3.2.1. A minimum of one additional pilot or one loadmaster is required when carrying more than 10 passengers. (T-2)

3.2.2. A loadmaster is not required for engine ground runs.

3.2.3. Additional Crew Members. Additional aircrew members assigned in addition to the normal aircrew complement required for a mission, will travel in MEP status. See AFI 11-401, AFSOC Sup 1. The PIC or designated representative will brief all MEPs on emergency procedures, egress, and appropriate FCIF items. MEPs will possess a security clearance appropriate to the mission being performed. (T-2)

3.2.4. Other US Military Service Members Performing Duties on Air Force Aircraft. Reference AFI 11-401, AFSOC Sup 1.

3.3. Interfly. Interfly is the exchange and/or substitution of aircrew members and/or aircraft between MAJCOMs to accomplish flying missions. Normally, interfly should be limited to specific operations/tests, exercises, or special circumstances.

3.3.1. HQ AFSOC/A4RX maintains current Memorandum of Agreements (MOA) between AFSOC, Air Force Reserve Command (AFRC), Air Force Material Command (AFMC), Air Education and Training Command (AETC), and Air Combat Command (ACC) for interfly using AFSOC-assigned aircraft. Unless specified in the MOA:

3.3.1.1. Aircraft ownership will not be transferred. (T-2)

3.3.1.2. The operational squadron will prepare and sign AFSOC/AFRC/AETC flight orders. (T-2)

3.3.1.3. As a minimum, aircrews will be qualified in the C-146A, as well as systems or configuration required to fly the aircraft and/or mission. If noncurrent, comply with **Paragraph 3.1.2.**

3.3.1.4. Crew member(s) will follow operational procedures defined in this instruction and Aircraft Operating Handbook (AOH) procedures. (T-2)

3.3.1.5. Flight and ground mishap reporting responsibility will be handled IAW AFI 91-204, *Safety Investigations and Reports*. (T-2)

3.3.2. Waiver Authority.

3.3.2.1. With a valid MOA. OG/CC or COMAFSOF is the approval authority for interfly on AFSOC aircraft under their control. (T-2)

3.3.2.2. No MOA/Expired MOA. HQ AFSOC/A3 is the approval authority for interfly on AFSOC aircraft. (T-2)

3.3.2.3. Contingency operations must be approved by both HQ AFSOC/A3 and respective MAJCOM/A3. (T-2)

3.4. Intrafly.

Intrafly is the exchange and/or substitution of aircrew members from separate units under the same MAJCOM to accomplish flying missions.

3.4.1. The OG/CC or COMAFSOF is the approval authority for intrafly of AFSOC crew members on Nonstandard Aviation (NSAv) aircraft under OG/CC or COMAFSOF control. (T-2)

3.4.2. In all cases, the aircrew must be current and qualified in the aircraft, systems, configuration, and mission being flown. If noncurrent, comply with **Paragraphs 3.1.2.**

3.5. Flight Duty Periods (FDP).

Reference AFI 11-202, Vol 3, AFSOC Sup 1, *General Flight Rules*. FDP does not include post-mission administrative duties.

3.5.1. Aircraft operated by the C-146A units are considered transport aircraft and will comply with FDP criteria outlined in AFI 11-202, Vol 3, AFSOC Sup 1. (T-2)

3.5.1.1. The basic FDP is 16 hours providing no training events or maintenance ground runs are accomplished after 12 hours. Fully qualified and current crew members must occupy duty stations past 12 hours. (T-2)

3.6. Crew Rest.

Reference AFI 11-202, Vol 3, AFSOC Sup 1.

3.7. Alert Duty.

Reference AFI 11-202, Vol 3, AFSOC Sup 1, for alert FDP guidance.

3.7.1. Give alert aircrews a general briefing at the beginning of each alert period. Update the briefing every 24 hours to include weather, local Notice To Airman (NOTAM), latest FCIF information, special instructions, and any other appropriate items.

3.7.2. Alert aircrews will prepare a weight and balance for the alert aircraft and compute takeoff and landing data (TOLD) using the existing weather conditions for the alerted time of takeoff. (T-2)

3.7.3. When an alert crew change occurs and the same aircraft remains on alert, the oncoming alert crew will complete a face-to-face turnover and review the aircraft forms for the aircraft. If unable to accomplish a face-to-face turnover, accomplish a preflight. (T-2)

Chapter 4

AIRCRAFT OPERATING GUIDELINES

4.1. Objectives. A fully mission capable aircraft is the ultimate objective of the logistics effort. The final responsibility regarding equipment required for a mission rests with the PIC. If one crew accepts an aircraft to operate a mission or mission segment without an item or system, this acceptance does not commit that crew, or a different crew, to accept subsequent operations with the same item or system inoperative. When the PIC considers an item essential, designate the component Mission Essential (ME) on the aircraft maintenance forms, and the item will be repaired or replaced prior to departure. (T-2)

4.1.1. The PIC is the approval authority for operations with degraded equipment within the guidelines of the aircraft Minimum Equipment List (MEL) and Minimum Equipment Subsystems List (MESL). Operating outside of the aircraft MEL or MESL guidelines requires Group/CC or COMAFSOF approval. For contingency operations when communication issues prevent any possibility of a waiver request, the PIC is the approval authority for operating outside the aircraft MEL guidelines but must notify the chain of command of the situation as soon as conditions permit. (T-2)

4.1.2. One Time Flights. An aircraft may be released for a one time flight with a condition that might be hazardous for continued use provided the aircraft is airworthy for one flight to another station. A one-time flight is defined as a required flight to a final destination including required fuel stops. (T-2)

4.1.2.1. The squadron commander, chief of maintenance, MC, or deployed maintenance representative must authorize this release. (T-2)

4.1.2.2. The OG/CC or COMAFSOF must authorize the flight after maintenance has released the aircraft for flight operations. (T-2)

4.1.2.3. The maintenance release, OG/CC or COMAFSOF approval, and the PIC's concurrence are all required before the aircraft can be flown to the specified repair destination. (T-2)

4.2. Policy. This chapter provides guidance on how to operate with degraded equipment. If the PIC elects to operate with degraded equipment or aircraft systems, the PIC will coordinate mission requirements (i.e., revised departure times, fuel requirements, maintenance requirements, etc.) prior to flight with the mission control agency to ensure the decision does not adversely impact follow-on missions. Reference the aircraft MEL and MESL for aircraft systems and equipment required for operations. (T-2)

4.2.1. Pressurization and/or Air-conditioning Systems. Pressurization and/or the air-conditioning system should be operational if patients are carried. If a system fails at an en route stop, the mission may continue (coordinate with the senior medical crew member when patients are carried) to a destination with repair capability. Required en route stops with inoperative pressurization and/or air-conditioning systems are authorized. The PIC will brief passengers and patients on the possibility of personal discomfort. (T-2)

4.2.2. Retractable Landing Gear System. If a landing gear malfunction is encountered, only a full stop landing will be made. The discrepancy will be corrected prior to the next flight.

(T-2) **Exception:** If repair capability does not exist and a positive determination is made that further flight can be accomplished with the gear down and locked, the aircraft may be flown to a destination where repair capability exists provided the gear is not moved from the down and locked position. Required en route stops are authorized. (T-2)

4.2.3. Radar. The weather mode radar must be operative for flights into areas of known or forecast thunderstorms. (T-2)

Chapter 5

AIRCRAFT OPERATING PROCEDURES

5.1. Checklists. Accomplish all checklists with strict discipline. A checklist is not complete until all items have been accomplished. (T-2)

5.1.1. The Pilot Flying (PF) will initiate all checklists unless the Aircraft Operating Handbook (AOH) or this instruction establishes an alternate procedure. (T-2)

5.1.2. Each aircrew member will use the HQ AFSOC/A3V approved checklist for the appropriate aircraft and duty position when conducting ground or flight operations. Self-prepared or “cheat sheet” checklists are not authorized for ground or flight usage. (T-2)

5.1.3. Aircrews may use approved checklists modified with notes, amplifying procedures, and limits provided the checklist and notes are current. Currency of notes is the crew member’s responsibility.

5.1.4. Before Landing Checklists. Aircrew will complete the Before Landing Checklist no lower than 200 feet (ft) Above Ground Level (AGL). Aircraft will be established on final, wings level, with a controlled rate of descent in a position to execute a safe landing no lower than 100 ft AGL. (T-2)

5.2. Duty Stations. All crew members will be at their duty stations during all takeoffs, departures, approaches, and landings. During other phases of flight, crew members may leave their duty stations to meet physiological needs and perform normal crew duties. Only one pilot may be absent from their duty station at a time. Notify the AC prior to departing assigned primary duty station. (T-2)

5.2.1. The loadmaster’s primary duty station is the jump seat for critical phases of flight. The AC may assign an alternate duty station for abnormal situations. (T-2)

5.3. Seat Belts.

5.3.1. Crew members occupying a primary crew position will have seat belts fastened at all times. (T-2) **Exception:** Evaluators, instructors, or crew members performing required duties not on the flight deck will have a designated seat and required restraint available. (T-2)

5.3.2. Provide a safety belt for all occupants over 2 years of age. Occupants will fasten seat belts securely for all takeoffs and landings or as directed by the PIC, turbulence is encountered or anticipated, or in areas of forecast clear air turbulence. (T-2)

5.3.3. Floor loading is authorized to support dedicated special operations forces team members or liter medical patients during contingencies, exercises, or training. The loadmaster will ensure a tie-down strap is rigged for each row of personnel to provide forward restraint and body stability. (T-2)

5.3.3.1. Alternate restraints will be secured prior to takeoff and will not be removed until after landing unless required to meet physiological needs or perform mission related duties. (T-2)

5.3.3.2. Accomplish alternate passenger restraints by one of the following methods in descending order of preference: (T-2)

5.3.3.2.1. Seatbelts or snap links attached to tie-down rings on the cabin floor.

5.3.3.2.2. Five thousand (5,000) pound tie-down straps.

5.4. Aircraft Control. A qualified pilot will be at a set of flight controls during all phases of flight. (T2)

5.4.1. Pilot in-flight seat swaps may be accomplished above 1,000 ft AGL. (T-2)

5.5. Takeoff and Landing Guidance.

5.5.1. The PIC will occupy either the left or the right seat during all takeoffs and landings. (T-2)

5.5.2. The PIC will land the aircraft during: (T-2)

5.5.2.1. Aircraft emergencies unless conditions prevent compliance.

5.5.2.2. Missions with patients on board the aircraft.

5.5.2.3. Missions with Distinguished Visitor (DV) 4 or higher on board the aircraft.

5.5.2.4. Missions operating in areas of hostile activity unless conditions prevent compliance.

5.5.3. A qualified Mission Pilot (MP), Instructor Pilot (IP), or Evaluator Pilot (EP) may takeoff or land from either seat. Any combination of mission events is permissible (i.e., short field, semi-prepared and/or NVGs). (T-2)

5.5.4. First Pilots (FPs) are authorized to conduct takeoffs and landings from either seat on prepared surfaces. Short field procedures and/or semi-prepared surfaces are not permitted. FPs may use NVGs for takeoff and landing at airfields with Airfield Marking Pattern (AMP)-1 lighting. (T-2)

5.5.5. FPs will make all takeoffs and landings when the right seat is occupied by a Copilot (CP) and the crosswind component exceeds 15 knots. (T-2)

5.5.6. A qualified CP may takeoff or land from the right seat: (T-2)

5.5.6.1. With an MP, IP, or EP as PIC.

5.5.6.2. When an FP is PIC and crosswinds are 15 knots or less.

5.5.6.3. On prepared or semi-prepared surfaces (only prepared surface when an FP is PIC).

5.5.6.4. Using NVGs (only AMP-1 lighting when an FP is PIC).

5.5.6.5. CPs are only permitted to conduct Pilot Not Flying (PNF) duties for short field operations. (T2)

5.6. Aircraft Taxi Obstruction Clearance Criteria. In addition to the requirements of AFI 11-218, *Aircraft Operations and Movement on the Ground*, comply with the following:

5.6.1. Without wing walkers, avoid taxi obstructions by at least 25 ft. With wing walkers, avoid taxi obstructions by at least 10 ft. (T-2) **Exception:** When operating at a civilian airport and taxiing on a Fixed Based Operator (FBO) ramp, the PIC may taxi the aircraft within 25 ft of obstacles or other aircraft without wing walkers when using marked taxi

routes. The PIC will comply with marshaller instructions. Taxi routes must be used by similar types of aircraft for which the routes were designed and in specifically designed parking spots. Support equipment shall be located in appropriately designated areas. In austere locations where wing walkers and taxi lines do not exist and obstacle distances are questionable, the PIC must use good crew coordination and sound judgment to effectively mitigate risk to the aircraft. (T-2)

5.6.2. Do not taxi aircraft closer than 10 ft to any obstacle. (T-2)

5.6.3. When taxi clearance is doubtful, use a wing walker. If wing walkers are unavailable or if provided and doubt still exists as to proper clearance, deplane a crew member to maintain obstruction clearance. (T-2)

5.7. Takeoff and Landing Runway Criteria.

5.7.1. PICs will comply with the Airfield Suitability and Restrictions Report (ASRR) requirements prior to operating at airfields classified as “special PIC airports” or “certification airfields” by the ASRR. Reference AFI 11-202, Vol 3, AFSOC Sup 1, for information on ASRR waiver authority. (T-2)

5.7.2. Runway Requirements. Use normal takeoff and landing procedures whenever practical. For mission accomplishment, if approach end overruns are available and stressed or authorized for normal operations, the overruns may be used to increase the runway available for takeoff. Base aircraft performance requirements on actual or predicted environmental conditions (e.g., pressure altitude, temperature, aircraft weight, runway surface conditions, etc.). (T-2)

5.7.2.1. Taxiway width. Minimum width for all operations is 22 ft. (T-2)

5.7.2.2. Runway width. Minimum width for normal operations is 35 ft. (T-2)

5.7.2.2.1. Minimum runway width for narrow field operations is 22 ft. **Note:** Approval authority for operations with less than 35 ft runway width is the squadron commander or Joint Special Operations Air Component (JSOAC) commander for deployed operations. **Note:** Operations on runways with widths less than the minimum turn radius of 47 ft 6 inches require an additional level of risk management. Runways narrower than the minimum turn radius will require the crew to accomplish star turns or other procedures to reposition the aircraft for departure. Crews must also consider the distance from the nose landing gear to the main landing gear (24 ft 4 inches) when attempting turnarounds. (T2)

5.7.3. Normal Operations:

5.7.3.1. Takeoff and Landing. Minimum runway length is the greater of Takeoff Distance or Accelerate-Stop Distance. (T-2)

5.7.3.2. Touch-and-go operations. A touch-and-go will not be continued unless sufficient touch-and-go distance remains. A minimum of 6,000 ft of runway is required for Flaps 20 touch-and-go landings. A minimum of 7,000 ft of runway is required for zero-flap or Flaps 32 touch-and-go landings. (T-2)

5.7.3.2.1. Touch-and-go distance is defined as Flaps 12 landing distance plus 1,000 ft prior to takeoff power application. (T-2)

5.7.3.3. Stop-and-go operations. Available runway distance remaining after stopping the aircraft will be at least Takeoff Distance or Accelerate-Stop Distance, whichever is greater. If the runway remaining is less, taxi the aircraft to achieve the required distance. (T-2)

5.7.4. Short field operations:

5.7.4.1. Takeoff. Minimum runway length for a short field takeoff is the greater distance of Takeoff Ground Roll + 10% of Takeoff Ground Roll, Accelerate-Stop Distance at KVS 1.13-V1/VR 0.85, or 2,000 ft. (T-2)

5.7.4.2. Landing. Minimum runway length for a short field landing is the greater distance of landing ground roll + 10% of landing ground roll or 2,000 ft. (T-2)
CAUTION: Landing at an airfield based on landing ground roll may not provide the aircrew with the required takeoff ground roll without off-loading pax, cargo, or fuel.

