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AIRCREW LIFE SUPPORT (ALS) PROGRAM

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This instruction establishes ALS objectives, responsibilities, administrative, deployment and contingency operations, training, clothing, and aircrew life support equipment requirements. Major Commands (MAJCOM) and the Air National Guard (ANG) must comply with the requirements for ALS and survival equipment in this publication and applicable Air Force technical orders. This publication applies to all MAJCOMs and the ANG when published in the ANGIND 2. Life Support Officers (LSO) or MAJCOM Functional Managers (FM) for each MAJCOM or Numbered Air Force (NAF), as well as field operating agencies (FOA) must send one copy of MAJCOM supplements to this publication to HQ USAF/XOOP, 1480 Air Force Pentagon, Washington DC 20330-1480. Send comments and suggested improvements to this instruction on an AF Form 847, **Recommendation for Change of Publication**, through appropriate channels, IAW AFI 33-360, Volume 1*, The Air Force Publications and Forms Management Programs—Developing and Processing Publications*, to HQ USAF/XOOP. Intervening levels will evaluate all recommendations and forward the AF Form 847 to the next echelon. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this instruction does not imply endorsement by the Air Force. **Records Disposition**. Ensure that all records created by this AFI are maintained and disposed of IAW AFMAN 37-139, *Records Disposition Schedule*.

(AFMC) This supplement establishes the Aircrew Life Support (ALS) Program for HQ AFMC, AFMC depots that have associate reserves personnel assigned to support flight test operations and AFMC field activities that have personnel assigned or attached for flying. It implements AFPD 11-3, *Life Support*. This supplement applies to all personnel, including passengers, flying in aircraft for which AFMC is responsible or may be contractually liable for loss or damage. This supplement does not apply to the Air National Guard (ANG).

SUMMARY OF REVISIONS

This revision is a compilation and consolidation of information formerly contained in previous AFI 11-301, dated 1 June 98, MAJCOM 11-301 Instructions, as well as supplements thereto. Among the changes too numerous to mention in this section, this revision formally identifies the requirement for an ALS Functional or Career Field Manager in the rank of Chief Master Sergeant on the Air Staff (paragraph **2.2.1.2.**), changes training requirements for ALS personnel (Table 4) changes ALS Continuation Training frequencies and AFORMS event identifiers (Table 5), and expands guidance on minimum aircrew protective clothing requirements (**Chapter 6**).

(AFMC) This supplement incorporates policy and procedures previously contained in AFMC Supplement 1, AFI 11-301, *AFMC Aircrew Life Support Program*, 11 February, 2000. It expands on AFI 11-301 and other Air Force directives concerning ALS, Survival, Evasion, Resistance, and Escape (SERE) Training Instructor, equipment maintenance, the Air Force Test Parachute Program (TPP) responsibilities, Life Support Human System Wing (HSW) and the Air Force Research Laboratory (AFRL) personnel.

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Chapter 1

OVERVIEW

1.1. Mission. Provide USAF aircrew safe and effective ALS systems and programs. To protect and sustain human life during flight operations. Prepares aircrew and passengers to survive, affect their rescue, and return to duty if forced to abandon their aircraft during an emergency.

1.1. (AFMC) Mission. Provide AFMC aircrew and passengers top quality, safe and effective ALS equipment, training and programs.

1.2. Program Objectives:

1.2.1. Increase combat capability of the total weapon system by enhancing the performance of the aircrew.

1.2.1. (AFMC) HQ AFMC/DOV will establish minimum guidance for standards of life support operations within AFMC and the Air Force TPP at Edwards AFB, CA.

1.2.2. Reduce injuries and increase survival rates by providing aircrew and passengers with the best equipment available through new technologies and system training.

1.2.3. Identify requirements for modernization and new equipment by analyzing: customer-validated operational requirements, operational deficiencies, USAF suggestions and recommendations, Air Force technical order (T.O.) improvement reports, aircraft mishap report recommendations, and joint developmental programs from other DOD agencies.

1.2.4. Train aircrew and passengers to use their aircrew life support equipment (ALSE) in a manner, which reinforces recall during emergency situations. Training should be accomplished using training equipment that mirrors operational equipment and realistic scenarios, which aircrew and passengers are likely to encounter. Realistic training will ensure aircrew and passengers have confidence in their equipment and their ability to use it.

1.2.5. Train and qualify ALS personnel (Air Force Specialty Code [AFSC] 1T1X1) to maintain ALSE in optimum condition and to conduct aircrew life support continuation training (ALSCT).

1.3. Supplements and Waivers:

1.3.1. MAJCOM and field operating agency (FOA) functional managers must forward a copy of their supplement to this publication to HQ USAF/XOOP, 1480 Air Force Pentagon, Washington DC 20330-1480.

1.3.1. (AFMC) Supplements. Units are not required to supplement this instruction unless, necessary for unique unit requirements (refer to paragraph **2.9.2.1.**). If supplements are necessary, submit IAW AFI 33-360, Volume 1, Publications Management Programs. Send unit supplements to HQ AFMC/DOV for approval.

1.3.2. MAJCOMs, direct report units (DRU), wings, FOAs may request waivers as well as deviations to requirements of this instruction when unique or unusual circumstances affect the unit's ability to implement stated policy or procedure. MAJCOMs and DRUs (e.g., DOT/XOT or higher) will forward the request by letter or message to HQ USAF/XOOP explaining why a waiver is needed and describing the specific requirement that is creating the problem. Wings and FOAs will process waivers

through their respective MAJCOM authority for submission to HQ USAF/XOOP. Wings (Operations Group Commander or higher) and FOAs (Operations Group Commander or equivalent) may request waivers to MAJCOM supplements by submitting their waiver request to the specific MAJCOM. Air Force Reserve Command (AFRC) units will forward waiver requests through NAF channels to HQ AFRC.

1.3.2. (AFMC) Waivers. Deviations from this supplement are not authorized without HQ AFMC/DOV written approval. Units may request waivers when unique circumstances or requirements affect their capability to support the programs, policies and procedures that are in this supplement. Forward AFMC Form 73, AFMC Flight Operations Waiver Request, with supporting information to HQ AFMC/DOV, 508 W. Choctawhatchee Ave., Suite 4, Eglin AFB, FL 32542-5713.

1.3.2.1. If approved, waivers remain in effect for the amount of time needed to correct the problem causing the waiver requirement, not to exceed one year. The approving agency may cancel the waiver in writing if issues change the basic intent or requirement for the waiver.

1.3.2.1. (AFMC) Government Flight Representatives (GFRs) within AFMC will submit written request to waive specific requirements of this instruction that are not included in, or conflict with, contractual requirements.

1.3.2.1.1. (Added-AFMC) Changes. Units are encouraged to propose and recommend policy and procedural improvements to this supplement. Submit all suggested changes and improvements to this supplement on AF Form 847, **Recommendation for Change of Publication**. Send AF Form 847 to HQ AFMC/DOV, 508 W. Choctawhatchee Ave., Suite 4, Eglin AFB, FL 32542-5713.

1.3.3. MAJCOMs will supplement this instruction for their unique programs within 12 months of the publication date of this instruction**.**

1.3.4. **Communications:**

1.3.4.1. All subordinate units will ensure ALS matters, including requests for waivers, are channeled through their group ALS staff.

1.3.4.2. At the wing level, direct communication with HQ USAF/XOOP, Air Logistics Centers (ALC), Human Systems Program Office (SPO), or Depots offices is not authorized without prior approval and coordination with respective MAJCOM or ANG FMs. If immediate contact is required in an emergency situation, advise respective MAJCOM FMs as soon as possible.

1.3.4.3. Do not request waivers by telephone. Use letter or message format to request waivers depending on urgency.

1.3.4.4. Keep messages to a minimum. When sending messages requiring an action by higher headquarters (HHQ), provide information copies to all command agencies involved. Units will ensure equivalent local coordination on messages prior to transmission when responding to coordinated messages.

1.3.4.5. Use written communications to explain actions or request assistance from a higher echelon. Forward the request to the next HHQs for action and do not bypass channels.

1.3.4.6. E-mail Procedures. Units are encouraged to use E-mail to facilitate correspondence. Use E-mail when an interim response is needed or to answer a HHQs tasking not requiring a formal response.

1.3.4.7. Units will periodically check their respective MAJCOM web page to ensure receipt of all applicable information.

Chapter 2

RESPONSIBILITIES

2.1. Shared Responsibilities. MAJCOMs and FOA director of operations (DO), ANG/DOOS, and comparable positions in the Numbered Air Forces (NAF), centers, and subordinate units share responsibilities for execution of ALS policy.

2.2. HQ USAF/XOO (Director of Operations & Training) through HQ USAF/XOOP (Personnel Recovery Division):

2.2.1. Is responsible for the Air Force ALS program.

2.2.1.1. The Chief, Personnel Recovery Division (HQ USAF/XOOP) oversees the entire ALS program.

2.2.1.2. An active duty ALS functional manager (1T100) will be assigned to manage ALS matters and serve as the Air Force career field manager (AFCFM) for AFSC 1T1X1.

2.2.2. Coordinates on Air Staff, MAJCOM, ANG, and FOA operations and training issues (aircrew and technician).

2.2.3. Coordinates with other Air Staff offices that affect ALS programs; aircrew chemical defense equipment and procedures; research and development (R&D) of ALSE; logistics; egress; survival equipment; and Nuclear, Biological, and Chemical (NBC) defense doctrine, policy, training; and tactics, techniques, and procedures.

2.2.4. Hosts an annual Air Staff working group with representatives involved with Aircrew Protection responsibilities. Membership should include representatives from HQ USAF/XOOP (Personnel Recovery Division), HQ USAF/ILMM (Egress and Survival Equipment Career Field Manager), AFMOA/SGOA (Aerospace Medicine), SAF/AQPC (Life Support PEM), HQ USAF/ILEXR (CE Readiness), HQ USAF/ILSP (Logistics), AFSC (Safety), and aircrew representation. The intent of the working group is to build a network of contacts, keep lines of communication open, and resolve Aircrew Protection issues that are cross functional in nature. Similar working group meetings will be held annually at MAJCOM and ANG level.

2.2.5. Advises on ALS issues.

2.2.6. Briefs Air Staff directorates and other officials or organizations on ALSE and training issues.

2.2.7. Serves on Air Force, joint inter-agency, and industry groups, boards, task forces, committees, and conferences dealing with ALS operational issues.

2.2.8. Assists Air Education and Training Command (AETC) in formulating, implementing, and evaluating formal training programs for ALS personnel.

2.2.9. Convenes the biennial World-Wide Life Support Workshop (WWLSW).

2.2.10. Participates in MAJCOM and ANG ALS conferences, as needed.

2.2.11. Manages the USAF Outstanding ALS: Airman, Noncommissioned Officer (NCO), Senior NCO, Officer, and Civilian of the Year Awards Program, IAW AFI 36-2807, *Headquarters United States Air Force Deputy Chief of Staff Air and Space Operations Annual Awards Program*.

2.2.12. Monitors:

2.2.12.1. MAJCOM, ANG, and FOA ALS programs.

2.2.12.2. Command-level technical concerns affecting ALS systems and subsystems, manpower resources, and equipment.

2.2.12.3. Commercial Off-The-Shelf (COTS) ALSE or Non-Developmental Items (NDI) that Air Force aircraft and aircrews might use as ALSE.

2.2.12.4. Aircraft acquisition, conversion, and modification programs to ensure proper integration of ALSE and weapon systems.

2.2.12.5. Development of Operational Requirements Documents (ORD) IAW the Paperwork Reduction Act of 1974, Amended in 1996, and development of Mission Needs Statements (MNS).

2.2.13. Reviews aircraft mishaps in which aircrews have used ALSE or systems.

2.2.14. Works with office of primary responsibility (OPR) and the AFMC ALS System Manager to ensure they publish and distribute technical publications and training equipment before new ALSE is fielded. Ensures technical schools have assets to support new training requirements.

2.2.15. The Undergraduate Program Guidance Letter (UPGL) and shortfalls with formal ALS and survival training program quotas.

2.3. The Air Force Aircrew Protection Executive Committee (APEC):

2.3.1. The APEC is an oversight and steering group body that provides direction and advocacy for all ALS programs. The purpose of the APEC is to prioritize and provide Air Force direction to resource sponsors and the Single Manager for ALS systems research, development, testing, evaluation, acquisition, and sustainment (311 HSW/YA).

2.3.2. The objective is to advocate Air Force sponsored ALS systems research and development funding priorities, equipment procurement funding priorities, and ALS systems related Integrated Process Team (IPT) recommendations with user needs.

2.3.3. The APEC will meet annually to receive briefings on ALS systems programs and plans, discuss issues, and establish a strategic plan for future development and acquisition. In addition, the APEC will prioritize sustainment activities related to currently fielded equipment. APEC membership will include representation from all MAJCOMs, the ANG, and the Air Staff.

2.3.4. HQ USAF/XOOP and 311 HSW/YA will co-chair the APEC. The host (311 HSW/YA) will arrange for a suitable conference site, announce the meeting, and via message provide an agenda and specific details related to the meeting.

2.3.4.1. The APEC will operate under a charter approved by HQ USAF/XOO.

2.4. HQ USAF/SE (Chief of Safety). Through the Air Force Safety Center, Life Sciences Branch, this office:

2.4.1. Provides statistical data, analysis, and recommendations on all mishaps or incidents involving ALSE or training.

2.4.1.1. Provides this information to MAJCOMs to improve their continuation training lesson plans.

2.4.2. Monitors the Air Force ALS Program to ensure aircrews maintain safety standards.

2.4.3. Provides technical assistance on request to aircraft mishap investigation boards.

2.4.4. Serves on the APEC.

2.4.5. Attends the WWLSW and MAJCOM meetings. Briefs attendees on aircrew use of ALSE, their performance during aircraft mishaps, and general safety concerns.

2.4.6. Attends Air Force, joint agency, and industry meetings, boards, task forces, and conferences that deal with ALSE, as required.

2.4.7. Provides a representative to the Air Staff Aircrew Protection Working Group (APWG).

2.5. SAF/AQP (Office of the Assistant Secretary of the Air Force for Acquisition, Directorate Global Power Program):

2.5.1. Monitors the development and acquisition of new ALSE.

2.5.2. Assigns an officer to serve on the APEC and ensures the ALS Program Management Directive contains the research, development, and acquisition strategies and priorities of the APEC.

2.5.3. Monitors ALS System Development and Demonstration (SDD) programs aimed to satisfy validated user requirements.

2.5.4. Attends the WWLSW and briefs attendees on ALS research, development, and acquisition issues.

2.5.5. Provides a representative to the Air Staff and APWG.

2.6. HQ USAF/SG (Surgeon General). Through the Air Force Medical Operations Agency (AFMOA/SGOA), this office:

2.6.1. Manages all aerospace physiological training and support programs according to AFI 11-403, *Air Force Aerospace Physiological Training Program*.

2.6.2. Oversees the medical aspects of the ALS program.

2.6.3. Sets guidelines for infection control.

2.6.4. Provides representation to the APEC and APWG.

2.7. Air Force Materiel Command (AFMC). Through the 311th Human Systems Wing (311 HSW/YA), this office:

2.7.1. Is the single point authority (i.e., Single Manager) for ALS systems, managing specific ALSE from its development, engineering, and sustainment to final disposition.

2.7.1.1. Maintains Operational Safety, Suitability, and Effectiveness (OSS&E) compliance of all fielded and future ALSE IAW AFI 63-1201, *Assurance of Operational Safety, Suitability, & Effectiveness*.

2.7.1.2. Manages and maintains a Master Configuration List (MCL) for all man-side and aircraft ALS related systems. The MCL will provide a list of all authorized subsystems and equipment in the Air Force ALS inventory.

2.7.1.3. Maintains and updates Air Force T.O. 00-25-06-2-1, *Intermediate Maintenance, 412A Survival/Life Support System Equipment Work Unit Code Manual*, when new equipment is fielded. If new equipment items are command specific, then the lead command will sponsor the update.

2.7.2. Ensures fielded ALS systems and subsystems are integrated with newly developed technologies, systems, and subsystems. Conducts product engineering evaluations and analysis with the purpose of providing users safe-to-fly certifications and recommendations.

2.7.3. Monitors and participates in the acquisition of ALS systems and subsystems for COTS aircraft converted for Air Force missions.

2.7.4. Monitors and establishes procedures for the acquisition of ALSE through the COTS/NDI programs. Monitors and tracks the procurement, approval, and capability of COTS/NDI systems used to meet Air Force requirements documented in formal requirement documents to include requirement letters.

2.7.5. Conducts an ALS science and technology program to ensure technologies will exist to satisfy future Air Force requirements.

2.7.6. Works with and monitors other service's ALSE acquisition and developments to avoid duplication of effort in the science and technology program.

2.7.7. Develops a technology transfer plan to move exploratory and advanced development ALS technologies into full-scale development.

2.7.8. Develops procedures to control and coordinate the configuration of ALS subsystems and equipment among MAJCOMs and the ANG.

2.7.9. Encourages operational input to ALS programs by ensuring MAJCOM and ANG representatives attend key acquisition events.

2.7.10. Develops, publishes, and maintains an Aircrew Protection Strategic Plan (APSP) outlining ALS systems acquisition and sustainment strategies. The APSP will use APEC directed priorities as a basis for the strategic plan.

2.7.11. Employs a Human Systems Support Manager (SSM) to provide centralized logistics support of the ALS systems.

2.7.12. Serves as the approval authority for aircrew and aircraft-installed ALSE through T.O. publication.

2.7.13. Establishes procedures for intra-command coordination and configuration control of ALS subsystems and equipment.

2.7.14. Assists MAJCOMs in determining training requirements for system changes.

2.7.15. Assists MAJCOMs and ANG in developing initial production funding plans for each ALS endeavor.

2.7.16. Provides technical assistance and laboratory analysis to aircraft mishap safety investigation boards as requested and to the Joint Task Force-Full Accounting (JTF-FA) and Central Identification Laboratory-Hawaii, assisting in determining the status of DOD warfighters missing in action.

2.7.17. Monitors the shelf-life program IAW AF Manual (AFMAN) 23-110, Volume 7, Part 3, *The AF Shelf-Life Program*.

2.7.18. Leads effort to develop and submit Sustainment Engineering Requirements Plans (SERP).

2.8. Air Force Operational Test and Evaluation Center:

2.8.1. Plans and conducts realistic, objective, and impartial operational test and evaluation (OT&E) to determine the operational effectiveness and suitability of Air Force systems and their ability to meet mission needs.

2.8.2. Advises MAJCOMs and ANG on operational test issues.

2.9. MAJCOM and ANG. Assign a full time ALS MAJCOM Functional Manager to manage the ALS program (MAJCOM FM may delegate their responsibilities to NAF points of contact [POC] or appoint weapon system team chiefs to handle specific issues).

2.9. (AFMC) AFMC Office of Primary Responsibility (OPR) for this supplement is HQ AFMC/DOV.

2.9.1. Provides representation to the APEC. Provides the status of their ALS programs to the APEC.

2.9.2. Establishes command-specific ALS programs according to AFIs and applicable MAJCOM and ANG instructions.

2.9.2.1. Establishes and publishes Technical Order options list for their respective commands. Exceptions to gaining MAJCOM options will be published by Air Reserve Component (ARC) ALS managers.

2.9.2.1. (AFMC) **Major Command (MAJCOM) Technical Order (TO) Options.** The T.O. procedures listed as "MAJCOM option" are contained in **Attachment 2 (Added)**. If additional procedures become mandatory, units will be advised by message or supplement change. All other "MAJCOM options" will be determined at wing/unit level to standardize TO options within each unit. Life support officers (LSOs) for AFMC squadrons, detachments with no wing function, or tenant units on non-AFMC bases may determine TO options for their unit. All unit options will be reflected in local supplements.

2.9.2.2. (Added-AFMC) Air Force Research Laboratory (AFRL) Life Support Personnel Responsibilities: Aircrew Life Support personnel assigned to AFRL are subject matter experts and liaisons between the field and the laboratory in the research and development of (ALSE) and human-related studies.

2.9.2.2.1. (Added-AFMC) Assemble, inspects, and maintains ALSE necessary to support research, test and evaluation of ALSE and aircrew protection-related studies.

2.9.2.2.2. (Added-AFMC) Fit and adjust ALSE on test subjects participating in laboratory studies.

2.9.2.2.3. (Added-AFMC) Submit technical order improvement reports on ALSE on both fielded items and those involved in test and evaluation.

2.9.2.2.4. (Added-AFMC) Draft, edit and review maintenance procedures necessary to support prototype ALSE under development.

2.9.2.2.5. (Added-AFMC) Participate in flight safety evaluation boards assessing safety of ALSE items prior to flight-related studies.

2.9.2.2.6. (Added-AFMC) Maintain current technical orders for conventional ALSE used in the laboratory.

2.9.2.2.7. (Added-AFMC) Support System Program Offices during acquisition-related activities to include review edit and draft of acquisition-related documents.

2.9.2.2.8. (Added-AFMC) Participate in Aircrew Protection Working Group activities as defined in the Aircrew Protection Executive Council (APEC) charter to ensure executive leadership is kept apprised of emerging technologies and to return to the laboratory issues plaguing the aircrew protection community.

2.9.2.2.9. (Added-AFMC) Assess effectiveness of agencies supporting Operational Utility Evaluation (OUE) activities.

2.9.2.2.10. (Added-AFMC) Monitor tests involving live test subjects utilizing ALSE.

2.9.2.2.11. (Added-AFMC) Evaluate performance of ALSE deliverables related to acquisition, research and development contracts.

2.9.2.2.12. (Added-AFMC) Research field-queries submitted from field units through each of the MAJCOMs.

2.9.2.2.13. (Added-AFMC) Assigned technicians may volunteer to participate as test-subjects during ALSE-related studies.

2.9.2.2.14. (Added-AFMC) Constructed/modify test assets necessary to support laboratory ALSE studies.

2.9.3. Reviews aircraft mishaps and incident reports (command specific) involving ALSE and resulting recommendations.

2.9.4. Through the Allowance Standard (AS) manager; annually reviews and validates AS 016, *Special Purpose Clothing and Personal Equipment*, and AS 450, *Personal/Life Support Equipment*, for accuracy and adequacy.

2.9.5. Identifies operational requirements and prepares MNSs and ORDs, as required. Coordinates with appropriate maintenance activities (i.e., Survival equipment and Egress) prior to submission.

2.9.5.1. Maintains integrity of the OSS&E baseline for all ALSE IAW AFI 63-1201 by ensuring newly developed (COTS/NDI) ALSE and modifications to existing ALSE pursued by units for Air Force aircraft as well as for aircrew use are evaluated and approved by the ALSE Single Manager, 311 HSW/YA.

2.9.6. Participates in periodic research, development, test and evaluation (RDT&E) program reviews as requested by AFMC.

2.9.7. Provides qualified aircrew member and appropriate maintenance personnel (if applicable) expertise early in the requirements definition phase and is involved throughout the RDT&E and acquisition process.

2.9.8. Lead MAJCOMs will publish weapon system specific policy for configuration requirements addressing aircrew and aircraft-installed ALSE IAW AFPD 10-9, *Lead Operating Command Weapon Systems Management*.

2.9.9. Participates in and monitors OT&E of ALSE. If the item is of an MDS specific nature, the lead command for that MDS (refer to AFPD 10-9) will oversee the process with AFMC.

2.9.10. Attends Air Force, joint agency, and industry meetings, groups, boards, task forces, committees, and conferences dealing with developing, modifying, or researching ALSE.

2.9.11. Advises users when the lead MAJCOM will no longer procure specific ALSE for them. This will allow MAJCOMs and ANG time to budget for the equipment.

2.9.12. Establishes ALS continuation training (ALSCT) programs.

2.9.13. Establishes and evaluates ALS technician and supervisor training programs IAW AFI 36-2201, *Developing, Managing, and Conducting Training*. LSOs and enlisted ALSCT instructors must comply with AFI 36-2105, *Officer Classification*, AFI 36-2108, *Airman Classification*, and Table 2 of this instruction. Each MAJCOM will review and update the Career Field Education and Training Plan (CFETP), Attachment 3, as required.

2.9.14. Coordinates formal training requirements between the MAJCOM and ANG, Director of Personnel for submitting class quotas for LSOs and technicians to attend AETC courses.

2.9.15. Ensures LSOs (rated officers) fly periodic sorties in primary assigned aircraft to evaluate the adequacy of personal and aircraft-installed ALSE.

2.9.16. Provides guidance to units for using, controlling, and safeguarding ALSE.

2.9.17. Establishes and evaluates unit quality assurance (QA) programs.

2.9.18. Evaluates AFTO Forms 22, **Technical Order Improvement Report and Reply**, and AF Form 1000, **Idea Application**, which refer to ALS systems.

2.9.19. Monitors command manning levels and coordinates with MAJCOM/DP to ensure ALS manning is optimized. Ensures units notify MAJCOM FMs prior to changing manpower authorizations.

2.9.20. Monitors the forecasting of replacement requirements for calendar time-change items IAW T.O. 00-20-9, *Forecasting Replacement Requirements for Selected Calendar and Hourly Time-Change Items*.

2.9.21. Monitors deficiency reports (DR) applying to the ALS system.

2.9.22. Monitors the overall operation of the ALS Program in subordinate units. Serves as a focal point concerning unit ALS matters.

2.9.22.15. (Added-AFMC) Brief ALS community on emerging technologies at biennial Worldwide Life Support Conference.

2.9.23. Annually or as required, hosts a working group meeting with MAJCOM representatives involved with Aircrew Protection responsibilities. Membership should include; Egress, Survival Equipment, Aerospace Medicine, CE Readiness, Logistics, Survival, Evasion, Resistance, and Escape (SERE), Safety, and aircrew representation. The intent of this working group is to foster a spirit of cooperation, keep lines of communication open, and resolve Aircrew Protection issues that are cross functional in nature. Forward appropriate issues to Air Staff counterparts.

2.9.23. (AFMC) As required, units will host a working group meeting with organizations involved with Aircrew Protection responsibilities. Membership should include; Egress, Survival Equipment, Aerospace Medicine, CE Readiness, Logistics, SERE, Safety, and aircrew representation as applicable to the unit. Forward appropriate issues to the MAJCOM and other AFMC field units.

2.9.24. Monitors and reviews the unit type code (UTC) logistics detail (LOGDET) for changes in missions and requirements. See **Chapter 6** for specific pilot and non-pilot unit responsibilities.

2.9.25. Conducts periodic site visits (e.g., staff assistance visit [SAV], aircrew standardization and evaluation visit [ASEV], readiness assistance visit [RAV]) to subordinate units for the purpose of providing HHQ level assistance and to remain connected to unit level requirements.

2.9.26. Identifies, submits and advocates command ALS program requirements through the command's Program Objective Memorandum (POM), Requirements Review Board, Financial Management Board and other resource management system processes.

2.9.27. Manages ALS cost factors for the Air Force Cost Analysis Improvement Group/Cost Per Flying Hour (AFCAIG/CPFH) program.

2.9.27.1. Identifies and defines, by National Stock Number, total life support program AFCAIG/CPFH requirements for each MDS aircraft configuration within the command.

2.9.27.2. Provides ALS annual call requirements to the MAJCOM/LG AFCAIG/CPFH manager for inclusion in the AFCAIG/CPFH program funds budget process.