5.7.4.3. Short Field Stop-and-Go Operations. Short field stop-and-go operations are not authorized. If a landing is conducted and sufficient distance does not remain to conduct a normal takeoff, taxi the aircraft back until sufficient distance allows using normal takeoff procedures. (T-2)

5.7.5. Semi-prepared surface operations:

5.7.5.1. Semi-prepared surfaces are defined in AFI 13-217, AFSOC Sup 1, *Drop Zone and Landing Zone Procedures*.

5.7.5.2. Pilots will only perform stop-and-go or full stop landings on semi-prepared surfaces. Reference AOH for information on aircraft performance on semi-prepared surfaces. (T-2)

5.8. Landing Gear and Flap Operation.

5.8.1. The copilot will operate the landing gear. Actuate the landing gear upon command of the PF. Prior to actuation of the landing gear, the PNF will acknowledge the PF command by repeating the command. (T-2)

5.8.2. The flaps will be actuated by the PNF, upon command of the PF. (T-2)

5.8.3. Unless an emergency situation dictates otherwise, zero-flap takeoffs are prohibited. (T-2)

5.9. Aircraft Navigation Systems.

5.9.1. Global Positioning System (GPS) approaches. The C-146A is approved to use GPS for navigation during en route operations and terminal procedures to include area navigation (RNAV) arrivals and departures and RNAV instrument approaches. Navigational Aids (NAVAIDS) will be used for backup when available. Refer to AFI 11-202, Vol 3 AFSOC Sup 1, and AFMAN 11-217, Vol 1, *Instrument Flight Procedures*, and C-146A AOH guidance for procedures and limitations. (T-2)

5.10. Aircraft Lighting.

5.10.1. Operate aircraft lighting IAW AFI 11-202, Vol 3, AFSOC Sup 1, and AFI 11-218, except when in compliance with contingency requirements or guidance. (T-2)

5.10.2. During NVG training operations, the aircrew may turn off anticollision and strobe lights when on final approach for landing within two nautical miles (nm) of touchdown zone, on the landing surface, and immediately after takeoff. For all other areas of NVG operations, aircrew will comply with AFI 11-202, Vol 3, AFSOC Sup 1. (T-2)

5.11. Advisory Calls During Instrument Flight Rules (IFR) Operations. The following are mandatory altitude calls made by the PNF: (T-2)

5.11.1. Non-precision Approaches.

5.11.1.1. "100 above" when 100 ft above minimum descent altitude (MDA) or step down altitude.

5.11.1.2. "Minimums" at MDA.

5.11.1.3. "Runway in sight" when the runway environment is in sight and the aircraft is in a position to execute a safe landing.

5.11.1.4. "Go-around" at or below MDA or at the missed approach point and the runway environment is not in sight, when the aircraft is not in a position to execute a safe landing, when directed by ATC facility, or conditions on the runway will not allow a safe landing (e.g., personnel, equipment, or aircraft on the runway).

5.11.2. Precision Approaches.

5.11.2.1. "100 above" when 100 ft above final approach altitude, glideslope intercept altitude, or decision height (DH).

5.11.2.2. "Continue" at DH with approach light system visible and the aircraft is in a position to execute a safe landing. Do not continue the approach below 100 ft if usable runway visual cues are not present.

5.11.2.3. "Land" at DH with the runway environment in sight and the aircraft is in a position to execute a safe landing.

5.11.2.4. "Go-around" at or below DH and the runway environment is not in sight or if the aircraft is not in a position to execute a safe landing, when directed by ATC facility, or conditions on the runway will not allow a safe landing (e.g., personnel, equipment, or aircraft on the runway).

5.11.3. Climb/Descent.

5.11.3.1. "1,000 ft above/below" assigned altitude or flight level.

5.11.4. Altimeter settings. Both pilots will state and set the altimeter setting as issued by ATC, weather reporting facilities (Automatic Terminal Information Service (ATIS), Automated Weather Observation System (AWOS), Automated Surface Observing System (ASOS), etc.), or when passing a Transition Level or Altitude (e.g., Flight Level 180).

5.11.5. Deviations:

5.11.5.1. Any crew member will immediately advise the PF when observing unannounced heading deviations greater than 10 degrees, airspeed deviations of 10 knots, altitude deviations of 100 ft during approach or 200 ft while en route, or potential terrain or obstruction problems and no attempt is being made by the PF to correct the deviation.

5.11.5.2. Any aircrew member will announce deviations from prescribed procedures for the approach being flown to the PF when no attempt is being made to correct the deviation.

5.12. Communications Guidance. The PIC will determine communication requirements during mission planning. Ensure all mission frequencies, cryptological data, mission radio configuration, and mission radio monitoring responsibilities are outlined during the preflight briefing. (T-2)

5.13. Wake Turbulence Avoidance.

5.13.1. Refer to AFMAN 11-217, Vol 3, *Supplemental Flight Information*, FLIP General Planning, and the Airman's Information Manual (AIM) for additional wake turbulence information and wake turbulence avoidance techniques.

5.14. Landing Zone (LZ) Operations and Criteria.

5.14.1. For C-146A specific LZ dimensions, criteria and suitability requirements refer to AFI 13-217 AFSOC Sup 1.

5.14.2. All LZs must be surveyed and approved in accordance with AFI 13-217, AFSOC Sup 1. (T-2)

5.14.3. The LZ program is a squadron tactics function. The squadron tactics office must ensure surveys are conducted and updated IAW AFI 13-217, AFSOC Sup 1, and the procedures below. It is the responsibility of all aircrew and/or ground personnel to notify the point of contact (POC) for the squadron LZ survey program, in a timely manner, of any changes or discrepancies on existing surveys. (T-2)

5.14.4. The overt or covert markings and signals to be used during LZ operations will be established during mission planning and included in the aircrew briefing. Refer to AFI 13-217, AFSOC Sup 1, for LZ marking descriptions. (T-2)

5.14.5. Navigating to Landing Zones. Some missions may require operations into unmarked and uncontrolled LZs. Mission effectiveness depends upon detailed intelligence, extensive aircrew planning and study, precision en route navigation and time control, accurate and timely LZ recognition, and positive aircrew coordination.

5.14.6. Landing Zone Arrival Procedures (LZAP). LZAPs may be used for arrivals to conventional airfields and landing zones, in both day and night environments, and either for overt or covert NVG operations. LZAPs will be flown at airfields without approved instrument approach procedures. Comply with ATC restrictions and host nation requirements, as appropriate. (T-2) **WARNING:** LZAPs are a situational awareness tool and do not guarantee obstacle or terrain clearance.

5.14.6.1. Weather minimums. All LZAPs must be flown in Visual Meteorological Conditions (VMC). (T-2)

5.14.6.2. LZAP construction. Use the most current sources for topological, obstacle, and airfield information.

5.14.6.3. En Route Altitude. Plan an en route altitude and en route descent point that allows the aircraft to be in a position to cross the Initial Approach Fix (IAF) at the planned glide slope intercept altitude. Carefully consider all terrain and obstacles along

the planned en route descent path that are not considered as part of the LZAP terrain analysis.

5.14.6.4. IAF. The IAF is the transition point between the en route phase and the approach phase. Plan to cross the IAF at the glide slope intercept altitude. The IAF will be no less than 3 miles from the Final Approach Fix (FAF).

5.14.6.5. Final Approach Course. Plan a straight-in final approach course. If terrain, obstacles, or airspace prevent a straight-in final approach course, crews may use an offset course up to 30 degrees either side of the final approach course centerline.

5.14.6.6. FAF. The FAF is defined as the glideslope intercept point. The distance is based on the distance from the Touch Down Zone (TDZ). The before landing checklist will be completed prior to the FAF.

5.14.6.7. Glide Slope. Final approach glide slope will be between 2.5 and 5 degrees. (T-2)

5.14.6.8. Required Calls.

5.14.6.8.1. Pilot Not Flying: In addition to normal calls, the PNF will announce the following calls on LZAPs: "IAF" at the IAF, "FAF" at the FAF, each 1.0 mile increment inside the FAF, "100 above" when 100 ft above MDA, "Minimums" at MDA, "Runway in sight" when runway is in sight and aircraft is in a position to execute a safe landing, "Go-around" at or below MDA or at the Missed Approach Point (MAP) and runway environment is not in sight or the aircraft is not in a position to execute a safe landing. (T-2)

5.14.6.8.2. Loadmaster. In addition to normal calls, the loadmaster will announce the preplanned glide slope MSL altitude at each 1.0 mile increment from the FAF until the MDA immediately after the PNF makes the distance remaining to TDZ call. (T-2)

5.14.6.8.3. Pilot Flying: In addition to normal calls, the PF will reference the altimeter and acknowledge the preplanned glide slope MSL altitude call made by the Loadmaster. If within 100' of preplanned glide slope altitude, announce "On glide slope". If outside of 100' of preplanned altitude, announce the deviation by stating "Below/Above glide slope" and take corrective action. (T-2)

5.14.6.9. Touchdown Zone (TDZ). The TDZ is defined as the coordinates at the front of the touchdown zone.

5.14.6.10. MDA. To compute an MDA, add 500 ft to the Touchdown Zone Elevation (TDZE). Do not descend below the MDA unless the LZ is in sight and in a safe position to land. If the LZ is not in sight, level-off and proceed to the MAP. If the runway becomes visible while proceeding to the MAP and in a safe position to land, execute a landing. (T-2)

5.14.6.11. MAP. The MAP is at the zero distance to go point on the mileage remaining to the TDZ. Upon reaching the MAP, execute the missed approach procedures. (T-2)

5.14.6.12. Missed Approach Course. The missed approach course will be designed to track a direction that provides the most appropriate terrain, obstacle, or airspace

avoidance. Plan to return to the published 25 mile Minimum Safe Altitude (MSA) altitude and return to IAF. (T-2)

5.14.6.13. Obstacle Analysis.

5.14.6.13.1. Significant obstacles. Significant obstacles are those within 300 ft of the desired glide slope. Crews will brief the location of all significant obstacles located within the horizontal template. (T-2)

5.14.6.13.2. Critical Obstacles. An obstacle is considered critical if it falls above the reference line for the planned glide slope or its extension along the depicted baseline. (T-2)

5.14.6.13.3. For each critical obstacle identified, preplan and brief a specific means of avoidance to be used during the approach. The following examples may be used separately or in combination: (T-2)

5.14.6.13.3.1. Use a steeper glide slope. Glide slopes exceeding 4.0 degrees should be carefully considered due to the high rate of descent required.

5.14.6.13.3.2. Move the touchdown point further down the runway.

5.14.6.13.3.3. Increase MDA.

5.14.6.13.3.4. Establish intermediate step-down altitude above the MDA at which the aircraft will level off until a positive separation from the obstacle is assured.

5.15. Terminal Area Landing Procedures.

5.15.1. Initial Approach. When pre-mission intelligence requirements are not satisfied for LZs, additional maneuvering and reconnaissance may be required to accomplish a safe landing. Perform reconnaissance maneuvering with approach flaps. **Note:** If the PF determines that the actual touchdown point is going to be different than what was briefed, the PF must verbalize the updated touchdown point.

5.15.2. Tailwind takeoff and landing operations at short, austere LZs are discouraged and, if necessary for mission requirements, limited to the absolute minimum required.

5.15.3. Do not land if the LZ is not properly identified or an abort signal is given. (T-2)

5.15.4. Brief the ground party and subsequent aircrews on any unexpected hazards encountered during takeoff or landing.

5.15.5. If landing clearance or go-around signals are to be given via radio, two-way communications with the reception committee must be established prior to landing. If communications out procedures are used, presence of a pre-briefed signal constitutes clearance to land. A signal must be pre-briefed to direct a go-around. Radio clearance to land is the primary method when more than one aircraft is using the LZ. (T-2)

5.16. Stabilized Approach. Unstable approaches are primary contributors to numerous military and civilian mishaps. Stabilized approaches are essential for the safe operation of aircraft and are mandatory. The following criteria define specific parameters that mitigate risk during this critical phase of flight. This philosophy requires aircrew to take immediate corrective actions to stabilize the approach when outside designated parameters.

5.16.1. The following criteria apply to all approaches:

5.16.1.1. At 1000 ft AGL:

5.16.1.1.1. Aircraft is in approach configuration. Circling configuration is acceptable for circling approaches. **Note:** In those cases where VFR traffic pattern is 1,000 ft AGL (as opposed to 1,500 ft), the aircraft will be configured for landing prior to commencing the base turn to final.

5.16.1.1.2. Airspeed is appropriate for the configuration and conditions.

5.16.1.1.3. Sink rate is no greater than 1000 fpm. **Note:** Under certain conditions (WX, Threats, Terrain, etc.) some IAPs and Tactical Approaches may require greater than a 1000 fpm descent rate.

5.16.1.1.3.1. Non-Precision Approaches. Pilots should calculate a constant descent gradient profile from the FAF altitude to the VDP (IAW AFMAN 11-217, Vol 1, *Instrument Flight Procedures*). This is considered the safest profile and should be used to the max extent possible. During a go-around, ensure descent below the MDA does not occur.

5.16.1.1.4. All briefings and checklists are complete unless contrary to TO guidance.

5.16.1.1.5. Aircraft is on the correct track.

5.16.1.1.6. Aircraft in the correct bank angle to maintain proper approach track for instrument, circling, or visual/tactical approach.

5.16.1.1.7. Power set to maintain the descent profile at approach speed.

5.16.1.1.8. If these criteria are not met by 1,000 ft AGL, the pilot monitoring (PM) will announce the deviation and the PF will take immediate corrective action. PM states "1,000 xxxx," where "xxxx" equates to a concise description of the unstable characteristic(s) which clearly relay to the PF what actions are required to return the aircraft to a stable platform. Examples: "1,000, fast," or "1,000, half dot low". If criteria are met, PM will simply state "1,000."

5.16.1.2. From 500 AGL to the runway, if these parameters are exceeded the PM will announce "Go-Around" and the PF will execute a go-around/missed approach. If criteria for stable approach are met, the PM will state "500."

5.16.1.2.1. Parameters are the same as those at 1,000 ft AGL.

5.16.1.2.2. If unstable at 500 ft crews should perform a go-around.

5.16.1.3. From 300 ft AGL to the runway, if these parameters are exceeded the PM will announce "Go-Around" and the PF will execute a go-around/missed approach. If criteria for stable approach are met, the PM will state "300 ft, Stable."

5.16.1.3.1. Momentary minor corrections or deviations are acceptable and defined as:

5.16.1.3.1.1. Airspeed: +10/-5 KIAS from target.

5.16.1.3.1.2. Bank Angle: $\pm 15^\circ$.

5.16.1.3.1.3. Rate of Descent: ± 300 fpm from target.

5.17. NVG Operations.

5.17.1. Aircrews may land at an LZ marked with any AMP configuration provided the pilots define identifiable touchdown and go-around points (e.g., visual point/location, timing past intended landing point, etc.) prior to landing. (T-2)

5.17.2. AMP-3 markings will consist of a box marked by four lights at the corners of the touchdown zone and a strobe will mark the end of the usable LZ surface or distance. The box width of the markings should be the width of the LZ up to 60 ft maximum. The box length should be 300 ft for both short field and non-short field procedures. (T-2)

5.17.3. AMP-4 landings will have a clearly defined intended point of landing. (T-2)

5.17.4. A STS controller (or qualified equivalent) or an active control tower is required to conduct NVG landings at unlit or covertly marked landing zones or airfields. (T-2)

5.17.4.1. Squadron qualified landing zone safety officers (LZSO) may accomplish these duties IAW AFI 13-217. (T-2)

5.18. Aircraft Rescue and Firefighting (ARFF) Requirements. ARFF requirements at non-USAF active flying bases are as follows:

5.18.1. Up to eight takeoffs and landings within four consecutive days may be accomplished at a LZ or airfield without ARFF equipment or local established aircraft incident procedures. Each flying squadron will track airfield usage to ensure this requirement is met. OG/CC or COMAFSOF is waiver authority for more frequent flight operations at these locations. (T-2)

5.18.2. Refer to AFPAM 32-2004, *Aircraft Fire Protection for Exercises and Contingency Response Operations*, to calculate ARFF requirements. Non-USAF ARFF vehicles may be used if the agent and pumping capabilities are equivalent.

5.18.3. Waivers to the ARFF requirements will be considered on a case-by-case basis. Required information for waiver request can be found in AFPAM 32-2004.

5.18.4. The squadron commander may authorize operations at training LZs and local airfields that do not possess local ARFF services. (T-2)

5.19. Reverse Taxi. **CAUTION:** Using brakes to stop the aircraft while reverse taxiing may result in aircraft empennage contacting the ground.