2.9.27.3. Notifies unit Operations Group commanders of approved “funded” requirements and ensure program needs are met.

2.9.28. Serves as ALS Functional Area Manager (FAM) for Aerospace Expeditionary Force (AEF) issues.

2.10. Operations Group Commander or ARC Equivalent:

2.10.1. The operations group commander or equivalent will appoint a rated officer to serve as the LSO and the wing ALS manager. An ALS Senior NCO (or civil service or contractor equivalent) will serve as the wing life support superintendent (LSS) to assist the LSO in the management of the wing ALS Program. The group LSO and the LSS are responsible to the operations group commander for the management of the wing/group ALS program. **EXCEPTION***:* Appointment of an LSO in the ANG and rescue flight is optional.

2.10.1. (AFMC) Director of Flying Operations (DFO) is responsible for unit ALS functions. Appoint, in writing a rated LSO who has charge of all ALS matters, including survival training. The LSO will not be required to perform other additional duties, except as required by limited manning requirements at small squadrons and detachments. Send one copy of the appointment letter to HQ AFMC/DOV, Life Support Branch.

2.10.1.1. (Added-AFMC) Additional Duty LSO Responsibilities. AFMC squadrons, detachments, and government flight representatives (GFR) that are tenants on non-AFMC bases will appoint an additional duty LSO. This LSO monitors the host's or contractor organization's ALS program as it applies to the AFMC activity and makes sure this instruction is followed. When AFMC equipment, training or procedural requirements differ from host base or contractor programs, the DFO will make sure host-tenant or contract support agreements include these require-

ments where possible. Inform the HQ AFMC/DOV Life Support Branch, in writing, of those portions of support that cannot be provided according to this supplement. If necessary, request support from the nearest major AFMC base.

2.10.2. Ensure the LSS or government quality assurance representative (for contract organizations) is appointed to the wing Exercise Evaluation Team (EET) to evaluate and ensure compliance with ALS areas of responsibility.

2.10.3. Ensure the ALSCT program is actively managed and instructors are qualified and certified IAW **Chapter 5** of this publication.

2.10.4. Ensure adequate distraction-free training facilities, sites and equipment are available to conduct all ALSCT events.

2.10.5. Ensure ALS facilities meet standards in AFI 32-1024, *Standard Facility Requirements*, and AFH 32-1084, *Facility Requirements*.

2.10.5. (AFMC) AFMC Units will ensure they follow T.O. 15X-1-1, Oxygen Equipment, recommended procedures when setting up an ALS facility.

2.10.6. Ensure funds are allocated for the continued management of all ALS programs and contingency plans.

2.10.7. During wartime contingencies, Inspector General Exercises (IGX), Operational Readiness Exercises (ORE), Mobility Exercises (MOBEX), Readiness Assistance Visits (RAV), and generation exercises, ALS personnel must be available to perform mission-essential duties to sustain ALS operations (i.e., ALSE issue, fitting and inspection, aircraft-installed ALSE configurations, pre-deployment ALS briefings, aircrew contamination control area (ACCA) operations, ALSE decontamination, etc.).

2.10.8. Ensure standardized guidance is provided for aircraft and ALSE configurations, mobility and chemical defense operations at bare-base and unit exercise locations. Standardized guidance will be provided to the maximum extent possible.

2.10.9. Ensure ALS functions are advised of changes to applicable contingency plans in time to ensure required equipment is available for deployment.

2.10.10. Ensure compliance with minimum ALSE requirements as established by the provisions of AFI 11-202, Volume 3, *General Flight Rules*, this instruction, applicable technical orders, and aircraft flight manuals.

2.10.11. Ensure all aircrew and passengers wear or have readily available aboard the aircraft for use all required ALSE. In no case will equipment worn or carried on aircraft be less than that prescribed by AFI 11-202, Vol 3 and AFI 11-302, Volume 1, *C-5, C-9, C-17, C-20, C-21, C-27, C-130, C-141, KC-10 and C/KC-135, Maintenance and Configuration Requirements for Aircrew and Aircraft-Installed Life Support Equipment (LSE)* (projected to be AFI 11-301, Volume 2).

2.10.12. Ensure only flying clothing and ALSE items approved “safe-to-fly” and authorized by the Air Force Equipment Management System (AFEMS), T.O.s, aircraft-specific manuals, and this instruction are utilized for flight operations. All other items require approval from appropriate MAJCOM ALS focal point prior to use.

2.10.13. Evaluate and forward waiver requests to respective MAJCOMs, NAFs or ANG.

2.10.13.1. Operations Group commanders may request waivers to requirements of this publication when unique or unusual circumstances affect the unit's ability or requirements to implement stated policy or procedure. Forward requests by letter or message through appropriate MAJCOM or ANG to HQ USAF/XOOP describing the specific requirement that is creating the problem and explaining why a waiver is needed.

2.10.13.2. If approved, waivers remain in effect for 1 year unless HQ USAF/XOOP specifies a shorter period of time, cancels it in writing, or issues a change that alters the basis for the waiver.

2.10.13.3. ANG units will forward waiver requests through the POC to ANG/DOOS.

2.10.13.4. AFRC units will forward waiver requests through applicable NAF to HQ AFRC/DOT.

2.11. Operations Group LSO/LSS. The LSO and LSS will:

2.11.1. Ensure ALS personnel are trained and certified IAW **Chapter 4** of this instruction.

2.11.2. Ensure a T.O. distribution account is established for each ALS section assigned within the operations group. Ensure that ALS sections maintain a current file of publications, T.O.s and manuals pertaining to issue, inspection, maintenance and use of assigned ALSE, and ensure compliance with instructions contained therein. Ensure a familiarization program exists to ensure ALS personnel are knowledgeable of T.O.s and publications.

2.11.3. Conduct SAVs annually to each subordinate activity. Maintain records of such visits for at least 2 years IAW 37-139. The respective functional manager will determine SAV frequencies for the ANG and AFRC.

2.11.4. Route visit reports through the operations group commander (or equivalent) to provide them with an accurate picture of units' health.

2.11.5. Monitor Time Compliance Technical Order (TCTO) programs to ensure satisfactory integration of ALSE with aircrew recovery systems. Advise HHQs of program delays or supply problems as they occur, and upon completion of the TCTO.

2.11.6. Prepare and evaluate ALS related portions of local support agreements. The LSS is responsible for conducting an annual review. Units providing host support to tenant units will maintain authorized ALSE according to support agreements and directives.

2.11.7. LSOs will maintain currency in unit-equipped aircraft. If equipment modifications are made that change ground egress, ejection procedures, or affect crew comfort, LSOs will fly with the new equipment to identify required changes to operational and training procedures. This duty may be delegated to squadron level LSOs for those units with more than one mission design series (MDS).

2.11.8. Support Aero Clubs, if within unit capability, with issue of ALSE and training as outlined in AFI 34-217, *Air Force Aero Club Program*.

2.11.9. Ensure other units' reports (e.g., operational readiness inspections [ORI], unit compliance inspections (UCI), Air Force audits, etc.) are reviewed for benchmarking and comparison.

2.11.10. Submit requests to the command ALS functional manager for waivers to the CFETP core task requirements.

2.11.11. Conduct initial task certifications for the ALS section NCOICs.

2.11.12. Gather squadron-level acquisition and sustainment recommendations from unit ALS and aircrew personnel to identify ALS systems requirements. MAJCOMs and ANG will task each wing/unit for inputs in preparation for annual APEC meetings.

2.11.13. Ensure newly developed (COTS/NDI) ALSE pursued by units for Air Force aircraft as well as for aircrew use is evaluated and approved using 311 HSW/YA requirements identified at: **https://hswya.brooks.af.mil/common/mil-gov/yac/yacl/nticots/NDICOT1**.

2.11.14. Ensure mishap response kits are developed and available to allow active participation as an interim or primary mishap investigation board member.

2.12. Squadron Commanders:

2.12.1. Appoint a rated officer to function as the additional duty aircrew LSO, and an ALS NCO (1T1X1) as the ALS NCOIC to carry out the duties and responsibilities listed in this AFI. LSOs must be rated officers, serve a minimum of 12 months, and be assigned to each flying squadron or rescue flight. Refer to **Table 4.1.** of this instruction for LSO training and certification. **EXCEPTION***:* Appointment of an LSO in the ANG and rescue flight is optional.

2.12.2. Implement policies and procedures as HHQs directs.

2.12.3. Conduct OT&E programs on ALSE as HHQs directs.

2.12.4. Supervise the unit ALS technician training program IAW AFI 36-2201.

2.12.5. Ensure instructions, publications, manuals, procedures, and T.O.s pertaining to the inspection, maintenance, and use of assigned ALSE, systems, and subsystems are maintained according to HHQs directives.

2.12.6. Ensure ALSCT is accomplished IAW **Chapter 5** of this instruction, the appropriate AFI 11-2MDS-series, Volume 1 publications, and command supplements to this instruction.

2.12.7. Restrict from flying any aircrew who has not completed required training events (grounding events only).

2.12.8. Ensure adequate vehicles are available to transport ALSE. Vehicles will be properly maintained, configured with required safety devices and will protect ALSE from the elements.

2.12.9. Ensure the ALS program is operating in compliance with all applicable safety directives.

2.12.10. Ensure all aircrew process through the ALS section upon arrival or departure from squadron.

2.12.11. Ensure adequate funding is provided to sustain non-cost per flying hour program items, i.e., aircrew chemical defense equipment, helmets, and night vision devices.

2.12.12. Monitor the progress of TCTOs effecting ALSE within their squadron.

2.13. Squadron LSOs/NCOICs:

2.13.1. Maintain a current file of directives, procedures, T.O.s, and manuals pertaining to issue, inspection, maintenance, and use of ALSE or systems possessed, and ensure compliance with instructions contained therein.

2.13.2. Monitor aircraft conversion and TCTO modification programs to ensure satisfactory integration of ALSE with aircrew recovery systems. Advise wing/group LSOs of program delays or supply problems as they occur.

2.13.3. Perform an annual in-depth, ALS program assessment IAW MAJCOM/wing self-assessment program. A record of assessment reports, discrepancies, and corrected actions will be maintained for 2 years IAW AFI 37-139.

2.13.4. Monitor status of deficiencies identified during SAVs, UCIs, ORIs, and unit self-assessments until corrective actions have been completed. Corrective actions will be documented as prescribed by governing instructions or as required to reflect current status and actions taken.

2.13.5. Ensure compliance with all ALS administrative, training, clothing, equipment, and mobility requirements as designated in the applicable chapters of this instruction.

2.13.6. Forward unit level acquisition and sustainment requirements to the operations group LSO/LSS. These inputs are the root of ALS systems requirements that feed the APEC process.

2.13.7. Ensure newly developed (COTS/NDI) ALSE pursued for Air Force aircraft as well as for aircrew use is evaluated and approved using 311 HSW/YA requirements identified at: **https://hswya.brooks.af.mil/common/mil-gov/yac/yacl/nticots/NDICOT1**.

2.14. Aircraft Commanders (AC). ACs will ensure required ALSE is available prior to each flight and all personnel are briefed or trained on the use, care, and safeguarding of this equipment.

2.14.1. ACs of multi-place aircraft will ensure all prepositioned ALS and survival equipment items are serviceable, inventoried, and certified on the AFTO Form 46, **Prepositioned Life Support Equipment** (or equivalent), prior to flight or alert. Notify the ALS section of any onboard equipment shortages or unserviceable conditions. Note discrepancies in the AFTO Form 781F, **Aerospace Vehicle Flight Report and Maintenance Document**.

2.14.2. Crewmembers whose main function is performing duties in the rear of a multiplace aircraft, e.g., combat camera and aeromedical nurses and technicians will coordinate emergency actions and clothing requirements with a qualified crew member (i.e., aircraft commander, boom operator, loadmaster) prior to flight. ACs will determine the clothing requirements for the route of travel when performing passenger or patient transport missions aboard MAJCOM support aircraft. The AC is responsible for ensuring each crewmember is wearing the required clothing and equipment, or has it aboard the aircraft and readily available for flight or alert duty. Military passengers, except for litter bound patients, are responsible for ensuring clothing needs meet environmental requirements IAW AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*.

2.14.3. The AC or designated aircrew representative will document and ensure missing ALSE and enroute configurations are annotated on AFTO Form 781A, **Maintenance Discrepancy and Work Document**, and AFTO Form 46 (or equivalent). Entries will include as much information as possible to assist ALS in locating and recovering missing ALSE (i.e., station where discovered missing, names, agencies and persons contacted, etc.) Reports of survey will be initiated IAW AFMAN 23-220, *Reports of Survey for Air Force Property*.

2.14.4. ACs of multi-place aircraft will ensure all ALSE items to include survival kits, life preservers, anti-exposure suits, emergency passenger oxygen systems (EPOS), passenger oxygen kits (POK), and parachutes are returned to their proper storage location.

2.15. Aircrew Members:

2.15.1. Obtain personal flying equipment (i.e., flight suits, boots, gloves, etc.) from supply, maintain accountability and serviceability, and ensure availability for maintenance.

2.15.2. Ensure flying helmets, oxygen masks, and headsets are carried in the helmet bag to and from the ALS facility. The helmet and mask are the only items authorized in the main compartment of the helmet bag. The headset will be carried in the helmet bag outer pocket.

2.15.3. Possess all required Aircrew Chemical Defense Equipment (ACDE) items prior to deploying to a chemical threat area or serving on conventional warfare alert as required by reporting instructions.

2.15.4. Receipt for ACDE on an AF Form 1297, **Temporary Issue Receipt**, or other authorized forms when equipment is issued and properly sized and fitted by life support. Return ACDE to the ALS facility upon completion of training, alert tour, or temporary duty (TDY).

2.15.4. (AFMC) AFMC Units will follow AFI 23-110 vol. 2 part 13 when using a receipt for ACDE on an AF Form 1297, **Temporary Issue Receipt,** or other authorized forms when equipment is issued and properly sized and fitted by ALS.