5.19.1. The pilot performing reverse taxi operations will coordinate reverse taxi directions and signals to be used with the marshaller (if applicable) and loadmaster prior to commencing reverse taxi operations. (T-2)

5.19.1.1. The loadmaster or another crew member will be in a position to direct reverse taxi, report any hazards and provide the pilot with timely interphone instructions on turns, distance remaining, condition of the maneuvering area, and stopping point. (T-2)

WARNING: Ensure the aircraft is depressurized prior to opening the crew door. (T-2)

5.19.2. During night reverse taxi operations, the pilot will ensure visibility in the taxi area is sufficient to conduct safe taxi operations. (T-2)

5.19.3. Stop no less than 25 ft from an obstruction even if using a wing walker. (T-2)

5.19.4. Secure all cargo and ensure passengers are seated prior to reverse taxi operations. (T-2)

5.20. Aircraft Maximum Operating Weight Policy. Waiver authority for operations above the maximum ramp, takeoff, or landing weights listed in the aircraft AOH is OG/CC or COMAFSOF. Waivers will be forwarded to HQ AFSOC/A3V for tracking purposes. (T-2)

5.21. Operations Over Arresting Cables. Do not roll over arresting cables at high speed during taxi, takeoff, or landing to preclude damage to bottom of aircraft. (T-2) **CAUTION:** Do not taxi over raised arresting cables when the gravel guard is installed on the nosewheel. Raised runway barriers are elevated above the runway surface using rubber "doughnuts".(T-2)

5.22. Aircraft Recovery from Unprepared Surfaces. Aircrews should not attempt to recover an aircraft after inadvertent entry onto surfaces that are not suitable for taxi. Ground crews using appropriate equipment will normally recover the aircraft. Aircrews may recover the aircraft at austere locations if, after thorough inspection, the PIC is sure there is no aircraft damage and the surface will support the aircraft. (T-2)

5.23. Inter. Normally, initiate takeoffs from the beginning of the runway. The decision to make intersection takeoffs rests solely with the aircraft commander. Base TOLD computations on the runway remaining at the point the takeoff is initiated. (T-2)

5.24. Engines Running Onload or Offload (ERO).

5.24.1. The ERO procedures in this paragraph may be used for any mix of personnel or cargo. Comply with all AOH limitations and checklists. (T-2)

5.24.2. General Procedures:

5.24.2.1. The PIC will brief crew members on the intended ERO operation, emphasizing specific crew member duties. (T-2)

5.24.2.2. Complete passenger and cargo manifests, and weight and balance for the subsequent sortie if passengers or cargo are unloaded or downloaded. (T-2)

5.24.2.3. After the aircraft is slowed to taxi speed, the crew may remove all tie-downs except one forward and one aft restraint. Remove remaining restraints only after the aircraft is stopped. (T-2)

5.24.2.4. The loadmaster will direct all unloading or offloading operations using pre-briefed signals. Other qualified crew members may assist the operation; however, the PIC and loadmaster retains overall responsibility for the operation. (T-2)

5.24.2.5. Passengers will be escorted by the loadmaster when enplaning or deplaning. (T-2)

Chapter 6

GENERAL OPERATING PROCEDURES

Section 6A—Pre-mission

6.1. Aircrew Uniforms.

6.1.1. On all missions, wear the aircrew uniform and other flying clothing/equipment in accordance with AFI 11-301, Vol 1, AFSOC Sup 1, *Aircrew Flight Equipment (AFE) Program* and AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*, or as directed for mission requirements. (T-2)

6.1.2. Aircrews will wear conservatively styled civilian clothing when required for mission or operational requirements (e.g., Foreign Clearance Guide [FCG]) and approved by the squadron CC or Director of Operations (DO). Civilian clothing worn will consist of casual slacks or cargo pants, collared shirts, shoes or hiking boots. Denim jeans, T-shirts, and clothing made from non-cotton based flammable or synthetic materials are not authorized. This approval meets the waiver requirement of AFI 11-301, Vol 1. (T-2)

6.1.3. All aircrew members will have flight gloves readily available during all flights. (T-2)

6.2. Personal and Professional Equipment.

6.2.1. Passports. Carry passports on OCONUS missions. (T-2)

6.2.2. Shot Record. Aircrew members will ensure they meet immunization requirements for the mission area of operations. (T-2)

6.2.3. Identification Tags. Identification tags should be worn around the neck or carried in a uniform pocket. If identification tags are not carried, member will carry a military issued identification card. (T-2)

6.2.4. Foreign Object Damage (FOD) Hazards. Aircrew will not wear wigs, hairpieces, rings, scarves, ornaments, pins, hair clips or fasteners, or earrings in the aircraft or on the flight line. Crew members will remove rings and scarves before performing aircrew duties. (T-2) **Exception:** Plain elastic hair fasteners or plastic barrettes are allowed, providing they do not interfere with the wearing of headsets or helmets, or the donning of oxygen equipment. All devices will be accounted for before and after flight. (T-2)

6.2.5. Restricted Area Badges. Carry the restricted area badge on all missions (except designated operational missions) and display badge only in designated restricted areas. (T-2)

6.2.6. Carry a headset and operable flashlight on all flights. (T-2)

6.2.7. NVGs. All crew members will carry and preflight their own NVGs prior to flight for missions using NVGs. The PIC or designated crew member will preflight a spare set of NVGs. Pilots will wear NVGs with similar acuity and gain. (T-2)

6.2.7.1. The PIC or designated crew member should preflight a night tactical bag containing a minimum of:

6.2.7.1.1. Spare set of NVGs and headset.

- 6.2.7.1.2. Chemical illumination devices (i.e., chem sticks).
- 6.2.7.1.3. Spare batteries compatible with batteries used in-flight.
- 6.2.7.1.4. NVG compatible tape or plastic film.

6.3. Survival and Protective Equipment. All personnel will wear survival and protective equipment provided during hostile environment operations in accordance with theater directives. (T-2)

6.4. Aircrew Publication Requirements.

6.4.1. Aircrews will maintain the unclassified publications specified in the Flight Crew Information Summary (FCIS). This requirement may be satisfied if fully posted publications are kept on board the aircraft. Publications will include all applicable AFSOC, Wing, Group, or Squadron Supplements (imbedded in parent regulation/instruction or stand-alone). (T-2)

6.4.2. Electronic posting and maintenance of aircrew publications is approved. HQ AFSOC Stan/Eval channels will develop procedures and standards for posting crew members' publications electronically. All applicable supplements, changes, and other official modifications of publications will be incorporated in the electronic version of publications. (T-2)

6.4.3. Electronic Flight Bag (EFB). Follow AFSOC Guidance on EFB operations. Each crew member is required to carry an EFB with current publications. Crews will ensure paper backup copies of required in-flight publications are carried unless approved for paperless cockpit transition. Charging EFB devices via power from the aircraft 115 VAC outlets is permitted. (T-2)

6.5. Aircraft Mission Kits. Units will maintain one mission kit per aircraft. The kit will contain, but is not limited to the items listed below. Documents and forms will be maintained in hard copy format or electronically if printer capability is available on the aircraft. (T-2)

- 6.5.1. MEL and MESL.
- 6.5.2. AF IMT Form 15, *USAF Invoice*.
- 6.5.3. AF IMT Form 70, *Pilot's Flight Plan and Flight Log*, or equivalent.
- 6.5.4. AF IMT Form 457, *USAF Hazard Report*.
- 6.5.5. AF IMT Form 651, *Hazardous Air Traffic Report (HATR)*.
- 6.5.6. AF IMT Form 711 (series), *USAF Mishap Report*.
- 6.5.7. AFSOC IMT Form 97, *Incident Report*.
- 6.5.8. DD Form 175, *Military Flight Plan*.
- 6.5.9. DD Form 1385, *Cargo Manifest*.
- 6.5.10. DD Form 1801, *International Flight Plan*.
- 6.5.11. DD Form 1854, *US Customs Accompanied Baggage Declaration* or CF6059B, *Customs Declaration*.
- 6.5.12. DD Form 2131, *Passenger Manifest*.

- 6.5.13. DESC -I-31, *Purchase of Aviation Fuels and Services at Commercial Locations*.
- 6.5.14. SF IMT Form 44, *Purchase Order – Invoice Voucher*.
- 6.5.15. For all non-local missions: Laptop equipped with Portable Flight Planning Software (PFPS) or other approved mission planning software.
- 6.5.16. Foreign Nations Customs Forms (when applicable).
- 6.5.17. Applicable home station forms.

6.6. Route Navigation Kits.

6.6.1. The PIC or a designated representative will build a route navigation kit at the home station, which will remain with the aircraft until its return. Kits should contain sufficient quantities of materials to cover the complete round trip from the issuing station and return, plus appropriate materials to cover the theater of operation. If approved for paperless cockpit operations, required en route navigation publications (excluding required navigation charts) may be contained on an EFB. (T-2)

6.6.2. The following items and applicable change updates will be included in en route navigation kits: (T-2)

6.6.2.1. DOD FLIP IFR Supplement (one each).

6.6.2.2. DOD FLIP Visual Flight Rules (VFR) Supplement (one each).

6.6.2.3. DOD FLIP Flight Information Handbook (FIH) (one each).

6.6.2.4. DOD FLIP IFR En Route Charts (one set for en route segments and area of operation).

6.6.2.5. DOD or Federal Aviation Administration (FAA)/National Aeronautical Charting Office (NACO) FLIP Instrument Approach Procedures (IAP) or commercially approved IAP documents. Two sets are required for areas of operation, including en route stops and divers. Reference AFI 11-202, Vol 3, AFSOC Sup 1, for information on guidance for using Host Nation or commercial IAP products.

6.6.2.6. Maps and Charts (including VFR sectional aeronautical charts as required).

6.6.2.7. FAA/NACO Airport Facility Directories (one for each applicable region as required).

6.6.2.8. Standard Instrument Departure (SID) and Standard Terminal Arrival Route (STAR) procedures.

6.6.3. Applicable information in FLIP Planning guides (e.g., GP, AP/1, AP/2, AP/3, AP/4) may also be included in en route navigation kits.

6.7. Airfield Review. Accomplish airfield review IAW AFI 11-202, Vol 3, AFSOC Sup 1, and AFI 13217, AFSOC Sup 1. (T-2)

6.8. Intelligence Briefing. Before departing on missions outside the United States, crews will receive an intelligence briefing that will emphasize terrorist, enemy, and friendly political and military development in the area in which they will be operating. In theater, aircrews should receive intelligence updates on initial arrival at a forward operating location, or en route stop,

and thereafter when significant developments occur. Report information of possible intelligence value to the local intelligence officers at the completion of each mission. (T-2)

6.9. Classified Material. Obtain and safeguard classified materials required for the mission. The communications security (COMSEC) material required depends on the theater of operation and user.

6.10. International Procedures. The PIC will review the Foreign Clearance Guide (FCG) and brief crew members on applicable items before flights outside the CONUS. Comply with all country over flight and landing diplomatic clearances, as well as customs, immigration, agriculture, immunization, and quarantine requirements. The unit dispatching the mission is responsible for coordinating diplomatic clearance approval and other special clearances when required. (T-2)

Section 6B—Predeparture

6.11. Briefing Requirements. Briefings should be clear, concise, and designed to provide mission essential information. The PIC will ensure their crews receive a briefing, prior to each mission, covering all specific areas to be accomplished. (T-2)

6.11.1. Aircraft commanders will brief the planned profile to the flight authorization authenticating official and submit documentation the day prior to the flight. On missions that are scheduled to span several days, the entire profile will be briefed prior to departure. Any changes to the briefed profile after departure, including (but not limited to) weather changes that require filing of an alternate not already planned and briefed or maintenance issues that degrade the performance of the aircraft, will be discussed with the authenticating official prior to subsequent departure. This discussion will ensure the risks associated with the modified profile are fully understood by the aircraft commander and operations supervisors as well as to establish a dialogue regarding appropriate levels of risk mitigation. (T-2)

6.11.2. Passenger Briefings. Prior to each flight, the loadmaster will ensure that all passengers are briefed. When more than one flight is accomplished by the same crew and passengers, subsequent briefings are not required, except to brief route information, mission changes, etc. When additional passengers are added, brief them completely. (T-2)

6.12. Flight Crew Information File (FCIF). Review Volume I, Part A, of the FCIF before all missions.

6.12.1. Crew members will use Patriot Excalibur (PEX) to review and sign FCIFs and Read Files. When unable to complete electronic FCIF review procedures, initialing and numbering the latest FCIF by an individual's name on the flight authorization order certifies the FCIF currency review of all items are complete. (T-2)

6.12.2. PIC will ensure any crew members joining a mission en route receive an FCIF update. Instructor pilots who fly with senior officers are responsible for briefing FCIF items. (T-2)

6.12.3. Crew members not assigned or attached to the squadron will certify FCIF review by entering the last FCIF number and their initials next to their name on the file copy of the flight authorization orders. (T-2)

6.13. Flight Planning Systems. The primary flight/mission planning system is PFPS. Upgraded or new versions of flight planning systems will be released and authorized by the HQ AFSOC/A3 for use after applicable testing has been completed. (T-2)

6.14. Coordinates. Aircrew will confirm a common datum with their mission users during the mission planning process. Failure to plan navigation to LZ or mission areas using a common datum may result in errors of up to several miles. Computer based mission planning systems and aircraft navigational systems generally use WGS84 as reference datum. Attempt to use WGS84 whenever possible to minimize confusion. (T-2)

6.15. Flight Logs. Prepare a flight log (i.e., AF IMT Form 70, *Pilot's Flight Plan and Flight Log*) for each off-station mission and include the following as a minimum: turn points, headings, distances, estimated time en route (ETE), MSA, and fuel computations. A flight log is not required if the above information is included on a flight map. (T-2)

6.16. Weather Planning. Comply with AFI 11-202V3, AFSOC Sup 1, weather minimums unless local or theater specific weather minimums are more restrictive. (T-2)

6.17. Lunar Illumination. WARNING: NVGs worn during flights with illumination less than 10% can lead to induced motion illusions and spatial disorientation.

6.17.1. Any mission planned when the lunar illumination is forecast to be less than 10% during the mission will require an additional level of Operational Risk Management (ORM), as determined by unit supplement. (T-2)

6.18. Fuel Planning. Use criteria outlined in AFI 11-202, Vol 3, AFSOC Sup 1. Aircrews will conduct appropriate in-flight planning to ensure proper fuel management. Reference [Attachment 2](#) for Equal Time Point (ETP) discussion and calculations. (T-2)

6.18.1. Pilots will plan fuel consumption rates in order to optimize training or mission accomplishment. Crews will attempt to conserve fuel to the maximum extent possible. (T-2)

6.18.2. Plan to arrive in the terminal area at destination or alternate (if required) with: (T-2)

6.18.2.1. 600 lbs of fuel remaining during day VFR or night VFR conditions when using NVGs. (T2)

6.18.2.2. 900 lbs of fuel remaining during night VFR conditions when not using NVGs or IFR conditions. (T-2)

6.18.2.3. When two alternates are required, flight plan to the most distant alternate. (T-2)

6.18.3. Holding Exception for Remote or Island Destinations. IAW AFI 11-202, Vol 3, AFSOC Sup 1, aircrew are authorized to hold for one hour in lieu of an alternate for remote or island destinations. (T-2)

6.18.4. Land with no less than 450 pounds of fuel on board. (T-2)

6.18.5. Plan to consume 300 lbs of fuel for each instrument approach to be flown. (T-2)

6.18.6. Minimum Fuel is 450 pounds and Emergency Fuel is 250 pounds. Pilots will declare "Minimum Fuel" or "Emergency Fuel" to ATC when fuel quantity reaches the respective value and the aircraft has not been given an approach or landing clearance. (T-2)

6.18.7. Plan an additional 15 minutes of fuel per hour at a maximum cruise power fuel consumption rate for that portion of the flight where structural icing or thunderstorms requiring off-course maneuvering are forecast or reported. (T-2)

6.18.8. For missions with extended periods over large bodies of water or desolate land areas, if no suitable alternate exists between the ETP and final destination, pilots will include an additional 10% of en route fuel to their total fuel requirements for contingencies (ex., flight at aircraft depressurization altitude). Waiver authority for this requirement is the OG/CC or COMAFSOF. (T-2)

6.19. VFR En Route Planning.

6.19.1. Map Selection. VFR Sectional or Tactical Pilotage Chart (TPC) 1:500,000 are required for en route VFR navigation legs and objective area planning, such as an LZ arrival. The VFR sectional is consulted because it is updated more frequently than the Joint Operations Graphic (JOG). It also provides accurate information on controlled airspace, major towers, airports, beacons, and power lines as well as current magnetic variation. Maps with a scale of 1:250,000 or greater are highly desired for objective areas. (T-2)

6.19.1.1. Pilots will ensure all maps used for flight have the most current hazards posted. Aircrew will also ensure appropriate civil airspace is annotated along their route of flight. (T-2)

6.19.2. Emergency Safe Altitude (ESA). An ESA is an altitude that will provide positive terrain clearance should Instrument Meteorological Conditions (IMC) be encountered. Use 1,000 ft (2,000 ft in mountainous terrain) above the highest obstacle or terrain feature within 10 nm of the intended flight path/objective area. An ESA will be computed for all objective areas. **Note:** Mountainous areas are defined as having a 500 foot change in surface altitude over ½ nm. (T-2)

6.19.3. MSA. An MSA is an altitude that provides VMC terrain clearance and limited threat avoidance during degraded aircrew situational awareness or periods of task saturation. Use 500 ft above the highest obstacle or terrain feature within 5 nm of the intended flight path/objective area. An MSA will be computed for all objective areas. (T-2) **WARNING:** Failure to maintain an accurate altimeter setting during flight may cause lower than planned terrain clearances or impact with terrain when using the computed ESA/MSA.