2.15.5. Maintain proficiency in donning, doffing, buddy dress, and aircrew contamination control area (ACCA) decontamination procedures including open air processing as applicable.

2.15.6. Securely store all ALSE to prevent damage or theft while in their possession.

2.15.7. Perform preflight inspections on all assigned or prepositioned ALSE as required by appropriate aircraft manuals, T.O.s, local policies, and HHQs directives.

2.16. Support Agencies:

2.16.1. Survival Equipment element responsibilities are identified in AFI 21-101, *Aerospace Equipment Maintenance Management*.

2.16.2. Egress element responsibilities are identified in AFI 21-101 and AFI 21-112, *Aircrew Egress Systems Maintenance.*

2.16.3. Medical Treatment Facility (MTF).

2.16.3.1. Optometry Clinic: Provides optometry support for chemical warfare eyepieces, contact lenses, screening of users for laser visors, high contrast visors, and night vision devices. Modifies aircrew spectacle temple bars used with the MBU-13/P mask IAW AFJI 44-117, *Ophthalmic Services*.

2.16.3.2. Flight Medicine: Conducts quarterly visits to ALS sections to ensure compliance with T.O. 15X-1-1, *Maintenance Instructions, Oxygen Equipment*, standards. The flight surgeon inspects ALS shops for compliance with occupational health and safety standards and assists in resolving mask-fitting problems. Records of such visits are maintained IAW AFI 37-139.

2.16.3.3. Medical Supply: Inspects and maintains first aid kits IAW applicable directives and replaces unserviceable components as necessary. Medical supply personnel will provide, or assist ALS units in acquiring, first aid kits, isopropyl alcohol, gauze pads, and other medical supplies used for cleaning and maintaining ALSE.

2.16.3.4. Bioenvironmental Engineering: Conducts occupational health surveillance IAW AFI 48-145, *Occupational Health Program*. Determines adequacy of controls established for occupational health hazards.

2.16.3.5. Aerospace Physiology. As applicable, will provide physiological training to aircrew and ALS personnel.

2.16.3.6. Public Health: Inspects rations and canned or packaged water IAW DPSC Handbook 4155-2, Appendix A, *Meal, Ready-to-eat (MRE) Inspection Responsibilities and Procedures* (projected to be DPSCH 4155.2, Appendix E, *Inspection Guide for Food Packet, Survival, General Purpose*).

2.16.4. Test Measurement and Diagnostic Equipment (TMDE) Lab. Calibrates all test equipment used by ALS personnel to maintain aircrew flight equipment.

2.16.5. Aircraft Electrical Environmental System element responsibilities are addressed in AFI 21-101.

2.16.6. Plans, Scheduling and Documentation Section. Notifies the ALS section of new aircraft arrivals and transfers so that they can process documentation records. Contacts the ALS section to perform incoming aircraft acceptance inspections of survival kits, parachutes, and other aircraft-installed ALSE IAW T.O. 00-20-1, *Aerospace Equipment Maintenance General Policies and Procedures*.

2.16.7. Safety: Provides safety inspections, and assistance in Operational Risk Management (ORM) assessments as required. Notifies ALS personnel and aircrews of flight safety issues relating to ALS programs or procedures.

2.16.8. Combat Arms (CA) Section. Provides weapons training for ALS personnel IAW AFMAN 36-229, *Weapons Handling Manual*, AFI 36-2226, *Combat Arms Program*, AFI 36-2227, Volume 1, *Combat Arms Training and Maintenance (CATM) Training Management and Range Operations*, and AFI 36-2227, Volume 2, *Combat Arms Training and Maintenance Rifle, Handgun, Shotgun, Grenade Launcher, M72 Light Anti-Tank Weapon, Submachine Gun, and M249 Squad Automatic Weapon Training Programs*.

2.16.9. Munitions: Monitors the status of munitions suspended or restricted by T.O. 11A-1-1, *Conventional Munitions, Restricted or Suspended*. Provides immediate notice of suspended or restricted lot numbers to all known users of affected national stock numbers (NSN). Assists ALS personnel in managing munitions accounts to include time-change forecasting and ordering.

2.16.10. Logistics Group AFCAIG/CPFH Analyst/Resource Advisor: Has overall responsibility of the total flying hour program dollars and will include ALS in their monthly AFCAIG/CPFH reporting and coordinate with operations group as needed to obtain program status.

Chapter 3

UNIT ALS PROGRAM MANAGEMENT

3.1. Purpose. This chapter provides guidance to assist ALS personnel in administering key areas necessary for effective management of the ALS program.

3.2. Budgeting:

3.2.1. Each ALS organization must use established DOD and USAF budgeting procedures to ensure proper funding of their ALS program.

3.2.2. Each ALS activity will prepare and submit a detailed annual budget and financial plan to their appropriate commanders and resource advisors. Submit unfunded requirements during mid-year and end-of-year calls IAW MAJCOM procedures.

3.3. Supply Accounts:

3.3.1. Each ALS section, to include the Operations Support Squadron (OSS) ALS staff supporting training functions, will budget for and establish their own supply account as specified by AFMAN 23-110, Vol 2, Part 13, Chapter 8.

3.3.2. When appropriate, local contingency plans will include qualified ALS technicians who will assume supply custodial responsibilities at deployed ALS shops.

3.3.3. Ensure custodians receive base supply customer training as needed IAW AFMAN 23-110, Volume 2, Part 13, and the Education and Training Course Announcements (ETCA) site at: **https://etca.randolph.af.mil/**.

3.3.4. Develop procedures to track supply, equipment and clothing expenditures so as to provide quantitative requirements to the unit commander and resource manager to assist in and justify budgeting and funding requirements.

3.3.5. Ensure a Configuration Data File is maintained for each supply account to show a breakdown of how each equipment item's authorization was determined (i.e., number of personnel assigned, number of aircraft [primary aircraft inventory (PAI)] assigned, number of crewmembers supported, designed operational capability [DOC] statements, operations plans [OPLAN], and UTCs tasked to support). Continuous emphasis is needed to properly control equipment. Refer to AFH 170-1, *Resource Manager's Handbook* (projected to be AFPAM 65-605).

3.3.6. Each supply account custodian must work with base supply to ensure applicable force activity designators (FAD) code is used when requisitioning ALSE. This will ensure mission essential ALSE and mobility equipment that is backordered and required for direct support of flying operations is available. When ordering time-change items, use TEX Code 8 to by-pass base level stock (if remaining service-life is inadequate to meet mission needs) and advice code "2G" to ensure assets received from depot have the most service-life remaining on item.

3.3.7. Report time-change component requirements IAW T.O. 00-20-9 and HHQs directives. AFRC associate units will provide information copies to their respective AFRC NAF.

3.3.8. Use AS 016 and AS 450, aircraft configuration instructions, mission requirements, logistics details (LOGDET), MAJCOM specific guidance, and this instruction to determine the basis of equip-

ment required. An additional 10 percent (a minimum of one set when equipment is required to be designated in sets) is authorized for change-outs to minimize aircraft down times. Units having an OPLAN or contingency plan (CONPLAN) tasking will use the following for mobility authorizations: items in column "A" in AS 016G and AS 450 are items used to support mobility UTC LOGDET requirements (items you would put on a pallet and deploy) and all accountable “individually sized” ACDE (except for ACDE assets required for training). These mobility items will be coded "Use Code A" on your custodian authorization/custody receipt listing (CA/CRL). Max number of "parent" UTC tasked items authorized in approved LOGDET. Multiply this number "times" ten percent for equipment maintenance spares. If that number is below one total set, units are authorized to exceed that quantity to make a complete set, but will not exceed the next whole set.

3.3.9. Each supply account custodian must submit supply difficulty and mission impact letters when experiencing delays receiving supplies and equipment.

3.4. Air Force Cost Analysis Improvement Group/Cost Per Flying Hour (AFCAIG/CPFH) Program:

3.4.1. Aircraft ALSE components that are pre-positioned aboard aircraft, such as parachutes, survival kits, and life rafts, will be included as logistics Cost Per Flying Hour (CPFH) factors.

3.4.2. MAJCOM ALS and LG AFCAIG/CPFH managers will develop a coordinated list of National Stock Numbers (NSN) that will be authorized as AFCAIG/CPFH ALS cost factors using the federal supply group exclusion list. These will be the only items authorized to be procured using flying-hour Materiel Support Division (MSD) EEIC 644, EEIC 619 IMPAC, and General Support Division (GSD) EEIC 609 funds. Any items not on the AFCAIG/CPFH ALS listing will be considered as non-fly items.

3.4.3. Cost Accounting: AFCAIG/CPFH Flying RC/CC X12L0X will be used to account for ALS requirements. Each unit must establish an organizational code under the LG AFCAIG/CPFH Project Funds Management Record (PFMR) in standard base supply system (SBSS). The organization code should be established with type organization “7”. Separate ALS planning numbers are developed and indicated on unit funding documents. Fly and non-fly funds will be tracked and managed separately since separate budget processes will be used.

3.4.4. Budget and Funding Distribution: AFCAIG/CPFH ALS items will be incorporated into the AFCAIG/CPFH Annual Call process for identifying requirements. MAJCOM ALS managers will task unit ALS managers, consolidate total requirements, and submit requirements to the MAJCOM LG AFCAIG/CPFH manager for inclusion and preparation of an AFCAIG/CPFH adjustment for each MDS. Funding for all fly ALS requirements will be considered a part of the unit LG total flying hour program allocation but will flow through the FM; which will be responsible to load the dollars against the proper organizational code.

3.4.5. Program Management and Reporting: Unit ALS has responsibility to notify the LG AFCAIG/CPFH Analyst/Resource Advisor of any unfunded AFCAIG/CPFH ALS requirements or potential excess funds. Unit LG AFCAIG/CPFH Analyst/Resource Advisor has responsibility to coordinate with the unit ALS and include the new AFCAIG/CPFH ALS RC/CC status of funds in their monthly AFCAIG/CPFH report. Unit LG AFCAIG/CPFH Analyst/Resource Advisor will include the AFCAIG/CPFH ALS items in their D26 program retrieval.

3.5. Equipment Redistribution. In the event ALSE becomes excess to organizational needs, the LSS will notify respective MAJCOM, ANG, or NAF FMS for possible redistribution prior to turn-in.

3.6. Transfer of ALSE:

3.6.1. During aircraft transfers or movement of ALSE, communication between depot, modification agencies, and gaining or losing units is required. Comply with the instructions in AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*, AFMAN 23-110, Volume 2, Part 2, Chapter 15, *Shipments*, and T.O. 00-20-1.

3.7. Quality Assurance (QA). ALS QA programs are designed to provide feedback to technicians, trainers, supervisors, and managers to eliminate defects and deviations from established guidance.

3.7.1. Quality Inspector (QI) Requirements. ALSE QIs are highly experienced 5-skill level technicians or above, and are trained and certified in the QI process.

3.7.2. Quality Control Inspection (QCI). QCI is a process of visual examination (without disassembly) of specific ALS items to ensure the highest level of product quality.

3.7.2. (AFMC) Semi-annually the LSO/Superintendent will choose one of the unit's assigned aircraft to be checked.

3.7.2.1. Perform QCIs on at least 10 percent of each type of equipment inspected and 100 percent of all items received from other supporting agencies. QCIs should be performed prior to the next flight. Additionally, 100% of all 3-skill level work will receive a QCI until the individual is task certified.

3.7.2.1. (AFMC) Remove a sample of ALSE that the aircrew of a selected aircraft should have after a successful ejection, bailout, ditching, or forced landing; transport the equipment to the activity's inspection area.

3.7.2.1.1. (Added-AFMC) Under the supervision of the activity's LSO or superintendent, a technician will manually deploy or open the selected equipment to simulate a normal ejection, bailout, ditching, or forced landing sequence. Inspect each item of equipment and note any deficiencies.

3.7.2.1.2. (Added-AFMC) Do not activate explosive or automatic opening devices installed in parachutes and survival kits during this check.

3.7.2.1.3. (Added-AFMC) Life rafts and LPUs inflated during these tests will be used to satisfy the functional inflation requirements in the applicable TOs.

3.7.3. Critical Points Inspection (CPI). A CPI is a check of critical requirements prior to closing a piece of equipment (e.g., survival kits, parachute spacer kit [PSK], etc.).

3.7.4. The original technician (inspector) will correct all discrepancies prior to the piece of equipment being placed back in service.

3.7.5. Monitor QA documentation (e.g., AF Form 2420, **Quality Control Inspection Summary**, or equivalent) to identify positive and negative trends.

3.8. Technical Orders (T.O.), Publications, Operating Instructions (O.I.) and Product Quality Deficiency Reports (PQDR):

3.8.1. A recommended T.O. and publications list is at **Attachment 1**. The list is for use as a reference guide only and is not all-inclusive. The list will help you determine your requirements and is not a mandatory requirement list.

3.8.1.1. ALS will maintain specific T.O.s for items serviced by the unit.

3.8.1.2. MAJCOMs, ANG, NAFs and units will determine when optional procedures listed in T.O.s are mandatory within their respective commands or units and publish a comprehensive list.

3.8.1.3. Proposed changes to Air Force T.O.s (AFTO Forms 22), Deficiency Reports (DR), and suggestions (AF Forms 1000) affecting ALSE will be sent to respective MAJCOM or NAF (info copy of the DR) according to T.O. 00-5-1, *Air Force Technical Order System*, and AFI 38-401, *The Air Force Innovative Development Through Employee Awareness (Idea) Program.*

3.8.1.3.1. Units will utilize the computer based Innovative Development Through Employee Awareness (IDEA) Program Data System (IPDS) to submit suggestions. Using Microsoft® Internet Explorer, access **https://ideas.randolph.af.mil/pls/ipdsprod/dv_home_page** to submit IDEAs.