6.19.4. During VFR en route navigation training (outside of the terminal area), the minimum altitude is 1000' AGL above the highest obstacle within 2 nm of the desired course. During operational and contingency missions, lower altitudes are permitted with the approval of the mission commander. (T-2)

6.19.5. GPS/FMS (Flight Management System) Procedures. Aircrews may use the GPS/FMS for situational awareness and as a backup to visual navigation.

6.20. Objective Area Planning.

6.20.1. A thorough review of the LZ survey and accompanying photographs, computer drawings, or imagery will be accomplished by all crew members during the aircrew brief. The PIC is responsible for ensuring that any crew member unable to attend the brief either reviews the landing zone survey or is briefed on the hazards associated with the LZ. Review the following items: (T-2)

6.20.1.1. For an LZ, brief the runway orientation, the run-in orientation, the LZ coordinates, dimensions, significant obstacles, expected surface conditions, weight bearing capacity, LZ markings, planned point of touchdown, go-around point, escape route in the event of a balked landing, and performance data for landing and for takeoff. (T-2)

6.20.1.2. High quality imagery of the landing zone. This facilitates final approach planning and LZ recognition.

6.20.1.3. Moisture at the LZ or any other meteorological elements that might affect landing surface weight bearing capability.

6.21. Aircraft Performance.

6.21.1. Weight and Balance. A copy of each mission's weight and balance will be maintained at the squadron or operations center (as applicable) and carried with the aircrew. For en route stops, weight and balance need not be recomputed provided the zero fuel weight has not changed. Weight and balance computations will be briefed during the crew or mission brief or during flight, as required. (T-2)

6.21.2. TOLD. Compute TOLD using the AOH performance data charts or approved tabulated data. Compute TOLD for initial takeoff prior to engine start. Recompute data for pressure altitude changes of 500 ft, temperature changes of 5° Celsius (C), or gross weight changes of 500 lbs. (T-2)

6.21.2.1. Options for calculating TOLD are in priority order:

6.21.2.2. Option 1: Use 1.2 Variable V2 (KVS) and a V1/VR of 1.0.

6.21.2.3. Option 2: If the runway length is limiting and climb gradient is not a factor, use 1.13 KVS and V1/VR of 1.0.

6.21.2.4. Option 3: Use TOLD calculations to find an optimized KVS and V1/VR combination. **Note:** All qualified MPs and MCs may perform takeoffs and landings using Options 1-3.

6.21.2.5. Option 4: Use short field performance planning data. **Note:** Only short field certified MPs may perform takeoffs or landings when using Option 4.

6.21.2.6. If none of these options offer suitable TOLD values for the given field length and conditions, consider reducing gross weight or delaying the mission until environmental conditions allow for use of one of the above 4 options.

6.21.3. Computed Engine Out Service Ceiling. The computed engine out service ceiling will not be below the published Minimum IFR Altitude (MIA) on IFR flights or planned VFR cruising altitude for VFR flights unless the following requirements are met: (T-2)

6.21.3.1. The forecast weather for each critical route segment, as defined in **Paragraph 6.21.3**, is day VMC allowing a VFR descent to a safe VFR altitude during an emergency, and; crews have planned emergency routes to emergency airfields on VFR charts (1:500,000 or larger) for the critical route segments, or;

6.21.3.2. Single engine drift down performance from the planned cruise altitude provides the opportunity to remain above the MIA until reaching a sector with a lower MIA and then safely continue to an emergency airfield.

Section 6C—Preflight

6.22. Aircraft Maintenance Forms.

6.22.1. Review the aircraft maintenance forms before applying power to the aircraft or operating aircraft systems. (T-2)

6.22.2. Ensure that the USAF fuel card and/or other authorized method of payment are on board the aircraft. The Air Card is used to pay for services such as aviation fuel, aircraft oil and fluids, minor maintenance items, landing fees, aircraft de-icing, follow-me trucks and other airfield related services at commercial FBO locations. The PIC is responsible for ensuring the receipt is correct and all appropriate signatures are obtained before departing the military base, airport, or FBO. The PIC is responsible for turning in all service receipts to maintenance upon return to home station. If services does not generate a receipt, the PIC will ensure the location and services performed are noted and relayed to maintenance. (T-2)

6.22.3. The aircraft preflight or exceptional release (if applicable) must be signed before flight. A maintenance officer, maintenance superintendent, or authorized contract civilian will sign the preflight or exceptional release. (T-2)

6.22.4. Ensure that aircraft locking keys are in aircraft maintenance forms prior to takeoff. (T-2)

6.22.5. Ensure the aircraft protective covers are on board aircraft prior to flight. (T-2)

6.23. Aircraft Inspections and Ground Operations.

6.23.1. The aircraft commander will review the forms and conduct an exterior inspection. The AC will focus on the overall condition of the plane and the loadmaster will complete an exterior inspection according to the AOH. (T-2)

6.23.2. The copilot will complete the Cockpit Preparation Checklist in accordance with the AOH expanded checklist. (T-2)

6.23.3. The loadmaster will check the mission circuit breakers, Blue Force Tracker (BFT), PRC-117G (load radio mission plan, load crypto, conduct Line of Sight [LOS] and Satellite Communications [SATCOM] checks on Portable Radio Communicator [PRC] #1 and #2), Audio Control Panel (ACP) #5 and #6, and check the laptop mission computer GPS moving map is operational. Coordinate with the copilot for loading the crypto fills into the Airborne Radio Communicator (ARC)-231. (T-2)

6.23.4. Auxiliary Power Unit (APU) Operations. Anytime the APU is running, at least one crew member or maintainer will remain within the immediate vicinity of the APU fire suppression control panel in order to adequately hear the APU fire bell. The immediate vicinity is considered anywhere inside the cockpit/cabin or a radius of 15 ft from the external APU control panel. If it is necessary to leave the immediate vicinity of the APU control panels, shutdown the APU prior to leaving. (T-2)

6.23.4.1. Crew members will wear hearing protection when operating aft of the 3-9 line while the APU is operating. The loadmaster will also offer hearing protection to passengers required to assist in loading/unloading baggage while the APU is running. The loadmaster will ensure adequate hearing protection is stored onboard the aircraft. (T-2)

6.23.5. During higher headquarters directed exercises or contingency operations, any qualified aircrew may accomplish the preflight inspection and brief the oncoming aircrew.

6.24. Required Equipment. The final responsibility regarding equipment required for a mission rests with the PIC. If one PIC accepts an aircraft to operate a mission or mission segment without an item or system, this acceptance does not commit that PIC, or a different PIC, to subsequent operations with the same item or system inoperative. If the PIC elects to operate with degraded equipment or aircraft systems, coordinate mission requirements prior to flight with the mission control agency to ensure the decision does not adversely impact follow-on missions. (T-2)

6.25. Required Forms. Aircraft should contain an appropriate and current airworthiness certificate, effective registration certificate, appropriate Weight and Balance information, and applicable maintenance forms.

6.26. Alert Aircraft Procedures. To accept an aircraft on alert, complete a normal aircraft preflight. After 72 hours on alert, allow maintenance personnel access to inspect the aircraft. (T-2)

6.26.1. Parking. Park the alert aircraft in a designated alert parking area to expedite taxi and takeoff.

6.26.2. Climatic Protective Facilities. During periods of extreme cold, hot, or severe weather, every effort should be made to shelter alert aircraft and essential equipment in a hangar to ensure operational readiness in the event of a mission.

6.26.3. Flying Alert Aircraft. The alert aircraft may be flown for purposes other than actual alert missions provided the following conditions are complied with: (T-2)

6.26.3.1. Ensure sufficient fuel remains on board to meet mission requirements. If not, upon flight completion, refuel the aircraft to required alert fuel quantity.

6.26.3.2. Communication contact is maintained with the primary controlling agencies.

6.26.3.3. A qualified (for the alert mission) aircrew is on board.

6.26.3.4. Controlling agencies are notified any time the alert aircraft departs the local area.

6.26.4. Once accepted for alert, the alert aircrew will make an entry in the aircraft maintenance forms, stating, "Aircraft accepted on alert at ____." (zulu time and date). No maintenance may be performed on it without prior approval of the alert crew PIC and notification of the squadron Director of Ops (DO) or deployed MC. To ensure integrity of the aircrew preflight, an alert crew member must be present whenever maintenance is performed, or at the completion of the maintenance, the aircrew is required to check the area in which maintenance was performed. The check should be performed as soon as practical after the maintenance and must be performed prior to flight.

6.27. Aircraft Servicing.

6.27.1. Aircraft Refueling. Aircrew qualified in refueling operations may perform refueling duties at austere locations or at stations without maintenance support. Aircrews are allowed to add engine oil, if needed, at austere locations or at stations without maintenance support. (T-2)

6.27.2. Aircrew/Maintenance Engine Runs. Mixed aircrew/maintenance engine runs should not normally be accomplished. If conducted, the AOH or maintenance inspection procedures will be used. (T-2)

6.28. Life Support and Oxygen Requirements.

6.28.1. Upon reporting to the aircraft, the PIC or designated representative will ensure sufficient quantities of appropriate serviceable life support, survival equipment, and protective clothing for the entire mission are aboard the aircraft. Verify Air Force Technical Order (AFTO) IMT Form 46, *Prepositioned Life Support Equipment*, prior to departing home station. (T-2)

6.28.2. When route of flight is beyond power off gliding distance from land, aircrew members will have Life Preserver Units sized and immediately available at the aircrew member's duty station while flying over water. Passengers will have life preservers available and will be worn at the discretion of the PIC. Life rafts will be available to accommodate all personnel on board. Life rafts and life preservers are not required when overwater flight occurs during instrument approach procedures under ATC control, immediately after takeoff, and before landing. (T-2)

6.28.3. Anti-exposure suits for the aircrew will be readily available during any preplanned overwater flights which are beyond power off gliding distance from land and the water temperature is 60° Fahrenheit (F)/(16°C) or less. (T-2)

6.28.4. Oxygen requirements are outlined in AFI 11-202, Vol 3, AFSOC Sup 1.

6.28.5. Eye Protection. Eye protection will be used during refueling operations. (T-2)

6.29. Cockpit Congestion and Loose Objects.

6.29.1. The flight deck area will be kept as uncluttered and orderly as possible for all flight and ground operations. Specifically: (T-2)

6.29.1.1. During engine start and ground operations, no items (checklist, charts, etc.) should be placed in a position that would prevent inspection of aircraft and engine instruments or switches.

6.29.1.2. During flight, no items (checklists, charts, etc.) will be placed in a position that covers or hides any flight or engine instruments from the view of the PF.

6.29.1.3. Publication kits, flight kits, and personal kits will not be placed where they may interfere with the flight controls or egress.

6.29.1.4. Drinking containers with liquids are not permitted in the cockpit unless covered with a lid.

6.30. Preparation for Night Vision Goggles (NVG) Operations. Cockpit and cabin lights may be taped or covered with NVG compatible film if they will interfere with NVG operations

and cannot be otherwise disabled without removing aircraft power (e.g., pulling circuit breakers). Landing gear indicators will not be covered with tape. (T-2)

Section 6D—Departure

6.31. Departure Briefing. Before initial takeoff, the PF will brief the aircrew on the procedures to be followed during takeoff and departure, performance data, and intentions in case of an emergency. (T-2)

6.32. On Time Takeoffs and Landings. Mission departures are considered “on time” if the aircraft is airborne no later than +30/-15, landing is +/-15 hours after the scheduled takeoff time. Early departures are authorized provided local, down range and aircrew impact are evaluated and no adverse effect will result. (T-3)

Section 6E—En Route

6.33. En Route Briefings. Conduct in-flight briefings, as necessary, to cover any unusual circumstances and when flight safety or other conditions require the nonstandard accomplishment of any maneuver. (T-2)

6.34. Flight Progress. Use all available navigation aids to maintain course centerline and a positive fix on the aircraft’s position. When conducting navigation using a GPS for primary navigation or autopilot flight coupling, the pilots will also use appropriate navigation aids (e.g., VHF Omnidirectional Range [VOR]) to maintain a positive fix on the aircraft’s position and back up the GPS. (T-2)

6.35. In-Flight Crew Duties and Responsibilities.

6.35.1. Change of Aircraft Control. The change of aircraft or flight controls will be accomplished using a positive change of controls. Use the statement “Pilot/Copilot has controls” to transfer control. The other pilot will acknowledge the change of aircraft control by stating “Pilot/Copilot has controls”. (T-2)

6.35.1.1. During approach briefings the PF should transfer aircraft control and the radios to the PNF. Transferring the autopilot is not necessary.

6.35.2. Interphone Communications. Limit interphone conversations to those essential for crew coordination. Do not discuss classified information on interphone during radio transmissions.

6.35.2.1. All crew members will monitor aircraft interphone prior to engine start. Clearance is required from the PIC prior to an aircrew member removing headset. The aircrew member will advise the PIC when they have resumed monitoring the aircraft interphone. (T-2)

6.35.3. Radio Communication. A thorough pre-brief should be accomplished by the aircraft commander to specify who is in control of which radio during all phases of flight. Aircrew will be specific when transferring control of radios in flight. (T-2)

6.35.3.1. Record and read back all ATC clearances except when ATC instructions require immediate execution and read back would interfere with the timely performance of aircrew duties.

6.36. Communication Instructions for Reporting Vital Intelligence Sightings (CIRVIS) and Other Reports. Refer to AFI 10-206, *Operational Reporting*. Report all vital intelligence sightings from aircraft as indicated in FLIP Planning or Flight Information Handbook (FIH). (T-2)

6.37. In-Flight Emergency (IFE) Procedures. Report deviations from directives that occur as a result of an emergency IAW AFI 11-202, Vol 3, AFSOC Sup 1, and this instruction.

6.37.1. During an emergency situation, the pilot flying will continue to fly the aircraft. The AC may take control of the aircraft if the situation dictates. The aircraft commander will assign specific duties based on the situation. The AC will conduct the emergency landing unless conditions do not permit. (T2)

6.37.2. The PNF should be the primary crew member responsible for executing emergency checklist procedures. The PF maintains aircraft control and calls for appropriate critical action procedures and checklists. The PF will confirm any switches or levers prior to being actuated and will reference the Emergency/Abnormal Quick Reference Handbook (QRH) for guidance during the emergency. The PNF or Loadmaster (LM) should review the AOH as appropriate and as time permits. (T-2)

6.37.3. The loadmaster will backup the PNF with the QRH checklist reading/actions as directed, visual confirmation of the memory items, and scanning of engines/passenger compartment. During engine shutdown procedures, the aircraft commander may direct the loadmaster to perform a visual scan of the engine and inform the pilots when/if the engine shuts down correctly (i.e., "Number 1 scans clear, standing tall"). Any abnormalities to include fluid leaks, smoke, fire, or damage will be verbalized to the pilots. (T-2)

6.37.4. During any emergency procedure, the aircraft commander may direct the loadmaster to reposition from the jump seat to another location on the aircraft to perform duties.