3.8.1.4. The group LSS is the OPR on all ALS related proposed T.O. changes. Unless the task is performed by the supporting T.O. Distribution Office (TODO), the LSS will establish procedures within the group to assign improvement report numbers to the AFTO Form 22. As the functional experts, LSSs are responsible for reviewing and processing wing-initiated AFTO Forms 22 and DRs affecting ALSE. The LSS will evaluate AF Forms 1000 or IDEAs pertaining to ALSE.

3.8.2. Policy, procedures, and responsibilities for PQDR submission and exhibit handling and processing are outlined in T.O. 00-35D-54, *USAF Materiel Deficiency Reporting and Investigating System*.

3.8.3. **Operating Instructions (O.I.).** Develop unit O.I.s or local directives, which address local mission requirements.

3.9. Aircrew Life Support Facilities:

3.9.1. Facilities will be maintained IAW applicable Air Force Occupational, Safety, and Health (AFOSH) and T.O. 15X-1-1 standards. The sensitivity of ALSE requires environmental and climatic controls. Refer to AFI 32-1024 and AFH 32-1084.

3.9.2. Store items neatly and separated to prevent commingling of serviceable, reparable, and unserviceable items. Provisions will be made to protect shelf stock components from dust, impurities, and direct sunlight.

3.9.3. Ensure sufficient work and storage areas are available for inspections and storage. When necessary, pad and cover work benches and storage bins with material to provide smooth surfaces and edges.

3.10. Hygiene:

3.10.1. Personnel will follow universal precautions, including the use of impermeable gloves when contact with body fluids is likely, IAW AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*, and AFI 48-101, *Aerospace Medical Operations*, when servicing ALSE.

3.11. Resource Protection and Control:

3.11.1. Installation commanders designate controlled areas and storage facilities IAW AFI 31-101, *Air Force Installation Security Program.* Units will establish a resource protection program that meets Department of Defense (DOD) and Air Force protection criteria IAW AFI 31-101.

3.11.2. Maintain munitions storage facilities within ALS sections IAW DOD 5100.76-M*, Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives,* AFI 31-101 and AFMAN 91-201, *Explosives Safety Standards*.

3.11.3. ALS sections storing firearms will ensure facilities are maintained IAW AFI 31-101.

3.11.4. Ensure internal circulation control procedures are established to control visitors and safeguard and monitor ALSE IAW AFI 31-101 and T.O. 15X-1-1. Upgrade visitor flow control procedures during heightened force protection conditions as necessary to protect ALSE.

3.11.5. Units will maintain classified material consistent with AFI 33-211, *Communications Security (COMSEC) User Requirements*.

3.12. Safety:

3.12.1. Administer mishap prevention, AFOSH, and operational risk management programs tailored to the needs of ALS personnel. Refer to AFI 90-901, *Operational Risk Management*, AFPAM 90-202, *Operational Risk Management (ORM) Guidelines and Tools*, AFI 91-202, *The US Air Force Mishap Prevention Program*, and AFI 91-301 for application into the ALS program.

3.12.2. Supervisors must attend Supervisor Safety Training IAW AFI 91-301.

3.12.3. Contact local wing or group safety staff, bioenvironmental engineering services, and fire department to ensure section hazards are identified and corrective actions are addressed.

3.12.4. Supervisors must develop a safety, fire protection, and health on-the-job training program as outlined in AFI 91-301, Attachment 5.

3.12.5. Units will maintain and store chemicals in Occupational Safety and Health (OSHA) approved facilities or containers. Quantities on hand will be consistent with Hazardous Material Pharmacy policy.

3.13. Hazardous Communications (HAZCOM) Program:

3.13.1. Each ALS section will ensure hazards in the work environment are identified to Military Public Health (MPH) for resolution.

3.13.2. Document the training provided and abatement equipment for each individual exposed to shop hazards on the individual's AF Form 55, **Employee Safety and Health Record**.

3.13.2. (AFMC) Units will document the training provided and abatement equipment for each individual exposed to shop hazards on the individual's AF Form 55, **Employee Safety and Health Record** or civilian equivalent.

3.13.3. Units will coordinate with the responsible agency to perform periodic review of Material Safety Data Sheet (MSDS) for currency and document appropriately.

3.14. Explosive Safety:

3.14.1. Establish and develop an explosive and munitions storage safety program IAW AFMAN 91-201 and AFI 91-202. Develop a local directive and review it annually.

3.15. Composite Tool Kit (CTK) Program. The objectives of the CTK program are elimination of foreign object damage (FOD) to aircraft and to reduce tool cost through effective control of assets.

3.15.1. Establish a CTK and lost tool procedure program to control and account for tools utilized by ALS in each ALS and flight line section IAW AFI 21-101, *Aerospace Equipment Maintenance Management*, AFMAN 23-110, Vol 2, Part 13, Chapter 8, MAJCOM, and wing/unit directives.

3.16. Mishap Prevention. A mishap prevention program tailored to the needs of ALS personnel will be administered using the applicable portions of AFI 91-202. The local wing or group safety staff should be contacted to ensure all shop hazards are addressed and procedures are established.

3.17. Operational Risk Management (ORM). The LSOs, LSS and the ALS section NCOICs will ensure ORM or other risk management programs and techniques are fully implemented.

3.18. USAF Aircrew Life Support Awards Program:

3.18.1. Individual Award. These awards are established to recognize outstanding individual accomplishments and enhance the visibility of ALS personnel. Each calendar year, one MAJCOM staff member, life support officer, senior NCO, NCO, airman, and civilian will be recognized for outstanding performance and initiative.

3.18.2. Unit Award. This MAJCOM level award is established to recognize outstanding unit accomplishments and enhance the visibility of the unit's ALS program. Each calendar year, one operations group ALS program is recognized for outstanding performance and initiative.

3.18.3. Units submit nominations via electronic mail to respective MAJCOMs as outlined in AFI 36-2807, *Headquarters United States Air Force Deputy Chief of Staff Air and Space Operations Annual Awards Program*.

3.18.4. Once MAJCOM and ANG winners have been selected, nominees for Air Force-level awards will follow the same procedures as stated in paragraph **3.18.3.**, submitting nominees to HQ USAF/XOOP.

3.19. Automated Life Support Management Systems (ALSMS). ALSMS is a management tool for use by ALS personnel. Units are authorized to use ALSMS to best suit their needs. Units tracking equipment with the ALSMS program are not required to duplicate the data maintained in the computer on status boards, shop inspection cards, or forms. LSSs will standardize equipment tracking methods within their respective groups.

3.19.1. **Aircrew Life Support Equipment Record and Tracking System (ALERTS).** Air Mobility Command is the MAJCOM responsible for the development and certification of the ALERTS program. Once certified, this program will serve as a replacement for ALSMS for all USAF ALS functions.

3.20. Core Automated Maintenance System (CAMS)/G081. Automatic tracking systems (i.e., CAMS, G081, etc.) will be used as directed by technical order and MAJCOM guidance.

Chapter 4

TECHNICIAN TRAINING

4.1. Purpose. The purpose of this chapter is to establish minimum training requirements for ALS personnel and provide guidance on conducting ALS on-the-job training (OJT) programs.

4.1.1. **ALS Technician Training.** ALS training is an instructional process that leads to task qualification through technician continuation training or upgrade and qualification training conducted IAW AFI 36-2201, *Developing, Managing, and Conducting Training*, AFSC 1T1X1 CFETP, and **Table 4.1.** of this instruction. The training program must ensure ALS personnel, both military and civilian, become and remain task qualified. The documentation of training is paramount to the success of the training program.

4.2. Responsibilities:

4.2.1. **LSS:**

4.2.1.1. The LSS, with assistance from NCOICs, will develop and tailor a Master Task Listing (MTL) using the current CFETP IAW AFI 36-2201.

4.2.1.2. Identify all mission related training requirements to meet MDS-specific and ancillary unit needs for wartime and peacetime operations using AFSC 1T1X1 CFETP, Attachment 3.

4.2.2. **NCOICs:**

4.2.2.1. Manage the overall OJT program for their respective ALS section.

4.2.2.2. Certify or decertify trainees on task qualifications.

4.2.2.3. Ensure all technicians scheduled to attend formal training courses have completed all prerequisites before attendance.

4.2.2.4. Evaluate all technical school graduates (AFSC 1T131) to ensure proficiency levels as specified in the approved CFETP.

4.2.2.5. Report training deficiencies using the Customer Service Information Line (CSIL) IAW AFI 36-2201. Send information copies of Air Education and Training Command (AETC) questionnaires concerning recent technical school graduates to respective MAJCOM or ANG, as applicable.

4.2.2.6. Plan, schedule, evaluate and administer training.

4.2.2.7. Counsel trainees and take administrative actions as necessary.

4.2.2.8. Document all training IAW AFI 36-2201, current CFETP, any additional guidance from HHQs and this instruction.

4.2.2.9. Maintain an OJT record for technicians IAW AFI 36-2201.

4.2.2.10. Ensure periodic ancillary training and task qualification training is conducted as required.

4.2.3. Task Certifier:

4.2.3.1. **ALS Task Certifier.** The ALS task certifier is highly qualified and experienced in ALS tasks and has completed the Air Force Training Course (J6AJI3S2X1 001) or the Task Certifier Course (J6AJS3S2X1 000).

4.2.3.2. Record task certification according to instructions provided in the respective CFETP when a trainee performs a task to required standards IAW AFMAN 36-2245, *Managing Career Field Education and Training*.

4.2.3.3. Recertify all newly assigned personnel, both military and civilian, in previously certified areas.

4.2.3.4. Evaluate all ALS personnel using pass and fail criteria. Document all technician task evaluations on prescribed AF Forms.

4.2.4. **Trainer:**

4.2.4.1. **ALS Trainers.** ALS trainers are experienced 5-skill level technicians who have completed the Air Force Training Course (J6AJI3S2X1 001) or the Training the Trainer Course (J6AJS3S2X1 001).

4.2.4.2. ALS trainers must be qualified on the tasks they instruct.

4.2.4.3. ALS trainers will document training as appropriate IAW current CFETP and AFI 36-2201.

4.2.5. **Trainee:**

4.2.5.1. Trainees must actively participate in opportunities for qualification and skill-level upgrade training (UGT).

4.2.5.2. Trainees must progress to and maintain knowledge, qualifications and appropriate skill-level within their assigned specialty.

4.2.5.3. Schedule their on and off duty time to complete upgrade Career Development Course (CDC) and self-training requirements.

Table 4.1. ALS PERSONNEL TRAINING REQUIREMENTS.
NOTE: Lists all Air Force ALS mandatory and desirable training. MAJCOMs will supplement this table with their unique requirements.

COURSE TITLE	1T131	1T151	1T171	1T191	ALSCTI	T1T1X1	LSO
Aircrew Life Support Apprentice, J3ABR1T131 003	M						
Aircrew Life Support Craftsman, J3ACR1T171 001			M				
Combat Survival Training, S-V80-A (Notes 5 & 6)	D	D	D	D	M	M	M
Water Survival School – Parachuting, S-V86-A (Notes 1, 5, & 6)	D	D	D	D	M	M	M
Arctic Survival Training, S-V87-A	D	D	D	D	D	D	D

COURSE TITLE	1T131	1T151	1T171	1T191	ALSCTI	T1T1X1	LSO
Water Survival School – Non-parachuting, S-V90-A (Note 6)	D	D	D	D	M	M	M
Maintenance of Night Vision Goggles, J4AST1T151 002 (Note 3)	D	D	D	D	D	D	D
Maintenance of Night Vision Devices, J4AZT1T151 002 (Note 3)	D	D	D	D	D	D	D
Academic Instructor Course, MAIS001 (Note 4)				D	M	M	
Night Vision Goggles Instructor Course (Note 6)					M	M	
Contingency Wartime Planning Course, MCADRE002			D	D			
Introduction to Personnel Recovery, PR101			D	D	D	D	D
USAF Life Sciences Equipment Investigation Course, S-V8G-C			D	M	D	M	
Physiological Training (Notes 2 & 7)	D	D	D	D	M	M	M
Airborne (Parachutist), L5AZA1T231 001	D	D	D	D	D	D	
USAF Underwater Egress Training, S-V84-A (Note 8)	D	D	D	D	D	D	D
Emergency Medical Technician					D	D	
Water Safety Instructor Training					D	D	
ACC Code of Conduct Training Course, Y120005					D	D	
ACC Aircrew Protection Instructor Course, Y120006			D	D	D	D	D
ACC Aircrew Life Support Program Managers Course, Y120004			D	D			D
USAF Aircrew Life Support Officer, S-V8G-A							M

LEGEND: M = Mandatory; D = Desirable

NOTES:

1. This course may be substituted with course S-V90-A, Water Survival Training, Non-parachuting.

2. Physiological Training is required initially and a MDS specific refresher every 5 years thereafter for enlisted ALSCTIs. Refer to AFI 11-403.
3. These mobile training team courses are for personnel performing maintenance on night vision systems (NVS). As a minimum, one technician will be trained and certified through an AETC approved course, by an AETC certified instructor, or directly by manufacturer or their certified instructor, and will train other personnel upon completion.
4. Completion of Principles of Instruction (J3AZR3S200 011 or J3AZT3S200 011), or ACC Classroom Instructor Course (Y120022) satisfies this requirement.
5. Required for personnel assigned to AFSOC or overseas units.
6. Required for personnel teaching VV-01.
7. MAJCOM Functional Managers may waive this requirement based on training capability.
8. This course only applies to instructors who train aircrew operating helicopters.

Chapter 5

AIRCREW LIFE SUPPORT CONTINUATION TRAINING (ALSCT)

5.1. Purpose. ALSCT consists of ground training events (not ancillary training) listed in **Table 5.1.** of this instruction and is provided for each aircrew member, designated non-rated personnel, and passengers to refresh and enhance their proficiency and knowledge in all ALSCT events. This chapter establishes specific requirements and applies to all ALSCT Instructors (ALSCTI), aircrew and personnel who fly. "Hands-on training" using training equipment configured to mirror operational equipment, to the maximum extent possible, is the standard method for developing aircrew proficiency.