6.37.4.1. The loadmaster is the primary crew member responsible for fighting fires in the cabin/cargo area. (T-2)

6.37.4.2. If necessary, the loadmaster will assist passengers in an emergency situation (i.e., oxygen masks, evacuation, etc.) and maintain general order in the cabin. (T-2)

6.37.5. Notification of Controlling Agencies. As soon as practical after completing the aircraft emergency procedure checklist or critical action procedures, furnish the controlling agency a description and extent of the difficulty, assistance required, intentions, and any further pertinent information.

6.37.6. Turnaround Procedures. When a turnaround is necessary, use procedures in FLIP. Maintain VFR, reverse course, climb or descend to a VFR altitude or flight level and request ATC clearance. If unable to maintain VFR, obtain an ATC clearance before reversing course. A turnaround under IFR conditions, without ATC approval, will be made only after a thorough evaluation of the seriousness of the emergency, general traffic density, and known traffic operating in the immediate area. Normally, a climb or descent (with minimum change in altitude) to a VFR altitude or flight level will result in minimum exposure to other aircraft, if a turnaround is required.

6.37.7. Need for Medical Assistance. When a person on board the aircraft requires medical care, the PIC will inform the station of next intended landing in sufficient time so medical

personnel may meet the aircraft. The request will include the individual's gender, approximate age, and the nature of the medical problem. (T-2)

Section 6F—Arrival

6.38. Arrival. Before starting each approach, the PF will brief the procedures to be followed during approach, landing, and go-around/missed approach, as necessary. Performance data will be reviewed. This briefing should be accomplished prior to the completion of the Before Landing Checklist. (T-2)

6.39. Go-Around Calls. If any crew member calls "Go-around", the PF will immediately apply power to establish a climb that clears all obstacles. Minimum altitude for overflight of aircraft, equipment, or personnel on the runway is 500 ft AGL. (T-2)

Section 6G—After Landing

6.40. Maintenance and Bed Down. Complete aircraft maintenance forms after each flight.

6.40.1. Immediately after arrival, the PIC and any aircrew member documenting a maintenance discrepancy will debrief maintenance personnel on the status of the aircraft and subsystems. The PIC or aircrew member noting a discrepancy will document the problem in the aircraft maintenance forms. At locations where there is no maintenance personnel and maintenance support is required, the PIC will ensure a thorough debrief is provided to the MC or command post prior to entering crew rest. (T-2)

6.40.2. The loadmaster will perform servicing when maintenance personnel are not available. When executing refueling operations, loadmasters will wear gloves and eye protection. (T-2)

6.40.3. All crew members will ensure the aircraft is clean, stow publications, deposit trash in proper receptacles, and account for all personal equipment before leaving the aircraft. (T-2)

6.40.4. The AC and the LM will complete a post mission walk around to determine any changes from their pre-mission inspection (i.e., bird strike). (T-2)

6.41. Classified Material. Turn in classified materials at destination (if applicable) and obtain receipts for classified material. At locations where no storage facilities exist, the PIC will ensure classified material is properly protected. Refer to AFI 31-401, *Information Security Program Management*, for further information about storing of classified on the aircraft. (T-2)

6.41.1. Mission Radios. Do not leave the aircraft unattended with crypto loaded into the mission radios. The aircraft commander is ultimately responsible for ensuring the radios are zeroized prior to leaving the aircraft. (T-2)

6.41.1.1. If the aircrew is going to leave the aircraft unattended for any period of time, remove the CIK (Crypto Ignition Key) from the Secure Key Loader (SKL) and lock the SKL in the lockbox on the mission radio rack. Ensure all entry points to the aircraft are locked as well. The copilot will maintain positive control of the CIK for the duration of the period away from the aircraft. If available, the CIK may be stored in an approved COMSEC storage location (i.e., Command Post). (T-2)

6.41.2. Remove/Zeroize any potential or classified information in the FMS, aircraft radios, or mission systems/software when not required for flight or continuous mission operations. The PIC is responsible for all classified materials. (T-2)

6.41.3. In an emergency, destroy or damage classified material and equipment prior to crash landing if possible. (T-2)

6.42. Aircraft Impoundment. If an aircraft is involved in a ground or in-flight incident, the PIC should impound the aircraft immediately and contact the squadron CC, DO, MC or appropriate controlling agency for further instructions.

6.43. Clearwater Rinse Facility (Birdbath). If directed by aircraft maintenance personnel, aircrews may use Clearwater Rinse facilities in order to prevent damage to the aircraft.

6.43.1. An entry will be placed in the aircraft maintenance forms, "Aircraft Subjected to Salt Spray" anytime the aircraft is flown over salt water below 1,000 ft AGL, except for takeoffs and landings. Document the lowest altitude and duration the aircraft was subjected to salt spray. (T-2)

6.44. Customs, Immigration, and Agriculture Inspections.

6.44.1. Complete customs, agriculture, and public health clearance forms, as required, prior to opening any doors other than the crew door or enplaning and deplaning personnel. (T-2)

6.44.2. Proceed directly from the aircraft to customs, immigration, or agricultural inspection for processing at those stations where federal or local inspections are required. The PIC or designated representative should complete the necessary forms before reporting to inspectors. (T-2)

6.44.3. After clearing with border clearance agencies, the PIC or designated representative will return to the aircraft for offloading and other post-flight procedures. (T-2)

6.44.4. A US military aircraft is a sovereign instrument. When cleared to over-fly or land in foreign territory, it is US policy to assert that military aircraft are entitled to the privileges and immunities which customarily are accorded warships. These privileges and immunities include, in the absence of stipulations to the contrary, exemption from duties and taxation; immunity from search, seizure, and inspections (including customs and safety inspections); or other exercise of jurisdiction by the host nation over the aircraft, personnel, equipment, or cargo on board. The PIC will not authorize search, seizure, inspection, or similar exercises of jurisdiction enumerated above by foreign authorities except by direction of HQ USAF or the American Embassy in the country concerned. (T-2)

6.44.5. PIC will not permit the inspection of their aircraft by officials of any foreign government. If requested to do so, the PIC and crew will deny access and seek aid from the senior AFSOC or USAF representative or US Embassy or consulate within the host nation. Inform customs or other officials of the above policy and request that they confirm their request through their own government and with US Department of State representatives. If necessary, the aircrew will seal the aircraft and enter into crew rest, and relay departure intentions, until resolution of the matter by appropriate authority. Use communications by the fastest means available to inform command and control facilities should this situation occur. (T-1)

6.44.6. When confronted with a search request by foreign authorities, aircrews should consider the following procedures:

6.44.6.1. In most cases, search attempts may be stopped by a statement of the PIC to the foreign officials that the aircraft is a sovereign instrument not subject to search without consent of HQ USAF or the chief of mission in the country concerned. This should be clearly conveyed in a polite manner so as not to offend foreign authorities that may honestly, but mistakenly, believe they have authority to search USAF aircraft. (T-2)

6.44.6.2. If foreign authorities insist on conducting a search, the PIC must negotiate to delay the search until contact is made with HQ USAF/A3OFN or the appropriate embassy (US or other friendly nation). The PIC should unequivocally state, the aircrew has no authority to consent to the search and that they must relay the foreign request to these agencies for decision. The PIC should then notify these agencies of the foreign request by the most expeditious means available. Thereafter, the PIC should follow instructions provided by the appropriate embassy and HQ USAF. (T-2)

6.44.6.3. If foreign officials refuse to desist in their search request, the PIC should indicate that they would prefer to fly the aircraft elsewhere (provided fuel and mechanical considerations permit a safe departure) and request permission for immediate departure. (T-2)

6.44.6.4. If permission is refused and the foreign authorities insist on forcing their way on board an aircraft, the PIC should state that he protests the course of action being pursued and that he intends to notify both HQ USAF and the US Embassy of the foreign action. The PIC should then allow the foreign agents on board the aircraft, without physical resistance, and thereafter report the incident to HQ USAF and the US Embassy as soon as possible. (T-2)

6.44.7. In all instances, specific instructions may be briefed because of sensitive cargo or equipment. These instructions and applicable provisions of classified supplements to the foreign clearance guide should be followed where applicable. (T-2)

6.45. Crew Debriefing/Post-Mission Actions.

6.45.1. Training Missions. The PIC will conduct the debriefing session and complete the appropriate documentation. The PIC will ensure all applicable information is passed to controlling agencies. (T-2)

6.45.2. Combat Operations. Each aircrew participating in operations under actual combat conditions will participate in an intelligence and mission debriefing session. (T-2)

6.45.3. The squadron CC or MC will ensure that all aircrews are debriefed immediately following a combat or combat support mission during which any tactics or procedures were observed that may affect other operations. (T-2)

6.45.4. Crews encountering hostile fire will submit an immediate airborne report to their controlling agency followed by a hostile fire incident report to intelligence immediately after landing. (T-2)

6.45.5. Other Missions. The PIC has the responsibility of affording each crew member the opportunity to discuss unusual aspects of the mission. Debriefings may be formal or informal, as the situation requires. (T-2)

6.45.6. When transiting installations, the PIC will establish a point of contact with the base operations or FBO for overnight billeting. The PIC will be immediately notified in the case of incident or emergency affecting the safety or security of the aircraft. (T-2)

Section 6H—Miscellaneous

6.46. Electronic Devices. The use of electronic devices is as specified in AFI 11-202, Vol 3, AFSOC Sup 1. For electronic devices not listed, the user will provide the aircrew a letter from the Aeronautical Systems Division, Deputy for Engineering (ASC/ENAE) certifying the device is approved for airborne use. If the aircrew detects any interference from an electronic device used aboard the aircraft, discontinue the use of this device for the duration of the flight. (T-2)

6.47. Jamming and Interference. All aircrews and other radio users must be familiar with the procedures for reporting incidents of meaconing, intrusion, jamming, and interference (MIJI) or Spectrum Interference (SI). Info copy HQ AFSOC/A3V on all MIJI/SI reports. (T-2)

6.48. Passenger Guidance. DoD 4515.13-R, *Air Transportation Eligibility*, establishes criteria for passenger movement on DOD aircraft. AFI 11-401, AFSOC Sup 1, provides further guidance on orientation and public affairs travel. Refer to these publications directly. In all cases, passengers will be manifested on DD Form 2131. (T-2)

6.48.1. During spouse orientation flights, spouses will not fly together on the same aircraft. (T-2)

6.48.2. Space-required. The OG/CC or COMAFSOF will determine and approve eligibility for all space required categories. Reference AFI 11-401, AFSOC Sup 1, for more information. (T-2)

6.49. Utilization of Civilian Law Enforcement or Medical Personnel. Generally, before transporting civilian law enforcement officials or civilian medical personnel, obtain proper authorization through OG/CC or COMAFSOF. (T-2)

6.50. Hazardous Material (HAZMAT) Procedures. The term “hazardous material” includes any material, which, because of its quantity, properties, or packaging, may endanger human life or property. Procedures in this paragraph apply whenever aircraft carry DOD Hazard Class/Division 1.1, 1.2, or 1.3 explosives, Department of Transportation (DOT) Class A and B poisons, etiological or biological research materials, radioactive materials requiring yellow III labels, and inert devices. Also included are DOD Hazard Class/Division 1.4 explosives, oxidizers, compressed gases, flammable solids and liquids, and corrosive liquids listed in AFMAN 24-204(I), *Preparing Hazardous Materials for Military Air Shipment*. (T-2)

6.50.1. Briefing. Reference AFMAN 24-204(I).

6.50.2. Cargo Documentation. Do not accept hazardous materials unless proper documentation, certification, and identification of cargo are provided. This includes transportation control number entered correctly on both the cargo manifest and the Shipper’s Declaration for Dangerous Goods. (T-2)

6.50.3. Flight Planning. The PIC (unless specifically briefed otherwise): (T-2)

6.50.3.1. Enters “Hazardous Cargo” in the appropriate section of the flight plan. Use remarks section of DD Form 175, information section of DD Form 1801, or ICAO Flight Plan Form.

6.50.3.2. Plans the flight to minimize over-flying heavily populated or otherwise critical areas.

6.50.3.3. Prepares a departure message. The remarks section of the departure message should include the following:

6.50.3.3.1. DOT class and DOD hazard class or division, if applicable, of hazardous material on board (include net weight of DOT Class A or B poisons and net explosive weight of Class A or B explosives).

6.50.3.3.2. Request for special support (e.g., isolated parking, security, technical escort teams, etc.).

6.50.3.3.3. Inert devices (when applicable).

6.50.3.4. If ETE is less than 1 hour, or if other circumstances preclude timely receipt at destination, notify base operations at the first intended landing, by priority telephone.

6.50.4. Before Engine Start. Ensure placards are removed. Give the controlling agency parking location, approximate engine start time, and verify that the firefighting agency has the hazardous materials information. If not, request the following be relayed to the firefighting agency: (T-2)

6.50.4.1. DOT class of hazardous material on board and the DOD hazard class or division for explosive material on board.

6.50.4.2. Net Explosive Weight.

6.50.4.3. Request for isolated parking (if necessary).

6.50.4.4. Estimated time of departure.

6.50.5. En Route. Normal procedures apply. Avoid flying over heavily populated or otherwise critical areas. (T-2)

6.50.6. Before Landing. Accomplish the following unless specifically prohibited by the theater commander or FLIP planning: (T-2)

6.50.6.1. Contact the base operations dispatcher, control tower, approach control, or other agency specified in FLIP at least 30 minutes (or as soon as practical) before ETA to announce that hazardous materials are on board and to verify that the appropriate base support agencies have received the departure message. If not, transmit the ETA and pertinent HAZMAT information.

6.50.6.2. If landing at a CONUS civil airport without a tower, give the previous information to the nearest Federal Aviation Administration (FAA) flight service station.

6.50.6.3. Request the information be relayed immediately to base operations or the civil airport manager, crash or fire protection agency, and other support agencies.

6.50.7. Parking: (T-2)

6.50.7.1. DOD requires aircraft carrying DOD Hazard Class or Division 1.1, 1.2, 1.3 explosives, DOT Class A poisons, and certain biological agents and munitions be parked in areas isolated from personnel. PIC's are responsible for ensuring cargo is correctly identified to the tower and ground control. When aircraft are not directed to an isolated area, identify the cargo again to tower or ground control. When identification is acknowledged, the host is solely responsible for selecting the parking area. Should host procedures be questionable, submit trip reports, as appropriate, to document such occurrences.

6.50.7.2. The military host is responsible for ensuring aircraft are properly placarded. For non-military installations, the briefing to the PIC will include placard requirements and, if required, placards will be furnished at the on load base. The shipper must make prior arrangements with the airport manager for shipments of hazardous materials requiring placards. The shipper is responsible for cargo identification, firefighting procedures, and isolated parking requirements.

6.50.8. Unscheduled Landing Due to IFE. Transmit unclassified information to the appropriate air traffic control facility as follows: (T-2)

6.50.8.1. Nature of emergency and intent to land.

6.50.8.2. Aircraft position and ETA.

6.50.8.3. Number of personnel and location in aircraft.

6.50.8.4. Fuel on board.

6.50.8.5. That hazardous materials are on board, location of the cargo, and applicable information.

6.51. Hazardous Medical Equipment.

6.51.1. Nonstandard equipment possessed by medical facilities that use AFSOC air evacuation services should be regarded as potentially hazardous. Two types of equipment are of major concern:

6.51.1.1. Electronic medical equipment produces electromagnetic interference, and therefore can interfere with aircraft communication and navigational equipment.

6.51.1.2. Therapeutic oxygen systems present an increased hazard of fire or explosion. A potential hazard is the inadvertent disruption of the cylinder neck, manifold, or regulator resulting in explosion and propulsion of the container or accessories.

6.51.2. For nonstandard electronic medical equipment, take the following precautions:

6.51.2.1. Pararescue or aeromedical evacuation personnel must inform the PIC when nonstandard electronic medical equipment is brought on board the aircraft. (T-2)

6.51.2.2. The PIC must be informed of the anticipated period of use of the equipment during the mission. (T-2)

6.51.2.3. The crew must be alert for any interference with aircraft communications or navigation equipment during periods of use of this equipment. (T-2)

6.51.2.4. When continuous use of the equipment is required throughout the duration of the mission, flight must be restricted to VFR conditions. Furthermore, exercise additional caution on night VFR missions to ensure there are no adverse effects on navigational equipment. (T-2)

6.51.3. For nonstandard oxygen equipment, take the following precautions: (T-2)

6.51.3.1. All compressed oxygen equipment with exposed, unprotected cylinder neck, manifold, or regulator must be completely secured from all movement in its longitudinal and lateral axes.