5.2. Responsibilities:

5.2.1. ALSCT will be conducted IAW **Table 5.1.** of this instruction. MAJCOMs will supplement this instruction to tailor ALSCT courses to fulfill their specific requirements. MAJCOMs will update their lesson plans based on current safety information provided by the Air Force Safety Center.

5.2.2. ALSCT instructors may be an LSO, instructor aircrew, or ALS training instructor. MAJCOMs will supplement this instruction with requirements for assigning and certifying ALSCT instructors.

5.2.2. (AFMC) Qualified personnel with Air Force Specialty Codes (AFSC) L11XX, L12XX, 1T0X1, or 1T1X1 will conduct egress training. In addition, the DFO may appoint no more than two additional aircrew members as egress instructors, in each squadron/unit, who are current and qualified in there MDS to conduct egress training. To maintain high training standards, field activity LSOs must review training qualifications and certify instructors annually by letter. The letter of certification must include a list of courses (applicable by aircraft system) each instructor is qualified to teach and must be updated by endorsement throughout the year.

5.2.2.1. (Added-AFMC) LSOs must maintain current qualifications in one of the field's activity aircraft, preferably one equipped with an ejection seat. Full-time LSOs will attend courses listed in AFI 11-301v1. Additional duty LSOs are authorized and encouraged to attend those courses.

5.2.2.2. (Added-AFMC) ALS supervisors or technicians (1T1X1) must have attained the standards required by AFMAN 36-2108 and completed the mandatory training in AFI 11-301.

5.2.2.3. (Added-AFMC) Certified ALS egress instructors for any ejection seat aircraft must attend applicable local egress/cockpit familiarization refresher courses annually, IAW AFI 21-112. A qualified egress instructor will instruct the course.

5.2.2.4. (Added-AFMC) DFOs will ensure there are adequate ALS continuation instructors available to provide training for the unit.

5.2.2.5. (Added-AFMC) Training Support. The Air Armament Center (AAC) and Air Force Flight Test Center (AFFTC) should maintain the ability to send qualified SERE training instructor(s) and suitable training aids TDY to field activities unable to obtain the minimum training from host bases or contractors. When it is more appropriate and less costly, personnel may be sent TDY to AAC or AFFTC for training. The requesting unit is responsible for scheduling and providing TDY funds to support this training.

5.3. ALSCT Event Descriptions. Lead commands, IAW AFPD 10-9, *Lead Operating Command Weapon Systems Management*, will be OPR for developing core curriculum for each of the following

blocks of instruction. ALSCT event instruction may be consolidated as long as curriculum requirements are met and individual events are tracked by the designated identifiers in Air Force Operations Resource Management System (AFORMS). Lead commands will provide ALSCT event guidance in applicable AFI 11-2MDS-series, Vol 1 publications.

5.3.1. Life Support Familiarization Training (LSFT) (LL01) (previously Local Area Survival Training, LS01): One time event, per base assignment, conducted prior to the first flight at home station to familiarize aircrew members with local ALS equipment availability, issue, use, pre-flight, and post-flight procedures. This training will be provided for subsequent re-assignments to the same base.

5.3.2. Emergency Egress Training, Ejection Seat (LL02) (formerly LS07): Evaluates aircrew and passenger ability to demonstrate proficiency in air and ground emergency egress/ejection procedures. In aircraft with multi-crew ejection seat capability, stress importance of aircrew coordination actions in emergency situations. Ensure aircrews are aware of their responsibilities for conducting safety and passenger briefings IAW AFI 11-202, Volume 3, *General Flight Rules*.

5.3.3. Emergency Egress Training, Non-Ejection (LL03) (formerly LS08): Evaluates aircrew and passenger ability to demonstrate proficiency in air and ground emergency egress procedures. Stress the importance of aircrew coordination, aircrew and passenger responsibilities and use of appropriate emergency egress equipment. Ensure aircrews are aware of their responsibilities for conducting safety and passenger briefings IAW AFI 11-202, Vol 3.

5.3.4. Aircrew Chemical Defense Training (ACDT) (LL04) (formerly LS04): An academic and equipment training session in which the aircrew member demonstrates and performs donning, doffing, buddy dressing procedures using either the first or second generation ACDE or aircrew eye/respiratory protection (AERP) equipment. This training also includes information on hazards and limitations of wearing the equipment properly and improperly, preflight procedures, aircraft integration, and parachute descent emergency procedures. Each aircrew will demonstrate procedures during their initial class; subsequent classes require a minimum of 10% of aircrew participants to dress out and demonstrate aircrew contamination control area (ACCA) processing procedures.

5.3.5. Egress Training with ACDE (LL05) (formerly LS05): Evaluates the aircrew's ability to demonstrate proficiency in the use of primary as well as secondary air and ground egress procedures while wearing ACDE. Training will stress the unique changes in procedures to include added difficulties aircrew would and could experience as a result of wearing ACDE.

5.3.6. Aircrew Life Support Equipment (ALSE) Training (LL06) (formerly LS06): An academic and equipment training event, in which aircrew members demonstrate their ability to locate, preflight, and use all aircrew and passenger ALSE carried aboard unit aircraft or issued to aircrew members. This training includes the limitations and safety issues related to ALSE. Additionally, include aircrew clothing items and information on hazards associated with improper wear and failure to use only authorized clothing and equipment items.

5.3.7. Former ALSCT courses (LS02) High Threat Combat Survival Training (CST); (LS03) Water Survival Training (WST); (LS09) Hanging Harness Training (HHT), Ejection; (LS10) HHT, Non-Ejection; (LS11) Low Threat CST; and (LS13) Helicopter Emergency Egress Training requirements and identifiers are included in AFI 16-1301, *Survival Evasion Resistance Escape (SERE) Operations* (forthcoming). LS02 and LS11 are combined as SS02, Combat Survival Training (CST). LS03 is now SS05, Water Survival Training (WST). SS05 also incorporates LS13 as required by unit type. LS09 and LS10 are incorporated as SS06, Emergency Parachute Training (EPT).

5.4. Formal Training Requirements:

5.4.1. All aircrew members must attend formal training requirements as identified in AFI 16-1301 (forthcoming).

5.4.2. All ALSCTI must meet the minimum formal training requirements contained in **Table 4.1.** of this instruction and be assigned using guidelines established by respective MAJCOMs.

5.4.3. To obtain formal course allocations for ALS personnel, forward the full name, rank, social security account number (SSAN), and organization of personnel requiring training to the appropriate MAJCOM ALS focal point at least 60 days in advance of the requested training date. AFRC and ANG will request quotas IAW AFRC and ANG procedures.

5.4.4. The group LSO or LSS will control and manage the wing's ALS related formal course allocations. Cancellations or substitutions will be accomplished by contacting the appropriate MAJCOM or ANG ALS focal point not later than 30 days prior to class start date. Return all allocations that cannot be used to the appropriate MAJCOM or ANG ALS focal point for redistribution at least 30 days prior to class start date.

5.5. ALSCT Requirements:

5.5.1. **Minimum Training Requirements.** **Table 5.1.** of this instruction specifies the required ALSCT events and frequencies for aircrew members and passengers.

5.5.2. Failure to accomplish ALSCT at the required intervals will result in grounding or non-combat mission ready status as outlined in the respective AFI 11-2MDS-series, Vol 1 instructions. If an aircrew member is deploying TDY to perform flying duties at a location where a training capability does not exist, the required training must be accomplished prior to home station departure. If an aircrew member is deployed past their training currency date, they must receive training in the grounding events prior to first flight at home station.

5.5.2. (AFMC) AFMC units will use AFI 11-2FT Vol 1(Chapter 4, Table 5) for frequencies and guidance for completing ALSCT.

5.5.3. If an aircrew member, current in all ALSCT events, is TDY to perform flying duties to a location where a training capability does not exist and the individual becomes due in an ALSCT event, training must be accomplished before first flight at home station. AFRC and ANG functional managers will determine time frame required to complete training upon arrival at home station.

5.5.4. Emergency Egress and Parachute Descent Training (PDT) (formally HHT) should be given concurrently when practical (ejection or non-ejection aircraft).

5.5.5. Flight Surgeons will receive ALSCT at frequencies determined IAW MDS-specific guidance.

5.5.6. Aircrew members arriving PCS or visiting aircrews, such as those assigned to the inspector general, test squadrons, etc., are not required to re-accomplish egress or PDT if source documentation of currency can be obtained (e.g., AFORMS) and they are current in the assigned aircraft. However, training on local unit specific ALSE and rescue requirements will be accomplished.

5.5.7. Aircrew members previously qualified in a given ejection seat equipped aircraft and currently in transition to a different model of the aircraft, or undergoing upgrade training in the same type of aircraft, may receive egress training at the regular interval from date last accomplished, if the escape systems and procedures are the same in both aircraft models.

5.5.8. Aircrew members in transition from one type of ejection seat equipped aircraft to another and awaiting a Fighter Training Unit (FTU) slot will receive Emergency Egress and PDT at intervals determined by respective MAJCOM.

5.5.9. Student aircrew members assigned to an FTU will receive emergency egress and PDT training IAW applicable syllabus.

5.5.10. Initial and periodic ACDE training will be conducted IAW appropriate 11-2MDS-series, Vol 1 publications, this instruction, applicable T.O.s and approved instructor guides.

5.5.11. An aircrew member may be credited with ACDT (LL04) during local operational readiness exercises provided all ALSCT requirements and objectives are satisfied.

5.6. ALSCT Safety. Safety is paramount when planning and conducting ALSCT. As a minimum, the following will apply:

5.6.1. The group LSO or LSS, with assistance from the local safety office, will ensure Operational Risk Management (ORM) or other risk management programs or techniques is fully implemented, documented in unit instructor guides (IG) or lesson plans (LP), and tailored to their specific operation and location for all ALSCT events.

5.6.2. The LSS will develop and publish an Emergency Action Plan (EAP) for use during any training event where injury is likely, e.g., ALSE class if signal flares are activated. The EAP will be included in the IG or LP, briefed by the lead instructor prior to each training event and understood by every instructor and student prior to event start.

5.7. Passenger and Incentive Flyer Training:

5.7.1. Passengers scheduled for flight aboard ejection seat equipped aircraft will receive, as a minimum, egress, PDT, and ALSE training no earlier than 72 hours prior to flight. If the 72 hours are exceeded before flight, training will be re-accomplished. Egress includes manual bailout procedures training, if applicable.

5.7.2. Non-rated personnel who fly occasionally to perform official duties (e.g., enroute ground support, security, etc.) will receive egress, PDT, and ALSE training at intervals determined by respective MAJCOM.

5.7.3. Passengers scheduled for flight aboard non-ejection seat equipped aircraft will be briefed on emergency procedures and ALSE as depicted in appropriate aircraft passenger briefing guides. The aircraft commander or their designated representative may conduct this briefing.

5.8. Training Documentation:

5.8.1. All completed ALSCT events will be documented on AF Form 1522, **AFORMS Additional Training Accomplishment input**, or equivalent, and maintained as a record of class attendance IAW AFI 37-139. Only those event identifiers shown in **Table 5.1.** of this instruction will be used to identify ALSCT events.

5.8.2. Upon completion of training, one or more rosters will be signed by the instructor and forwarded to appropriate office for input into AFORMS. The OSS ALS staff will keep a duplicate copy of the rosters on file.

5.8.3. Instructors will provide written documentation to individuals who are from another unit (i.e., Inspector General, HHQs staff, and visiting aircrews) so their records can be updated at home station.

5.8.4. FTU and Basic Fighter Training (BFT) student rosters will be maintained until graduation.

5.8.5. ALS is not responsible for maintaining AFORMS or managing and tracking aircrew training status for ALSCT events in AFORMS.

5.9. Training Aids and Equipment:

5.9.1. Emergency ground and air egress and ejection seat training will be accomplished using the appropriate Egress Procedures Trainer (EPT) or the aircraft. Non-ejection seat egress training will be conducted using actual aircraft to the maximum extent possible.

5.9.2. Units may use the actual aircraft installed ejection seat for egress training when designated training devices are not available provided all ejection seats are made safe by qualified egress personnel.

5.9.3. For ACDT and egress training, aircrew members are required to wear all clothing and ALSE items typically worn during contingency operations unless specifically prohibited by this instruction.

5.9.4. ALSCTIs will inspect training devices and aids prior to use to ensure they are properly configured and operational for training. The LSS or their designated representative will perform semi-annual inspections of all training devices and aids to ensure they are current and safe for training use. This includes displays, EPTs, PDT devices, ACDE, ALSE, personnel lowering devices, and water survival equipment. Inspections will be documented appropriately.

5.9.5. Training equipment, to include PDT and EPT devices, will mirror operational equipment to the maximum extent possible. Equipment used for training will be clearly marked "FOR TRAINING USE ONLY" and stored to prevent co-mingling with operational equipment. When training equipment does not exist (i.e., night vision devices, PRC-112 series radios, etc.), MAJCOMs may designate the use of operational equipment for training as long as the training does not damage or destroy the integrity of the equipment.

5.10. Instructor Guides and Lesson Plans:

5.10.1. ALSCT Instructor Guides (IG). IGs are documents developed to prescribe instructional requirements, teaching points, and instructor-student activities essential to the accomplishment of training objectives. IGs are designed to include the minimum training requirements and are essential for supervisors and instructors to ensure lesson objectives are completed.

5.10.1. (AFMC) Ensure lesson plans are developed for each type of aircraft with egress or ALSE installed according to the mission flown by the field activity. Each organization will physically possess current training lesson plans affecting the unit and ensure the ALS continuation training syllabi are effective, and lesson plans are reviewed annually for currency.