6.51.3.2. Pararescue or aeromedical evacuation personnel must continually monitor the operation of the equipment to detect possible malfunction during exposure to altitude.

6.52. Transporting Narcotics. Aircrew members will ensure narcotics and other unauthorized items are not smuggled onboard the aircraft. Maintain narcotics that are part of official medical kits in accordance with appropriate directives. (T-2)

6.53. Dropped Objects. During aircraft exterior visual inspections, pay particular attention to surfaces, panels, and components, which could potentially be dropped objects. If a dropped object is discovered and the mission is continued, the PIC will: (T-2)

6.53.1. Ensure documentation is entered into the aircraft maintenance forms.

6.53.2. Notify the controlling agency as soon as practical. Include route of flight, altitude, and weather conditions encountered.

Chapter 7

AIRCRAFT SECURITY

7.1. General. This chapter provides guidance for aircraft security on the ground and in-flight. AFSOC C-146A aircraft are Protection Level (PL) 4 resources in CONUS and PL3 while OCONUS. This security priority designation applies to operational aircraft, wherever they are located, worldwide. Some aircraft contain equipment and documents that require protection per DoD 5200.1, *DoD Information Security Program; Vol 1-4*, and AFI 31-401.

7.2. Security Procedures. The PIC is ultimately responsible for the security of their aircraft when located away from US military installations. AFJI 31-102, *Physical Security*, covers security arrangements when US Air Force aircraft are located on other US military installations. Arrangements must be made to protect the aircraft during crew rest status at non-US protected locations. If US military security forces are not available, the US embassy assigned to that country must be consulted to ensure security arrangements are made. For missions involving a planning agency, the agency must coordinate with the PIC to ensure the planned security measures conform to mission requirements. The amount of security required will vary, depending on location and ground time. (T-2)

7.2.1. For nonpermissive or uncertain environments, airfield and LZ security is the responsibility of the agency requesting support. Crew will work with the agency requesting support to insure security meets the requirement for the mission. (T-2)

7.2.2. For permissive environments, the PIC will receive a threat assessment and force protection capability evaluation briefing at home station prior to departure and receive updates en route, if required. When landing at DOD component installations, the installation commander is responsible for providing adequate security for the aircraft. The PIC will determine if security is adequate. Planning agencies and the PIC will use **Table 7.1**, to help assess the risk to parked aircraft for planned overnight stops located at non-US military installations overseas and civilian airfields. **Note:** Aircrews possess the training to provide the appropriate security when present at the aircraft. For unscheduled or emergency landings at non-USAF installations, the PIC will assess the aircraft security situation and take the following actions, if force protection capability appears insufficient: (T-2)

7.2.2.1. Aircrew surveillance. If the aircraft is not remaining overnight, aircrews are capable of maintaining appropriate aircraft security. The PIC will direct armed crew members to remain with the aircraft and maintain surveillance of aircraft entrances and activities in the aircraft vicinity. (T-2)

7.2.2.2. Area Patrol. Request area patrol coverage from local security forces to include back-up response forces. If local authorities request payment for this service, use AF Form 15 or cash. (T-2)

7.2.2.3. Departure without Crew Rest. If local security forces are unacceptable or unavailable, the PIC may waive FDP restrictions and depart as soon as possible for a destination with adequate force protection. If unable to depart the location due to system malfunction, the aircrew must secure the aircraft to the best of their ability. In no case, will the entire crew leave the aircraft unattended. Crew rest requirements will be subordinate to aircraft security when the aircraft may be at risk. The PIC should rotate a

security detail among the crew to provide for both aircraft protection and crew rest until relief is available. The PIC will coordinate through appropriate C2 channels to acquire additional security. (T-2)

7.2.2.4. Tailored Security Measures. Standard physical security measures may be impractical at times due to mission, terrain, climate, sociopolitical sensitivities, or other factors. At such locations, tailor security measures to meet unique requirements when necessary. As a minimum, lock aircraft entry points and hatches. Contact with US Embassy personnel is required at locations where security agreements are not in existence. (T-2)

7.2.3. Ground security teams. Ground security teams may be considered to guard the aircraft for planned overnight stops. Teams may travel in MEP status and are responsible to the PIC at all times. The PIC will ensure security team members receive a mission briefing, aircraft egress, and passenger briefings, as appropriate. The flying squadron commander is the final approval authority for the need of ground security teams for their aircraft and authority may be delegated no lower than the PIC. (T-2)

7.2.3.1. Ground security teams will comply with AFMAN 24-204(I), at all times when carrying weapons, ammunition, and equipment onboard the aircraft. (T-2)

7.2.4. Unauthorized Entry. At the discretion of the PIC, the aircraft should be locked and sealed as a measure to detect unauthorized entry. (T-2)

7.2.4.1. The aircraft should be locked during all off-station missions remaining overnight. (T-2)

7.2.5. Security awareness is crucial to effective mission accomplishment. Aircrews must always remain vigilant to their surroundings, especially at high threat, low security locations. During preflight activities, aircrews will inspect accessible areas to include aircraft wheel wells, air-conditioning compartments, and cargo compartment for unauthorized packages, personnel, or other unfamiliar devices. Report any suspicious items to host security forces. Aircrews will maintain a heightened security posture throughout all pre-takeoff activities. (T-2)

7.3. Aircraft Security Risk Assessment Matrix. Planning agencies and the PIC will use this matrix to help assess the risk to parked aircraft in a permissive environment. This matrix will be used for planned overnight stops at non-US military installations overseas and civilian airfields. A cumulative score of less than 55 implies that normal unmanned aircraft security measures are adequate. A score of 55 to 90 implies moderate security risk. The squadron or mission commander may consider additional security measures. If the cumulative score is greater than 90, commanders should consider deploying or contracting security personnel. The squadron or mission commander is the final approval authority for aircraft security issues. Authority may be delegated no lower than the PIC. **Exception:** During unscheduled or emergency landings, the PIC is the final approval authority for aircraft security. The PIC should contact the US Embassy or US Defense Attaché Office (USDAO) for security assistance. **Note:** Normally, additional security for the aircraft is not required at military installations within a NATO country or US civilian airfields approved by the FAA/Transportation Security Administration (TSA). (T-2)

Table 7.1. Aircraft Security Risk Assessment Matrix.

FACTORS	0 POINTS	5 POINTS	10 POINTS	15 POINTS
Local terrorist threat is currently:.. ¹	Negligible	Low	Medium ³	High ³
Installation/airport security services are:	Provided by host military forces only	Provided by Host military and contract security	Contract security forces only	Not available ³
Host security forces control entry:	The flight line and installation/airport	To the flight line only	To the installation/airport only	To neither flight line nor the installation/
There is perimeter fencing or barriers around:	The flight line and installation/ airport	The flight line only	The installation/airport only	Neither the flight line nor the installation/
Host security forces will provide ___ to guard the aircraft	An armed sentry	An unarmed sentry	Random security patrol coverage only	No sentry or random patrol coverage ³
Host security forces will ___ security incidents involving the aircraft	Provide armed response to	Provide unarmed response to	Notify civilian authorities of	Notify the PIC of ³
The aircraft will be parked:	Among civilian Aircraft	Separate from host military and civilian aircraft	Among other host military aircraft only	
The aircraft will ___ illuminated during the hours of		Be adequately	Be marginally	Not be ³
TOTAL POINTS:				
Notes:				
1. Derive the local threat from valid intelligence sources only.				
2. "Adequate lighting" is equal to the illumination provided by one standard USAF light cart.				
3. If a security response team and security patrols are not present, commanders should consider deploying or contracting security personnel.				

7.4. Protective Standards for Aircraft Carrying Distinguished Visitors (DV). This paragraph applies specifically to aircraft transporting DV Code 4 or above. The PIC is responsible for aircraft security at en route stops. (T-2)

7.4.1. DOD Installations. Notify the base security forces of estimated arrival and departure times. Request continuous security surveillance during the entire ground time. If the installation is unable to comply, arrange for the best protection available. (T-2)

7.4.2. Non-DOD Installations. Contact the airport manager or installation commander to arrange for force protection. (T-2)

7.5. Arming of Crew Members. The squadron CC, DO, or MC may direct arming of crew members as deemed necessary by mission threat analysis. Protect all weapons IAW AFI 31-117, *Arming and Use of Force by Air Force Personnel* and AFMAN 31-229, *USAF Weapons Handling Manual*. (T-2)

7.5.1. Weapons Issue. Before departing home station, authorized crew members will obtain weapons, ammunition, lock, and key. Crew members must present a current AF Form 523, *USAF Authorization to Bear Firearms*, to be issued a weapon. Crew members will be reissued the same weapon until the mission terminates at home station. If an armed crew member must leave the crew en route, transfer the weapon to another authorized crew member, using AF Form 1297, *Temporary Issue Receipt*. (T-2)

7.5.2. Loading and Transfer of Weapons. Load and unload weapons at approved clearing barrels/facilities if available. To transfer a loaded weapon to another crew member, place the weapon on a flat surface. Do not use a hand-to-hand transfer. (T-2)

7.5.3. Wearing of Weapons. Wear weapons in a holster, concealed at all times to protect the identity of armed crew members. (T-2)

7.5.3.1. Due to the sensitivity of weapons in foreign countries, crews will keep their weapons inside the aircraft and out of sight of foreign nationals, even if the FCG allows them to be carried outside the aircraft. If a destination requires weapons be carried outside the aircraft, the controlling MAJCOM must approve such action prior to deployment. (T-2)

7.5.4. Weapons Storage. If required for anti hijacking purposes, crew members will be armed before beginning preflight or on load duties. When no passengers are on board and after a satisfactory stowaway check, weapons may be stored in the gun box in-flight. Crew members will rearm before landing. Weapons need not be unloaded before being placed in the gun box. (T-2)

7.5.5. Crew Rest. During crew rest, store weapons in the most secure facility available. If a weapons storage facility is unavailable or the country prohibits or restricts the entry of weapons, secure firearms and ammunition in the gun box. (T-2)

7.6. General Anti Hijacking Guidance. Aircrews must make every reasonable effort to resist an aircraft hijacking attempt, resistance may vary from dissuasion, to direct physical confrontation, including the use of deadly force IAW CJCSI 3121.01B, *Standing Rules of Engagement/Standing Rules for the Use of Force for US Forces*, and all applicable ROE/RUF. It is imperative that all crew members are familiar with the ground and in-flight resistance actions and forced penetration of unfriendly airspace procedures in AFI 13-207, *Preventing and Resisting Aircraft Piracy (Hijacking)*, and the FIH. In the event of a hijacking, crew members must act immediately and resourcefully, without instruction, in order to counter the attacker successfully. An aircraft is most vulnerable when the crew is on board and the aircraft is ready

for flight. Hijackers cannot be dealt with as ordinary criminals. Some are mentally disturbed, emotionally unstable individuals for whom the threat of death is not a deterrent, but a stimulus to crime. Delay tactics have been most successful in saving lives and property. Detection of potential hijackers before they board the aircraft is the best solution to the problem. (T-2)

7.6.1. Acceptance of Passengers. The host station passenger processing and manifesting facility should conduct anti hijacking inspections. Do not board passengers unless the aircraft commander is fully satisfied with these inspections. **Exception:** Passengers may be anti hijack inspected at the aircraft by the aircrew if no passenger processing facility exists. (T-2)

7.6.1.1. Aeromedical Procedures. Military medical facility commanders are responsible for the anti-hijacking inspection of patients. When patients are delivered to the aircraft by civilian sources, the aircrew will perform required inspections before departure. (T-2)

7.6.2. Arms and Ammunition. Passengers (including MEP) will not carry weapons and/or ammunition on their person or in hand-carried baggage on board an aircraft. **Exception:** Special agents/guards of the Secret Service or State Department, and other individuals specifically authorized to carry weapons in coordination with the PIC. In all cases, the crew will be aware of the location of weapons and ammunition. (T-2)

7.6.2.1. If individuals must clear their weapons before boarding the aircraft, and access to clearing barrel/facilities is limited, as a minimum, direct them to: (T-2)

7.6.2.1.1. Move to a safe, clear area at least 50 ft from any aircraft, equipment, or personnel before unholstering/unslinging their weapons.

7.6.2.1.2. Clear their weapons in accordance with standard safety procedures.

Chapter 8

LOADMASTER SPECIFIC OPERATIONAL GUIDELINES

8.1. General. Loadmasters are responsible for all duties described in technical orders, Air Force instructions, and any other regulatory guidance that applies to their crew position. The PIC may assign additional duties as necessary to aid in ensuring mission success. (T-2)

8.1.1. In addition to the responsibilities listed above, the loadmaster is responsible for, supervises, performs, and/or participates in the following: (T-2)

8.1.2. Load planning, verifying proper aircraft configuration, aircraft pre flight, operation of aircraft equipment, preparation of DD Form 365-4, *Weight and Balance Clearance Form F*, the safe movement of cargo and personnel into and out of the aircraft, ensuring proper tie-down of cargo/equipment, handling of troops/passengers, and verifying cargo/passengers against required documentation.

8.1.3. Loadmaster in-flight duties also include backing up the pilots on radio traffic, assigned altitude/heading/airspeeds, altimeter settings, Traffic Collision Avoidance System (TCAS) alerts, monitoring systems and periodically accomplishing an interior/exterior scan.

8.1.4. Perform and or read checklists initiated by the PF or PNF.

8.1.5. Assist the pilot in obstacle and terrain clearance during flight and ground operations.

8.1.6. Refuel the aircraft if maintenance personnel are not available.

8.1.7. Perform any other ground or in-flight duties as briefed by the PIC.

8.2. Responsibilities of Aircraft Loading.

8.2.1. Normally all air freight, fleet service, and servicing personnel are authorized to perform assigned duties in all AFSOC aircraft when escorted by an authorized individual. (T-2)

8.2.2. At locations with no air terminal or traffic personnel, the shipper assumes responsibilities listed in **Paragraph 11.2.1.** (T-2)

8.3. Emergency Exits and Safety Aisles. Load aircraft in such a manner that emergency exits are available as follows: (T-2)

8.3.1. At least one cabin emergency exit is unobstructed.

8.3.2. Seats erected across an emergency exit are not considered an obstruction.

8.3.3. Access to the rear of the aircraft and entry into cargo or baggage areas, or emergency exits must be maintained without exception. No less than 30 inch by 14 inch space will be provided.

8.4. Air Cargo Restraint Criteria. Cargo will be restrained in accordance with the AOH. (T-2)

8.5. Preflight Duties. The loadmaster will normally report to the aircraft immediately after the crew briefing or as directed by the aircraft commander to begin preflight and/or loading duties. (T-2)

8.5.1. The loadmaster will sign off the AFE inventory Air Force Technical Order (AFTO) IMT Form 46, *Prepositioned Life Support Equipment*, comm and mission equipment inventory forms prior to each flight. (T-2)

8.5.2. After removing the landing gear pins, the loadmaster will show the pins to the aircraft commander prior to stowing the pins and also ensure a set of chocks and a grounding wire are stowed aboard the aircraft (T-2)

8.6. Passenger Handling. Loadmasters will ensure all passengers are manifested. Give one copy to the PIC for filing and retain sufficient copies for border clearance. The loadmaster will complete anti-hijacking requirements for personnel in accordance with this instruction. Ensure all classified equipment is not visible prior to passenger boarding. The loadmaster is the key figure concerning good passenger relations. Be aware of the concerns that may arise in the minds of passengers and anticipate their questions and actions. (T-2)

8.6.1. Passengers may move about the cargo compartment. Good judgment must be exercised on the number of passengers allowed out of their seats at one time. Encourage passengers to keep seat belts fastened when seated.

8.6.2. Do not allow passengers to lounge on or tamper with equipment, cargo, or baggage. (T-2)

8.6.3. Ensure classified equipment remains covered during the entire mission when passengers are on board and ensure passengers are denied access to this equipment. (T-2)

8.6.4. Floor loaded passengers. If available, any cushioning material may be used for seating, to prevent the passenger from having to sit on the cargo floor. Seat passengers face forward in the aircraft. Attach a cargo tie-down strap for each row of passengers, in a manner that it will provide forward restraint and body stability. No more than 5 passengers should be in a row per strap. Pig tails with quick release are authorized as restraint for specific SOF operations. (T-2)

8.7. Troop Movements. Every effort should be made to advise troops of mission progress or deviations. The troop commander should be identified prior to boarding.