5.10.2. Only approved IGs developed by the MAJCOMs and the 436th Training Squadron Aircrew Life Support Section, Dyess AFB, Texas will be used to conduct ALSCT. The IGs developed by the 436 TS are complete and ready to use by the units once they have been approved by the lead MDS MAJCOM. Units should delete information from the IGs that do not pertain to their mission. MAJCOMs will use, to the maximum extent possible, IGs developed by the 436 TS. IGs not developed by the 436 TS will be developed by the MAJCOM. MAJCOMs can request the 436 TS to develop an IG;

if approved, the MAJCOM will provide necessary funding. Approved IGs are available at: **https://wwwmil.dyess.af.mil/436ts/lifesupport.htm**.

5.10.2. (AFMC) AFMC units will use IGs developed by the 436th Training Squadron Aircrew Life Support Section, Dyess AFB, Texas to provide ALSCT. Lessons will be tailored to meet the unit mission requirements.

5.10.3. ALSCT LP. Lesson plans are documents developed and prepared for use by instructors to organize and present information. This is accomplished by writing a separate document with personal instructional notes and material. The lesson plan must be validated with approved reference materials that can be produced upon request.

5.10.4. The group LSO or LSS must produce standardized lesson plans for use by all ALSCTIs if no IG is available. Units will forward a copy of each lesson plan used to their MAJCOM for review and approval prior to publication and use.

5.10.5. All IGs and locally prepared lesson plans used in the conduct of ALSCT will be reviewed annually by the group LSO or LSS. Annual reviews will be documented appropriately.

5.10.6. Higher headquarters correspondence (e.g., messages, flight crew information files [FCIF], etc.) directing the inclusion of information not covered in ALSCT IGs or lesson plans will be added as directed.

Table 5.1. ALSCT REQUIREMENTS.

AFORMS Identifier	Course Title	Event Frequency
LL01	Life Support Familiarization Training (LSFT)	Initial (Note 1)
LL02	Emergency Egress Training, Ejection Seat	(Note 5)
LL03	Emergency Egress Training, Non-Ejection Seat	(Note 5)
LL04	Aircrew Chemical Defense Training (ACDT)	(Note 5)
LL05	Egress Training with ACDE	Initial (Note 2)
LL06	Aircrew Life Support Equipment (ALSE) Training	(Note 5)

NOTES:

1. Accomplished before first flight at unit of assignment.
2. Must be accomplished one time in assigned MDS aircraft before first flight using ACDE.
3. Grounding items: LL01, LL02, and LL03.
4. ALSCT courses may be combined as long as all required training is accomplished.
5. Training frequencies are identified in AFI 11-202, Volume 1, *Aircrew Training*, and AFI 11-2MDS-series, Vol 1.

Chapter 6

AIRCREW CLOTHING AND EQUIPMENT

6.1. Purpose. This chapter establishes minimum aircrew clothing requirement, defines who may wear the MC-1 knife and when, and outlines minimum requirements for maintenance and inspection of aircrew life support equipment (ALSE).

NOTE: *Members of the USAF Aerial Demonstration Squadron are exempt from the provisions of this chapter except for the wear of fire retardant clothing.*

6.2. Minimum Clothing Requirements. MAJCOMs, ANG and FOAs will comply with the following, unless MAJCOM directives specifically waive the unit from the following clothing requirements.

6.2. (AFMC) AFMC units will comply with AFI 11-301, Volume 1, Aircrew Life Support Program, AFI 11-302, Volume 1, Life Support Equipment Configuration, Allowance Standards (AS) 016, Special Purpose Clothing and Personal Equipment, AS 450, Personal/Life Support Equipment, and applicable technical order requirements for wear and use of flight clothing and ALS and survival equipment. All non-passenger personnel (except flight stewards and crewmembers in support of CSAF/CC/CV and AFMC/CC on distinguished visitor airlift missions worldwide) will, as a minimum, wear flight boots, Nomex (or equivalent) coveralls, and have Nomex (or equivalent) gloves in their possession. Personnel flying in fighter or trainer aircraft equipped with ejection seats must wear gloves at all times. Additionally, they will wear an Air Force approved helmet, oxygen mask, harness, and anti-G suit/combat edge (if required).

6.2.1. Undergarments. Cotton or fire retardant undergarments are mandatory due to the added protection. Undergarments made of 100 percent nylon or polyester are not authorized during flight.

6.2.2. Flight Coveralls, Nomex®. To comply with the intent of AFI 11-202, Volume 3, *General Flight Rules*, and T.O. 14P3-1-112, *Maintenance Instructions Nomex® Flight Gear, Coveralls, Gloves, Jacket*, the outer layer of clothing will be of fire retardant material. Coveralls listed in T.O. 14P3-1-112, T.O. 14P3-1-131, *Operation and Maintenance Instructions With Illustrated Parts Breakdown Aircrew Chemical-Defense Ensemble*, T.O. 14P3-5-61, *Operation, Service, and Maintenance Instructions Quick-Donning Anti-Exposure Flying Coverall Type CWU-16/P*, T.O. 14P3-5-81, *Operation and Maintenance Instructions With Illustrated Parts Breakdown, CWU-21 and 21A/P Anti-Exposure Suit*, and T.O. 14P3-5-91, *Operation and Maintenance Instructions With Illustrated Parts Breakdown, CWU-74/P Flyer's Anti-Exposure Coverall*, are the only coveralls aircrew are authorized to wear during flight. Sleeves will be rolled down and closed at the wrist for maximum fire protection.

6.2.3. Flight Jackets. The unit commander determines seasonal requirements. Flying jackets listed in AS 016 and T.O. 14P3-1-112 are the jackets aircrew are authorized to wear during flight. Wear of the A-2 leather flight jacket is addressed in AFI 36-2903.

6.2.4. Flight Gloves. Nomex ® flight gloves listed in AS 016 and T.O. 14P3-1-112 are the only gloves aircrew are authorized to wear during flight. As a minimum, aircrew are required to have gloves in their possession in case of emergencies. Gloves will not have fingers exposed, cut off, or modified in any manner.

6.2.4. (AFMC) Per AFI 11-2FTv3, aircrews and operational support crewmembers in multi-engine aircraft must wear gloves for takeoff, approach, and landing.

6.2.5. Flight Boots. The primary aircrew boots, as authorized in AS 016, are the FWU-3/P, FWU-8/P and the lightweight model 700, 770, and 790 Belleville® Aircrew Boot. Lace-up zipper inserts may be used. Boots, flying, extreme cold, Sorrel Premium, Mukluks, as well as vapor barrier thermal are authorized for wear during winter flight operations at the discretion of unit commander.

6.2.6. Extreme Cold Weather Trousers, Flyers, Nomex® (CWU-18/P) and Cold Weather Coverall (CWU-64/P). These items are authorized for issue as a unit option.

6.2.7. (Added-AFMC) DFOs will expand above minimum clothing requirements for each mission the field activity flies and for periods when seasonal clothing must be worn. Seasonal periods for local flying may be defined using average ground temperatures and chill factors, instead of the calendar date. Added minimum clothing requirements should be directly related to the aircraft flown, terrain, climate, forecast weather, number of occupants, availability of flight following service, and anticipated timeliness of search and rescue service.

6.2.8. (Added-AFMC) Aircraft commanders will ensure personnel (including passengers) flying on AFMC aircraft wear appropriate clothing and footwear. In addition, personnel receiving taxi rides in an ejection seat aircraft will wear as a minimum flight boots (or equivalent), Nomex coveralls, and Nomex gloves on ejection type aircraft. The wearing of jewelry is prohibited.

6.2.9. (Added-AFMC) Flying personnel operating aircraft from aircraft carriers may wear appropriate non-skid footwear.

6.3. MC-1 Survival Knife. Any USAF aircrew member may wear the MC-1 knife for flying duties as long as it remains on the flight uniform.

6.3. (AFMC) When parachutes are worn (including parachutes integral to an ejection seat), the MC-1 knife with hook blade open, or riser cutter knife, will be carried in the pocket of the outer garment.

6.3.1. Responsibility of the Aircrew Member. Aircrew members have the same responsibility for their survival knives that security police have for their side arms. Aircrew members are subject to military and civil penal action if they unsheathe the MC-1 knife outside of a survival or training situation.

6.3.2. Action in Case of Civil Apprehension. If a civil officer arrests an aircrew member who is wearing the survival knife as part of the flight uniform, the aircrew member will take the following action:

6.3.2.1. Do not resist apprehension. Comply with the civil officer's instructions.

6.3.2.2. Explain to the civil officer that the knife is part of their authorized flight uniform.

6.3.2.3. Notify the nearest Chief of United States Military Security Forces, who in-turn contacts the Staff Judge Advocate (SJA) of the nearest military installation. The SJA, in turn, reports the incident to HQ USAF.

6.4. ALSE Requirements. Only ALSE approved as safe-to-fly will be issued, worn, installed or used for flight operations. All ALSE will be sized, fitted, issued, inspected, maintained, modified, controlled and stored IAW applicable Technical Order (T.O.) guidance, approved commercial manuals, and applicable MAJCOM directives. The following specific guidance applies:

6.4.1. Aircrew helmets will be used as required and inspected and maintained IAW applicable 14P-series T.O.s.

6.4.1.1. All aircrew helmets will be subdued factory gray or blended to match the aircraft color scheme so as not to contrast or brightly reflect off inside of the canopy or cockpit glass. Subduing can be accomplished by application of paint or taping of helmet shells to blend with the aircraft exterior color. Subdued method is at the discretion of the unit commander. BFT, FTU students, and units without a mobility commitment are exempt from this requirement.

6.4.1.2. Foreign students may use their own helmets if systems are compatible. However, continued use will depend on availability of maintenance procedures and replacement parts.

6.4.1.3. Only helmet visor housings and visor fabric covers may be customized with unit approved designs. Visor housings may only be customized using elastomeric film (decals), tape or equivalent materials. Designs must not interfere with visor operations, the EEU-series goggle top latch assembly, or the night vision goggle (NVG) mounting bracket. Designs will be obliterated by removing decals, painting over designs, or replacing visor housings or covers when necessary to comply with real world sanitization requirements.

6.4.2. Helmets mounted devices (Joint Helmet Mounted Cueing System [JHMCS], NVGs, Nuclear Flashblindness Goggles, Laser Eye Protection & High Contrast Visors) will only be worn or used by aircrew members requiring them to perform specific missions. Inspection and maintenance of these devices will be accomplished IAW appropriate T.O.s and MAJCOM guidance.

6.4.2.1. ALS technicians will perform operational and intermediate level maintenance on aviators NVGs. Additionally, ALS personnel are responsible for issuing, fitting, inspection, maintenance, and storage of aviators NVGs only.

6.4.2.2. Where applicable, squadron commanders will ensure an area is designated for use by aircrew members to perform NVG preflight operations.

6.4.2.3. Inspect thermal flash blindness devices.

6.4.3. Global Positioning System Receivers. Inspect and configure IAW appropriate T.O.s and MAJCOM, Special Instruction (SPIN) notices, and theater guidance.

6.4.4. Anti-G Garments are required during all flights in aircraft equipped with anti-G systems when 2 or more “Gs” are anticipated.

6.4.4.1. CSU-Series Anti-G Garment. Aircrews who are required to wear anti-exposure suits as well as aircrew chemical defense ensembles will have a second anti-G garment fitted for use with these items. This does not apply to the CSU-17/P anti-G vest.

6.4.4.2. Combined Advanced Technology Enhanced Designed “G” Ensemble (COMBAT EDGE). The wear of COMBAT EDGE is required on all flights where 6 Gs or more is pre-planned or anticipated and assigned aircraft are appropriately modified to accommodate COMBAT EDGE equipment. The CRU-94/P oxygen connector will be used in all equipment configurations with the exception of real world chemical flights that require the use of the ACDE or AERP.

6.4.5. Anti-Exposure Suits. Only authorized and approved anti-exposure suits will be worn by aircrews and passengers.

6.4.5.1. Non-Ejection Seat Aircraft. Quick-don anti-exposure suits will be readily available for aircrew during overwater flights when the water temperature is 60 degrees Fahrenheit (F) (15.5 Celsius (C) or less.

6.4.5.2. Ejection Seat Aircraft. Constant wear anti-exposure suits will be worn by crewmembers of ejection seat aircraft on any preplanned overwater flight when the water temperature is 60F/ 15.5C or less. If the water temperature ranges between 60F (15.5C) and 51F (10.5C), and the local air temperature is 70F (21.2C) or greater, the unit commander may waive the requirement to wear the anti-exposure suit after considering the following factors:

6.4.5.2.1. Climate zone and existing weather throughout range of flights (reference T.O. 14P3-5-81/91).

6.4.5.2.2. Operational requirements.

6.4.5.2.3. Number and type of aircraft participating in sortie.

6.4.5.2.4. Time of flight over water.

6.4.5.2.5. Distance from land.

6.4.5.2.6. Mission altitude.

6.4.5.2.7. Risk based on type of sortie.

6.4.5.2.8. Degree of surveillance over the mission area.

6.4.5.2.9. Location, availability and capability of Search and Rescue (SAR) forces.

6.4.5.2.10. Winds, wave height, and their impact on SAR operations.

6.4.6. Helicopter Emergency Egress Device (HEED). All rotary type aircraft aircrews will wear the HEED during overwater flights when they are outside the auto rotation distance from shore.

6.4.7. Life Preserver Units (LPU) will be worn on all overwater to include cross-country flights by aircrew members and passengers of ejection seat and single engine aircraft. Designated life preservers will be readily available during all overwater flights on multiplace aircraft.

6.4.8. Survival Kit/Vest Components. Only those authorized and approved components will be used and all will be used and inspected IAW appropriate T.O.s, MAJCOM directives, to include manufacturer's instructions.