8.7.1. Determine if the troop commander has any special requirements prior to departure, and advise the aircraft commander of these requirements if appropriate.

8.7.2. Determine if specific communications requirements exist and coordinate these requirements with the PIC.

8.7.3. Determine if there is a need for the troops to perform any type of in-flight rigging. Ensure the aircraft is loaded to accommodate in-flight rigging if required. Inform the PIC prior to in-flight rigging. If turbulence is anticipated, the PIC should inform the passengers in advance if possible.

8.7.4. Ensure troops do not have access to classified equipment during the mission. If troops require access to classified equipment, the requirement should be made known to the PIC prior to the mission. (T-2)

8.8. Border Clearance. Customs, Immigration, and Agriculture require certain forms for border clearance. The loadmaster will ensure that required forms are contained in the aircraft

mission kit. Distribute the forms to the crew, ensure their completion prior to landing, and deliver them to the proper persons. (T-2)

8.9. Weight and Balance. Weight and balance for the aircraft is accomplished in accordance with TO 1-1B-50, *Weight and Balance*, and the AOH. (T-2)

8.9.1. A basic handbook of weight and balance, containing current aircraft status, is maintained by the unit possessing the aircraft which provides a supplemental weight and balance handbook for each aircraft. The loadmaster will carry any additional weight and balance documentation necessary for the planned mission. (T-2)

8.9.2. Compute weight and balance by using the moments method or the approved spreadsheet. (T-2)

8.9.3. The weight and balance section of the unit possessing the aircraft is responsible for providing the appropriate agency with information required to keep documents current and accurate. (T-2)

8.10. Fuel Weight Computation. Use the most accurate method available to compute wing fuel when calculating total fuel weight. (T-2)

8.11. Loadmaster Forms: DD Form 2131, *Passenger Manifest*, AF Form 463, *Cargo Manifest*, DD Form 1854, CF 7507, *General Declaration (Outward/Inward)*, I-94, *Immigration Form, Immigration and Naturalization Service Arrival/Departure Record (accountable form)*, AF Form 127, *Traffic Transfer Receipt*, DD Form 365-4, *Weight and Balance Clearance Form* (or the AFM/AOH approved form).

Chapter 9

TRAINING

9.1. General. See AFI 11-202, Vol 1, *Aircrew Training*, and AFI 11-2C-146A, Vol 1, *Aircrew Training*, for additional information.

9.2. Instructor/Flight Examiner Briefings. Before all training/evaluation missions, the PIC or instructors/flight examiners will brief their crew on the training/evaluation requirements, objectives, planned profiles, and seat changes. (T-2)

9.3. Debriefing. Review and assess overall training performed. Each student or crew member should thoroughly understand what training has been accomplished. All required documentation should be completed as expeditiously as possible.

9.4. Training Aircraft Not Capable of Flight. If an aircraft is not capable of departure within 4 hours after scheduled departure time, cancel the training mission unless waived by the PIC. Departure consists of actual takeoffs for assigned or planned training missions and does not include maintenance ops checks. (T-3)

9.5. Simulated Instrument Flight.

9.5.1. The use of a hood or other artificial vision-restricting device is not authorized for any phase of flight. (T-2)

9.5.2. Initiate practice instrument missed approaches no lower than the minimum altitude for the approach being flown. (T-2)

9.6. Confidence Maneuvers. All confidence maneuvers will be accomplished in VMC conditions under VFR with a discernible horizon. Ensure the airspace around the aircraft is clear of traffic by visually clearing the area prior to the maneuver. Do not exceed AOH limitations. (T-2)

9.6.1. Stall Series. Begin stall series at least 5,000 ft AGL or 5,000 ft above the clouds if operating “VFR on top”. For stall series training, recover from the stall at the first definite indication (e.g., stick shaker, actual stall of aircraft, decay of control effectiveness). An IP at a set of flight controls is required to perform this maneuver. (T-2)

9.6.1.1. Simulated or actual engine-out stalls are prohibited. (T-2)

9.6.2. Steep Turns. Accomplish steep turns at least 1,500 ft AGL, 1,500 ft above the clouds if operating “VFR on top”. Accomplish both 45 and 60 degree bank steep turns. Do not exceed 60 degrees of bank. (T-2)

9.6.3. Slow Flight. Fly an airspeed 5 Knots Indicated Airspeed (KIAS) below V_{REF} for aircraft configuration. Do not exceed 15 degrees of bank. Authorized in day VMC only at a minimum of 1,500 ft AGL or 1,500 ft above a clouds if operating “VFR on top”. (T-2)

9.7. Prohibited Maneuvers. The following maneuvers or procedures are prohibited in the aircraft: (T-2)

9.7.1. Spins.

9.7.2. Full Stalls.

9.7.3. Simulated runaway trim malfunctions.

9.8. Simulated Emergency Procedures.

9.8.1. Practice simulated emergencies which require placing switches in other than their normal position or the aircraft in an abnormal configuration as specified in the AOH only during training, evaluation, or currency flights when an instructor or flight examiner pilot is in one of the pilot seats. Preface all simulated emergencies with the word “simulated” and terminate simulated emergencies if an actual emergency arises. **Note:** For training, 0 Flap approaches and landings are not considered emergency procedures; however, if an actual condition exists that leads to a flapless landing, run appropriate emergency or abnormal checklists. (T-2)

9.8.2. IP candidates who occupy a pilot seat and are under the direct supervision of a flight examiner pilot not in the seat, may practice simulated emergency procedures during upgrade evaluations to IP. (T2)

9.8.3. Preface all simulated emergencies with the word “simulated” and terminate simulated emergencies when an actual emergency arises. (T-2)

9.8.4. Use a realistic approach and do not compound emergencies. Limit simulated emergencies to noncritical phases of flight when possible. Notify the controlling agency if a nonstandard traffic pattern or maneuvering airspace is required. (T-2)

9.8.5. Do not perform simulated emergencies when passengers or medical crew members (except flight surgeons performing required flight duties) are on board. (T-2)

9.8.6. Simulated Engine Failure. Simulated engine failures will only be accomplished with an IP at a set of functional aircraft controls. Weather required during daylight (or when using NVGs) is circling minimums for the approach being flown. Weather required for nighttime conditions is 1,000 ft ceilings and 2 statute miles (sm) visibility or circling minimums, whichever is higher. (T-2)

9.8.6.1. Initiate simulated engine failure no lower than 200 ft AGL or approach minimums if during an instrument approach. The IP will initiate the emergency. The IP will set the power lever or throttle to a setting equivalent to a feathered propeller once the flying pilot correctly executes/applies the proper critical action procedure. (T-2)

9.8.6.1.1. Retard the appropriate throttle to approximately 10% torque to simulate zero thrust on the simulated failed engine. (T-2)

9.8.6.2. Turns into the simulated failed engine should be minimized. Turns into the simulated failed engine are permissible but require a higher degree of pilot skill than with actual failed engines and must be smooth and coordinated. (T-2) **WARNING:** Improper application of rudder or power can lead to an immediate out-of-control situation where recovery might not be possible.

9.8.6.3. No lower than 100' AGL, the simulated inoperative engine will be available for use by the PF to accomplish a landing or go-around. (T-2)

9.8.6.3.1. A go-around will be executed if a safe landing is not ensured. (T-2)

9.8.6.4. Simulated Engine Out Go-around or Missed Approach. Initiate simulated engine out goaround or missed approach no lower than 100 ft AGL or minimum altitude for the approach. (T-2)

9.8.7. Aborted Takeoff. Authorized during day or night VMC, or with NVGs. Crosswind component must not exceed 15 KIAS. The runway must be dry, a minimum width of 44 ft, and long enough to meet normal takeoff distance requirements. (T-2)

9.8.8. Actual Engine Shutdown and Air start. If required by a formal training syllabus, one engine may be shut down in day VMC only at a minimum of 5,000 ft above the ground or cloud deck, whichever is higher. Do not shut down the engine unless the aircraft can remain clear of clouds and recover and land under visual flight rules. (T-2)

9.9. Touch-and-go/Stop-and-go Operations.

9.9.1. Conduct touch-and-go operations IAW the AOH. (T-2)

9.9.2. The touch-and-go checklists may be used when performing multiple instrument approaches or VFR pattern practice at the same airport or transitioning to another airport within 25 nm. Pilots will complete all normal checklists after the initial takeoff or when transiting to another airport greater than 25 nm from the airport where the instrument approach or VFR pattern practice was accomplished. (T-2)

9.9.3. Wet Runways. Touch-and-go operations are prohibited when crosswinds exceed 15 KIAS. (T2)

9.9.4. Icy Runways. Stop-and-go or touch and go operations are prohibited on icy runways. (T-2)

9.9.5. Ceiling and visibility (RVR) for touch and go operations must be at least 300 ft and $\frac{3}{4}$ mile. (T2)

9.10. NVG Operations. NVG training illumination requirements are the same as outlined in **Chapter 5**. NVG instrument approach weather minimums are the minimums for the approach. (T-2)

9.10.1. Training. Aircrews will normally use AMP-3 with covert lighting or AMP-4 markings for training. To sustain proficiency in the most demanding situations, light configuration priority for the first approach is to an AMP-4 configuration. (T-2)

Chapter 10

LOCAL OPERATING PROCEDURES

10.1. General.

10.1.1. Units will publish local and unique unit operating procedures.

10.1.2. These procedures will not be less restrictive than items contained in this or extracted from other AFI.

Chapter 11

OPERATIONAL REPORTS AND FORMS

11.1. General. This chapter contains a description of applicable reports and forms. For assistance in completing safety forms contact the wing/group, squadron, or local flight safety officer.

11.2. AFSOC IMT Form 97, *Aircraft Incident Worksheet*. Refer to AFI 91-204, and the AFSOC Sup. The Safety Office (HQ AFSOC/SE) will be notified of the following high interest items: IFR incidents, dropped objects, or any other incident which, in the judgment of the Flight Safety Officer (FSO), needs to be reported. Use the AFSOC IMT Form 97, when reporting these incidents to HQ AFSOC/SE. AFI 91-204, and the AFSOC Sup provide policy guidance that is common to investigating and reporting all US Air Force mishaps and instructions for using AFSOC IMT Form 97. Safety investigations and reports are conducted and written solely to prevent future mishaps. Safety investigations take priority over any corresponding legal investigations, except friendly fire mishaps. (T-2)

11.3. AF IMT Form 457, *USAF Hazard Report*. Refer to AFI 91-202, *The US Air Force Mishap Prevention Program*. The USAF hazard reporting system provides a means for Air Force personnel to alert supervisors and commanders to hazardous conditions requiring prompt corrective action. A hazard is any condition, act, or circumstance that jeopardizes or may jeopardize the health and well-being of personnel, or which may result in loss, damage, or destruction of any weapons system, equipment, facility, or material resource. (T-2)

11.4. AF IMT Form 651, *Hazardous Air Traffic Report (HATR)*. Refer to AFI 91-202.

11.4.1. The Air Force HATR program provides a means for personnel to report all near midair collisions and alleged hazardous air traffic conditions. Use information in HATR reports only for mishap prevention. AFI 91-202 list reportable incidents. (T-2)

11.4.2. Procedures:

11.4.2.1. Make an airborne report of the hazardous condition to the nearest ATC agency (e.g., center, Flight Service Station (FSS), control tower, or aeronautical radio station), and give the following information as appropriate:

11.4.2.1.1. Identification or call sign.

11.4.2.1.2. Time and place (radial/Distance Measuring Equipment (DME), position relative to the airfield, etc.).

11.4.2.1.3. Altitude or flight level.

11.4.2.1.4. Description of the other aircraft or vehicle.

11.4.2.1.5. Include a verbal statement as soon as possible after occurrence that a written HATR report will be filed upon landing. **Note:** ATC agencies (e.g., FAA, etc.) must know if an official report is being filed.

11.4.2.2. File the HATR as soon as possible (within 24 hours) using any available means of communication. Normally, it should be filed at the base operations office at the landing airport. If this is impractical and if communications permit, notify the safety

office of the Air Force base where the condition occurred, the safety office at the home station, or as prescribed by the overseas MAJCOM. In any case, provide the safety office with all available information needed to prepare the AF IMT Form 651. Turn in a completed copy of the AF IMT Form 651 to the wing/group safety office. **Note:** HATR reports are not privileged information and may be released outside the USAF.

11.4.3. Individuals submitting a HATR are granted immunity from disciplinary action provided:

11.4.3.1. Their violation was not deliberate.

11.4.3.2. They committed no criminal offense.

11.4.3.3. No mishap occurred.

11.4.3.4. They properly reported the incident using the above procedures.

11.5. AF IMT Form 711, USAF Aircraft Mishap Report Worksheet. Refer to AFI 91-204.

11.5.1. Responsibilities. Notify the appropriate authorities of any mishap involving aircraft or crew. When notified, AFSOC units will initiate investigative and reporting actions in accordance with AFI 91-204. **Note:** Do not attempt to classify a mishap. (T-2)

11.5.2. Reportable Mishaps:

11.5.2.1. Report damage to the aircraft, injury to the crew or passengers, and any damage or injury to another organization's equipment or personnel resulting from the movement or actions of an aircraft or crew.

11.5.2.2. Report the following occurrences:

11.5.2.2.1. A physiological episode: a physiological reaction, near accident, or hazard in flight due to medical or physiological reasons. This includes:

11.5.2.2.1.1. Proven or suspected case of hypoxia.

11.5.2.2.1.2. Carbon monoxide poisoning or other toxic exposure.

11.5.2.2.1.3. Decompression sickness due to evolved gas (bends, chokes, neurocirculatory collapse), or severe reaction to trapped gas resulting in incapacitation.

11.5.2.2.1.4. Hyperventilation.

11.5.2.2.1.5. Spatial disorientation or distraction resulting in an unusual attitude.

11.5.2.2.1.6. Loss of consciousness for any cause.

11.5.2.2.1.7. Death by natural causes of any crew member in flight.

11.5.2.2.1.8. Unintentional loss of pressurization if cabin altitude is above 18,000 ft MSL, regardless of effects on personnel.

11.5.2.2.1.9. Alcohol intoxication and hangover (crew only).

11.5.2.2.1.10. Illness (both acute and pre-existing), including food poisoning, dehydration, myocardial infarction, seizure, and so forth.

11.5.2.2.1.11. Exposure to toxic, noxious, or irritating materials such as smoke,

fumes, or liquids. **Note:** In the event of a physiological episode, all crew members and passengers involved will report to a flight surgeon as soon as practical. The flight surgeon will coordinate with the safety office to generate a Class E Physiological Event in the Air Force Safety Automated System.

11.5.2.2.2. In-flight flameout, engine failure, required engine shutdown, suspected engine power loss, or loss of thrust sufficient to preclude maintaining level flight above minimum en route altitude. **Note:** Intentional shutdowns for training are excluded; however, report failure to restart, using the criteria above.

11.5.2.2.3. Flight control malfunction resulting in an unexpected or hazardous change of flight attitude, altitude, or heading.

11.5.2.2.4. Malfunction of landing gear when difficulty is experienced using emergency system or procedures.

11.5.2.2.5. In-flight loss of all pitot-static instrument indications or all attitude or directional indications.

11.5.2.2.6. Spillage or leakage of radioactive, toxic, corrosive, or flammable material from aircraft stores or cargo.

11.5.2.2.7. All cases of departure from intended takeoff or landing surface onto adjacent surfaces.

11.5.2.2.8. Any incident which does not meet the established criteria for a reportable mishap but, in the judgment of the PIC, needs to be emphasized in the interest of flight safety.

11.6. Reports of Violations/Unusual Events or Circumstances. Violations identified in AFI 11202, Vol 3, AFSOC Sup 1, and navigation errors (including overwater position errors exceeding 24 nm, border and ATC violations) will be reported. (T-2)

11.6.1. Include the following: factual circumstances, investigation and analysis, findings and conclusions, recommendations, and actions taken.

11.6.1.1. Attachments should include: notification of incident, crew orders, statement of crew members (if applicable), and documenting evidence (logs, charts, etc.).

11.6.2. In addition to the information listed, the historical flight plan will be turned in to the C2 center or owning standardization and evaluation office.

11.6.3. Send the original investigation report within 45 days to the Inspector General (HQ AFSOC/IG).

11.6.4. The following operational report (OPREP)-3, Event or Incident Report, reporting procedures for all aircraft notified of navigational errors exceeding 24 nm will be reported under AFI 10-206.

11.6.4.1. On notification of a navigational position error, the PIC (or agency receiving notification) documents the circumstances surrounding the incident (report content below) and ensures submission of an OPREP-3 report through C2 channels. Include the following:

11.6.4.1.1. Name and location of unit submitting report, mission identification number, reference to related OPREPs-3, type of event (e.g., state “navigation position error.”), date, time (Zulu), and location (e.g., ATC Sector).

11.6.4.1.2. Description of facts and circumstances. Include aircraft type and tail number, unit (wing/group or squadron assignment of crew), home base, route of flight, point of alleged deviation, and miles off course.

11.6.5. PICs must keep the appropriate agencies apprised of any unusual events or circumstances impacting their missions. Examples of reportable events include meaconing, jamming, intrusion, interception, loss of multiple engines, hostile fire, injury to passengers or crew members, etc. This list is not exhaustive. Some events may require the C2 agency to forward OPREP reports to higher headquarters.

BURTON M. FIELD, Lt Gen, USAF
DCS, Operations, Plans and Requirements

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

- AFI 10-206, *Operational Reporting*, 6 September 2011
- AFI 10-801, *Defense Support of Civil Authorities (DCSA)*, 19 September 2012
- AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, 19 January 2012
- AFI 11-202, Vol 1, *Aircrew Training*, 22 November 2010
- AFI 11-202, Vol 2, *Aircrew Standardization/Evaluation Program*, 13 September 2010
- AFI 11-202, Vol 3, *General Flight Rules*, 22 October 2010
- AFI 11-218, *Aircraft Operations and Movement on the Ground*, 28 October 2011
- AFI 11-2C-146A, Vol 1, *Aircrew Training*, TBD
- AFI 11-301, Vol 1, *Aircrew Flight Equipment (AFE) Program*, 25 February 2009
- AFI 11-401, *Aviation Management*, 10 December 2010
- AFI 13-207, *Preventing and Resisting Aircraft Piracy (Hijacking)*, 21 June 2010
- AFI 13-217, *Drop Zone and Landing Zone Operations*, 10 May 2007
- AFI 31-117, *Arming and Use of Force by Air Force Personnel*, 29 June 2012
- AFI 31-401, *Information Security Program Management*, 1 November 2005
- AFI 33-360, *Publications and Forms Management*, 7 February 2013
- AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*, 18 July 2011
- AFI 91-202, *The US Air Force Mishap Prevention Program*, 5 August 2011
- AFI 91-204, *Safety Investigations and Reports*, 24 September 2008
- AFJI 11-204, *Operational Procedures for Aircraft Carrying Hazardous Material*, 11 November 1994
- AFJI 31-102, *Physical Security*, 31 May 1991
- AFMAN 11-217, Vol 1, *Instrument Flight Procedures*, 22 October 2010
- AFMAN 11-217, Vol 3, *Supplemental Flight Information*, 23 February 2009
- AFMAN 24-204(I), *Preparing Hazardous Materials for Military Air Shipments*, 3 December 2012
- AFMAN 31-229, *USAF Weapons Handling Manual*, 12 May 2004
- AFMAN 33-363, *Management of Records*, 1 March 2008
- AFPAM 32-2004, *Aircraft Fire Protection for Exercises and Contingency Response Operations*, 21 April 2010

AFPD 11-2, *Aircrew Operations*, 19 January 2012

CJCSI 3121.01B, *Standing Rules of Engagement/Standing Rules for the Use of Force for US Forces*, 13 January 2005

DoD 5200.1, *DoD Information Security Program; Vol 1-4*, 24 February 2012

DoDI 7730.57, *Aviation Incentive Pays and Continuation Bonus Program*, 12 August 2008

DoD 4515.13-R, *Air Transportation Eligibility*

TO 1-1B-50, *Weight and Balance*, 1 March 2005

Adopted Forms

AF IMT Form 15, *USAF Invoice*

AF IMT Form 70, *Pilot's Flight Plan and Flight Log*

AF IMT Form 457, *USAF Hazard Report*

AF IMT Form 651, *Hazard Air Traffic Report*

AF IMT Form 711B, *USAF Aircraft Mishap Report*

AF IMT Form 847, *Recommendation for Change of Publication*

AFTO IMT Form 46, *Prepositioned Life Support Equipment*,

AFSOC IMT Form 97, *Aircraft Incident Worksheet*

AF Form 127, *Traffic Transfer Receipt*

AF Form 463, *Cargo Manifest*

AF Form 523, *USAF Authorization to Bear Firearms*

AF Form 4327A, *Crew Flight Authorization (FA)*

AF Form 1297, *Temporary Issue Receipt*

Air Force Technical Order (AFTO) IMT Form 46, *Prepositioned Life Support Equipment*

CF 6059B, *Customs Declaration*

CF 7507, *General Declaration (Outward/Inward)*

DESC-I-31, *Purchase of Aviation Fuels and Services at Commercial Locations*

DD Form 175, *Military Flight Plan*

DD Form 365-4, *Weight and Balance Clearance Form F*

DD Form 1385, *Cargo Manifest*

DD Form 1801, *DoD International Flight Plan*

DD Form 1854, *U.S. Customs Accompanied Baggage Declaration*

DD Form 2131, *Passenger Manifest*

I-94, *Immigration Form, Immigration and Naturalization Service Arrival/Departure Record (accountable form)*

SF IMT Form 44, Purchase Order – *Invoice Voucher*

Abbreviations and Acronyms

AC—Aircraft Commander
ACC—Air Combat Command
ACM—Additional Crew Member
ACP—Audio Control Panel
AETC—Air Education and Training Command
AF—Air Force
AFE—Aircrew Flight Equipment
AFI—Air Force Instruction
AFJI—Air Force Joint Instruction
AFJMAN—Air Force Joint Manual
AFMAN—Air Force Manual
AFMC—Air Force Material Command
AFPD—Air Force Policy Directive
AFRC—Air Force Reserve Command
AF RDS—Air Force Records Disposition Schedule
AFSOC—Air Force Special Operations Command
AFSOCI—Air Force Special Operations Instruction
AFSOF—Air Force Special Operations Forces
AFTO—Air Force Technical Order
AFTTP—Air Force Tactics Techniques and Procedures
AGL—Above Ground Level
AIM—Airman’s Information Manual
AIMS—Airlift Implementation and Monitoring System
ALS—Approach Lighting System
AMC—Air Mobility Command
AMP—Airfield Marking Pattern
ANG—Air National Guard
AOH—Aircraft Operating Handbook
AP—Area Planning
APU—Auxiliary Power Unit

AQP—Airfield Qualification Program
ARC—Airborne Radio Communicator
ARFF—Aircraft Rescue Firefighting
ARMS—Aviation Resource Management Systems
ASC/ENAE—Aeronautical Systems Division, Deputy for Engineering
ASOS—Automated Surface Observation System
ASRR—Airfield Suitability and Restriction Report
ATC—Air Traffic Control
ATIS—Automatic Terminal Information System
AWOS—Automated Weather Observation System
BFT—Blue Force Tracker
C—Celsius
C2—Command and Control
CC—Commander
CCT—Combat Control Team
CHOP—Change in Operational Control
CHUM—Chart Update Manual
CIK—Crypto Ignition Key
CIRVIS—Communication Instructions for Reporting Vital Intelligence Sightings
COMAFSOF—Commander Air Force Special Operations Forces
COMSEC—Communications Security
CONUS—Continental United States
CP—Copilot
DEPORD—Deployment Order
DH—Decision Height
DME—Distance Measuring Equipment
DO—Director of Operations
DOD—Department of Defense
DOT—Department of Transportation
DSN—Defense Switched Network
DSR—Deployed Status Reports
DV—Distinguished Visitors

EFB—Electronic Flight Bag
EGPWS—Enhanced Ground Proximity Warning System
EP—Evaluator Pilot
ERO—Engine(s) Running On or Offload
ESA—Emergency Safe Altitude
ETA—Estimated Time of Arrival
ETD—Estimated Time of Departure
ETE—Estimated Time En route
ETP—Equal Time Point
EXORD—Execution Order
F—Fahrenheit
FA—Flight Authorization
FAA—Federal Aviation Administration
FAF—Final Approach Fix
FAR—Federal Aviation Regulation
FBO—Fixed Base Operator
FCG—Foreign Clearance Guide
FCIF—Flight Crew Information File
FCIS—Flight Crew Information Summary
FDP—Flight Duty Period
FIH—Flight Information Handbook
FLIP—Flight Information Publication
FMS—Flight Management System
FOD—Foreign Object Damage
FP—First Pilot
FPM—Feet Per Minute
FSO—Flight Safety Officer
FSS—Flight Service Station
ft—Feet
GDSS—Global Decision Support System
GP—General Planning
GPS—Global Positioning System

HAT—Height Above Touchdown
HATR—Hazardous Air Traffic Report
HAZMAT—Hazardous Material
HF—High Frequency
HQ—Headquarters
IAF—Initial Approach Fix
IAP—Instrument Approach Procedure
IAW—In Accordance With
ICAO—International Civil Aviation Organization
IFE—In-flight Emergency
IFR—Instrument Flight Rules
IMC—Instrument Meteorological Conditions
IMT—Information Management Tool
IP—Instructor Pilot
JOG—Joint Operations Graphic
JSOAC—Joint Special Operations Air Component
KIAS—Knots Indicated Air Speed
LM—Loadmaster
LOS—Line of Sight
LZ—Landing Zone
LZAP—Landing Zone Arrival Procedure
LZSO—Landing Zone Safety Officer
MAP—Missed Approach Point
MAJCOM—Major Command
MC—Mission Commander
MDA—Minimum Descent Altitude
ME—Mission Essential
MEL—Minimum Equipment List
MEP—Mission Essential Personnel
MESL—Minimum Essential Subsystem List
MIA—Minimum IFR Altitude
MIJI—Meaconing, Intrusion, Jamming, and Interference

MOA—Memorandum of Agreement
MP—Mission Pilot
MSA—Minimum Safe Altitude
MSL—Mean Sea Level
NACO—National Aeronautical Charting Office
NATO—North Atlantic Treaty Organization
NAVAID—Navigational Aid
NC—Noncurrent
nm—Nautical Miles
NOTAM—Notice to Airmen
NSAv—Nonstandard Aviation
NVG—Night Vision Goggle
OCONUS—Outside Continental United States
OG/CC—Operations Group Commander
OGV—Operations Group Standardization/Evaluation
OPCON—Operational Control
OPLAN—Operational Plan
OPORD—Operational Order
OPR—Office of Primary Responsibility
OPREP—Operational Report
ORM—Operational Risk Management
QRH—Quick Reference Handbook
P—Pilot
PEX—Patriot Excalibur
PF—Pilot Flying
PFPS—Portable Flight Planning System
PIC—Pilot In Command
PL—Protection Level
PM—Pilot Monitoring
PNF—Pilot Not Flying
POC—Point of Contact
PRC—Portable Radio Communicator

RDS—Records Disposition Schedule
RNAV—Area Navigation
ROE—Rules of Engagement
RUF—Rules of Use of Force
RVR—Runway Visibility Range
SATCOM—Satellite Communications
SI—Spectrum Interference
SID—Standard Instrument Departure
SITREP—Situation Reports
SKL—Secure Key Loader
sm—Statue Mile
SOCCS—Special Operations Command and Control Squadron
SOCCE—Special Operations Command and Control Element
SOF—Special Operations Forces
SOAWC—Special Operations Air Warfare Center
STAR—Standard Terminal Arrival
STS—Special Tactics Squadron
TDZ—Touch Down Zone
TDZE—Touch Down Zone Elevation
TCAS—Traffic Collision Avoidance System
TOLD—Takeoff and Landing Data
TPC—Tactical Pilotage Chart
TSA—Transportation Security Administration
TSOC—Theater Special Operations Command
UNQ—Unqualified
USDAO—US Defense Attaché Office
USSOCOM—United States Special Operations Command
VFR—Visual Flight Rules
VMC—Visual Meteorological Conditions
VOR—VHF Omnidirectional Range
Vref—Reference Speed

Terms

ABORT—To turn back from or cut short a mission before its successful completion for reasons other than enemy action. This may occur after an aircraft is airborne or on the ground before takeoff.

ACCELERATE–STOP DISTANCE—The runway required to accelerate the aircraft to rotate speed, experience engine failure, and stop using the brakes IAW the AOH.

ADDITIONAL CREW MEMBER (ACM)—An additional crew member is one assigned in addition to the normal aircrew complement required for a mission for purposes of supervising or monitoring in-flight procedures.

ALERT AIRCRAFT—An operationally ready aircraft specifically designated to be launched IAW timing factors established for the assigned missions with a ready crew available.

BORDER CLEARANCE—Those clearances and inspections required to comply with federal, state, Agricultural, Customs, Immigration, and Immunization requirements.

COMMANDER, AIR FORCE SPECIAL OPERATIONS FORCES (COMAFSOF)—The commander designated by Commander, United States Special Operations Command (CDRUSSOCOM) for CONUS deployments or by Theater SOC/CCs for overseas deployments, who is responsible for management of Air Force Special Operations Forces (AFSOF) within a theater, a geographic area, or a designated operation. The COMAFSOF is responsible to CDRUSSOCOM for management of CONUS-deployed AFSOF or to the respective SOC/CC for management of theater assigned AFSOF and is responsible to COMAFSOF for monitoring and management of AFSOF operating within the specific area of responsibility.

COMMAND AND CONTROL—An arrangement of personnel and facilities, plus the means of acquisition, processing, and dissemination of information, used by a command in planning, directing, and controlling operations.

CREW COMPLEMENT—The number of crew personnel used for a specific mission.

DESIGNATED REPRESENTATIVE—Individuals authorized in writing by the appropriate command level as having decision-making authority.

EXERCISE—A military maneuver or simulated wartime operation involving planning, preparation, and execution. It is carried out for the purpose of training or evaluation. It may be combined, joint, or single-service, depending on participating organizations.

HAZARDOUS CARGO or MATERIALS—Explosive, toxic, caustic, nuclear, combustible or flammable, biologically infectious, or poisonous materials that may directly or indirectly endanger human life or property, particularly if misused, mishandled, or involved in accidents (AFJI 11-204, *Operational Procedures for Aircraft Carrying Hazardous Material*).

MANIFEST—Movement record of traffic airlifted on aircraft operated by, for, or under the control of the Air Force.

MISSION FOLLOWING—Monitoring the location and status of aircraft and crews through the use of departure, arrival, and advisory messages.

OPERATIONALLY READY AIRCRAFT—An aircraft which is capable of flight with all required equipment operable to carry out the primary assigned mission.

Attachment 2

EQUAL TIME POINT CALCULATIONS

A2.1. Equal Time Point (ETP). The equal time point is an airborne decision point. It is the point along the route of flight (usually over water) from which it takes the same amount of time to return to the point of departure (or to the last suitable airfield) as it would to continue to the destination (or the first suitable airfield). In no wind conditions, the ETP is simply the halfway point between the two airfields. However, when flying into a headwind, the ETP moves closer to the destination aerodrome. Conversely, when flying into a tailwind, the ETP moves closer to the departure aerodrome. These calculations will also be impacted by the decision to fly at lower altitudes due to loss of aircraft pressurization without supplemental oxygen. The distance and time to the ETP from the departure aerodrome (or last suitable airfield) may be calculated using the following formulas: (reference [Figure A2.1](#) and [A2.2](#))

Figure A2.1. Equal Time Point Formula, Problem, and Solution.

$$\text{Distance to ETP} = \frac{(\text{Total Distance}) \times (\text{Ground Speed Home})}{(\text{Ground Speed Out}) + (\text{Ground Speed Home})}$$

$$\text{Time to ETP} = \frac{\text{Distance to ETP}}{\text{Ground Speed Out}}$$

Problem:

Distance from A to B=800 nm

Wind: 50 kts headwind

TAS: 250 kts

Solution:

$$\text{Distance to ETP} = \frac{800 \times 300}{200 + 300} = \frac{240,000}{500} = 480 \text{ nm}$$

GS Out: 200 kts (250 kts - 50 kt headwind)

$$\text{Time to ETP} = \frac{480 \text{ nm}}{200 \text{ kts}} = 2.4 \text{ hrs}$$

Figure A2.2. Example.