6.4.9. Gunner's Belts/Restraint Harnesses will be inspected IAW T.O. 13A1-1-1, *Repair, Cleaning, Inspection, and Testing of Aircraft Safety Belts, Shoulder Harness, and Miscellaneous Personnel Restraint Equipment*. The MB-21, Part Number MS16070-21 is the restraint device authorized for helicopters. The PCU-17/P and HBU-6/P are the only devices authorized for use in fixed wing aircraft (i.e., C-17, C-130, RC-135, etc.).

6.4.10. Survival Vests. Only authorized and approved survival vests, properly configured and maintained will be worn or used. Inspections will be accomplished IAW appropriate T.O. and MAJCOM directives.

6.4.11. Oxygen Masks and Connectors. Oxygen masks, connectors, and emergency quick disconnects will be inspected, tested, and maintained by qualified ALS personnel as authorized by applicable T.O.s.

6.4.11.1. Oxygen mask connectors and emergency quick disconnects will be inspected and tested at least once every 30 days. Document all inspections appropriately. Units will inspect, test, and maintain oxygen connectors used for equipment preflight attached to MQ-1, TTU-529/E or other authorized test-sets and document appropriately.

6.4.11.2. ALS will inspect and repair quick-start masks as required.

6.4.11.3. E-3 and E-4B aircraft crew oxygen masks will be inspected and maintained IAW applicable T.O.s by appropriate personnel. E-4B flight crew quick-don masks on the flight deck area will be inspected IAW McDonnell-Douglas or Boeing aircraft maintenance contract.

6.4.12. Parachutes/Torso Harnesses will be inspected and maintained IAW appropriate 14D series technical orders and MAJCOM directives. Preflight inspection of personnel parachute or torso harness is the responsibility of the user.

6.4.12.1. MXU-22/P Inflatable Lumbar Support Pad. This USAF-approved item may be installed on parachutes and torso harnesses as authorized in writing by the local aerospace medicine office. Unit flight surgeons will be consulted for optimal use and placement of the lumbar support pad. When installed it will inspected IAW appropriate T.O. and concurrent with item on which installed.

6.4.12.2. Units are authorized, IAW T.O. 00-20-1, to defer personnel parachute inspections on alert aircraft or aircraft away from home station, until the aircraft are removed from alert status or return to home station. NOTE: This provision is not to be used as a deliberate planning factor to defer inspections in support of deployment operations. Inspections will be accomplished prior to deployments.

6.4.13. The use of contact lenses by aircrew is prohibited while wearing their aircrew chemical defense equipment (i.e., AERP/ACDE) IAW AFJI 44-117.

6.5. Care, Use, and Storage of ALSE. The following specific instructions apply to the unique use, care and storage of ALSE.

6.5.1. All flight clothing will be sanitized prior to deployment to combat areas or first employment mission. Sanitize all ALSE and inspection forms prior to deployment. Use local control numbers on equipment and clothing items to identify and maintain accountability.

6.5.2. Only authorized knee-boards and clipboards will be used. The use of all-metal checklist rings presents both safety and FOD hazards and will not be used in ejection seat equipped aircraft. Units are authorized to use the nylon or plastic covered flex-lock type ring for checklist use. Aircrew members flying non-ejection seat aircraft may use clipboards authorized for use in AS 016.

6.5.3. Fire department personnel will be trained in integration, functional use, and operation of ALSE that may be encountered during aircrew and passenger extraction and appraised of any changes in ALSE equipment type or operation that effect aircrew extraction.

6.5.4. The Chief of Supply may courtesy store ACDE/AERP equipment not required for immediate use or aircrew training IAW AFMAN 23-110, Vol 2, Part 2, Chapter 26, Section F, *Individual Mobility Baggage Kits*.

6.5.5. Vacuum-Packing ALSE is authorized under the following conditions:

6.5.5.1. Clothing type items may be vacuum packed indefinitely, unless signs of discoloration, deterioration or broken seals are evident. All vacuum-packed items, other than clothing, will be opened and inspected every 24 months.

6.5.5.2. Vacuum packaging is not authorized for components that would inhibit compliance inspection criteria, aircrew safety, and accessibility for emergency use. Some examples of what not to vacuum pack include signaling and communication devices.

6.5.5.3. All vacuum packaged items will be installed in a see through container and clearly labeled with the package contents. Seal items in such a way that the package can be opened with a single gloved hand. Mark the package "OPEN HERE" with an arrow pointing to the notched or tear strip (or equivalent). Label all packages using a 1 inch by 3 inch label, placed on the inside of the package, with the date of installation, any applicable manufacturing data and the initials of individual who packaged the item.

6.5.5.4. Vacuum packaging equipment may be requisitioned IAW AS 006 and AS 258.

6.6. Re-Use of Aircrew Life Support Equipment Involved In a Class A Aircraft Mishap. ALSE is not designed or intended for reuse after undergoing the effects of aircraft mishaps and will not be placed back into operational service. Use is limited to training purposes only and must not be subjected to training scenarios where system failure could cause injury to personnel.

Chapter 7

DEPLOYMENT AND CONTINGENCY OPERATIONS

7.1. Purpose. This chapter establishes broad policies governing responsibility and preparation for the deployment of ALSE. It also establishes requirements for deployment and distribution of ACDE for all aircrew members. Units without a Counter-Nuclear, Biological, Chemical (C-NBC) defense Designed Operational Capability (DOC) or deployable Global Reach Laydown (GRL), Weapons of Mass Destruction (WMD) unit type codes (UTC) are exempt from these requirements.

7.2. Responsibilities:

7.2.1. Group and Squadron Commanders:

7.2.1.1. Will ensure compliance with this chapter and keep ALS personnel abreast of the group's existing and forthcoming contingencies and commitments.

7.2.1.2. Ensure unit's annual financial plan includes a budget for maintaining ALSE to meet all probable peacetime and wartime missions.

7.2.1.3. Ensure that forthcoming mobility commitments are provided adequate support from organizations within the wing/group.

7.2.2. Group LSO/LSS and Squadron LSO/NCOIC:

7.2.2.1. The LSS and NCOICs are responsible for UTC manning and unit mission contingency operation.

7.2.2.2. Ensure standardized unit deployment local directives are developed to recall, deploy, employ, and redeploy ALS personnel, ALSE, and supplies. These directives will include all necessary information required to setup, employ, resupply, and staff the ACCA used by each unit.

7.2.2.3. Identify equipment shortages resulting in mission impairment through the Status of Resources and Training System (SORTS) reporting process IAW AFI 10-201, *Status of Resources and Training System*.

7.2.2.4. Ensure copies of MSDSs are available for each type of hazardous material being shipped to deployed locations.

7.2.2.5. Ensure items listed in LOGDET and Contingency Operations/Mobility Planning and Execution System (COMPES) listings are on hand and serviceable. Units must also review and comply with theater specific reporting instructions for specialized ALSE requirements. Squadron NCOICs, through the LSS, squadron commander, and operations group commander will notify their MAJCOM of shortfalls in their mobility packages as directed by the MAJCOM.

7.2.3. Pilot and Non-pilot Units.

7.2.3.1. Pilot Units, with assistance from non-pilot units, are responsible for developing and maintaining the standard LOGDET for each UTC assigned to it. The unit must comply with responsibilities IAW AFMAN 10-401, Volume 1, *Operation Plan and Concept Plan Development and Implementation*. The goal is a uniform package for all units using the UTC. Coordinate change requests through respective MAJCOM ALS manager.

7.2.3.2. Non-pilot units will review assigned UTC equipment listings on a biennial basis. Provide the pilot unit with suggested changes.

7.3. Mobility Preparation, Personnel:

7.3.1. Ensure ALS personnel are trained to process and handle hazardous cargo IAW AFMAN 24-204(I), *Preparing Hazardous Materials for Military Air Shipments.* At least two AFRC personnel (per unit) will be trained and qualified to handle hazardous materials.

7.3.2. If applicable, ensure personnel are qualified in unit assigned aircrew weapons to include issue, operations, cleaning, and security requirements.

7.3.3. All personnel will be current in essential ancillary training and wartime skills identified in CFETP 1T1X1 prior to deployment.

7.4. Equipment:

7.4.1. Air Expeditionary Wings (AEW) and AEF units must coordinate with each other, as well as their respective MAJCOMs to ensure appropriate and adequate equipment and supplies are deployed.

7.4.2. Units experiencing a shortage of ALSE may work with units with similar MDS aircraft to satisfy requirements. Coordinate all equipment requirements through respective MAJCOMs to ensure other units' deployment capabilities are not hampered.

7.4.3. Ensure mobility bins or boxes are available for transportation and storage of ALSE and supplies. Bins will be pre-packed to the maximum extent possible at all times.

7.4.4. Ensure sufficient quantities of equipment, parts, supplies, forms, inspection records, T.O.s and computers are packed to support extended combat operations.

7.4.5. In addition to all maintenance equipment and supplies, portable or deployable equipment racks, workbenches, and storage bins will be included in the mobility package.

7.4.6. Ensure equipment stored in the mobility bins or boxes is inventoried and inspected for serviceability at least once every 180 days. A locally developed form will be used on each bin or box to document this inspection. Constant maintenance of mobility stock levels must be accomplished to support ongoing operations. Additional consideration should be given to the potential for follow-on tasking from a deployed location.

7.4.7. Ensure all accountable, deployable ALS equipment items are assigned use code "A" for mobility on the custodian authorization/custody receipt listing (CA/CRL).

7.4.8. Ensure Test Measurement and Diagnostic Equipment (TMDE) are calibrated to the maximum extent possible prior to deployments. Inspection should be staggered to prevent all TMDE coming due at same time and all TMDE should be carefully packaged to prevent damage.

7.5. Deployment:

7.5.1. Ensure deploying ALSE and accompanying inspection forms are sanitized of data pertaining to unit of assignment or activity.

7.5.2. All deploying aircrews will have individual ALSE combat configured prior to the first employment mission. The following actions are required:

7.5.2.1. Issue weapons IAW applicable Air Force instructions (refer to paragraph **7.7.** of this instruction).

7.5.2.2. Ensure aircrews sanitize their flight clothing.

7.5.2.3. Personnel locator beacons will be placed in the appropriate mode based on established theater requirements or as directed by battle staff.

7.5.2.4. Configure aircraft ALSE for appropriate contingency operations.

7.5.2.5. Establish procedures to ensure extra, sanitized copies of deploying aircraft and aircrew ALSE records accompany deploying aircraft and aircrews.

7.5.2.6. Enroute support operations will be outlined by MAJCOMs for specific airframes.

7.6. Employment:

7.6.1. As applicable, upon arrival at deployed location, ALS supervision will establish contact with the Survival Recovery Center (SRC) and CE Readiness NBC control center personnel to coordinate plans for aircrew contamination control area (ACCA) construction and operation during stages of alert. ACCA operations should be collocated with groundcrew contamination control area (CCA) operations to the maximum extent possible. Refer to AFI 11-301, Volume 3, *Aircrew Life Support (ALS) Combat Operations* (forthcoming).

7.6.2. Each ALS section should establish an organizational Non-classified Internet Protocol Router Network (NIPRNET) and Secret Internet Protocol Router Network (SIPRNET) account to ensure effective communications. If an organizational SIPRNET account is not available, efforts should be taken to gain access to the SIPRNET for conduct of deployed operations.

7.6.3. Follow theater, MAJCOM, and unit specific guidance for employed area operations and redeployment.

7.6.4. Units should report all shortfalls through deployed leadership to minimize impact on theater capability.

7.7. Weapons:

7.7.1. Ensure ALS technicians are qualified annually on weapons handling procedures, operations, cleaning, and security requirements, as applicable, for M9 (9mm) and M16 weapons IAW AFPD 16-8, *Arming of Aircrew, Mobility, and Oversea Personnel*, AFI 31-207, *Arming and Use of Force by Air Force Personnel*, AFMAN 31-229, *USAF Weapons Handling Manual*, AFI 36-2226, and each commands specific arming policies as required. The M9 (9mm) handgun is the primary weapon for ALS personnel.

7.7.2. ALS personnel assigned to units with a mobility requirement are assigned to arming Groups B and C, as applicable. Ensure ALS personnel are selectively armed when tasked to issue, store, and protect weapons at deployed locations, under field conditions, and in support of ACCA operations IAW AFI 31-101 and AFI 31-207.

7.8. Counter-Nuclear, Biological, Chemical (C-NBC) Defense Operations:

7.8.1. Ensure the full basis of issue (BOI) for aircrew C-NBC operations (refer to **Table 7.1.** of this instruction) is available to each aircrew member deployable to a chemical or biological threat area.

Aircrews will be sized, fitted and issued a D-1 Bag; remaining assets may be maintained as ready to issue bulk storage. Aircrew deploying into chemical or biological threat areas will hand carry one complete ACDE/AERP (D-1 "mini" bag). Units must also comply with theater specific reporting instructions for C-NBC requirements when the D-1 Bag is insufficient to meet their requirements.

7.8.2. Units may assemble sufficient CRU-80/P filter packs (with M13A2 filters installed) to accommodate rapid processing of initial cadre deploying aircrew. Inspect built-up filter packs as required by governing T.O.s and Army Service Bulletin (SB) 3-30-2. Disassemble the remaining filter packs and place parts in resealable bags ready for immediate installation of filter elements. Procedures must be established and personnel and tools must be available for mass filter element installation.

7.8.3. Vacuum packing the completed CRU-80/P assembly to extend the filter element service-life to 2 years IAW T.O. 14P3-1-131, *Operation and Maintenance Instructions With Illustrated Parts Breakdown Aircrew Chemical Defense Ensemble*, is highly encouraged.

7.8.4. Unit ALS personnel will maintain individual aircrew sizing information in ALSMS or equivalent, be responsible for requisitioning, fitting, and maintaining ACDE/AERP equipment, and be readily available for donning and doffing operations

7.8.5. Ensure aircrews are trained on handling, use and installation of lithium batteries IAW AFMAN 23-110, Vol 1, Part 1, Chapter 4, Section C.

7.8.6. ALS personnel will be trained in ACCA operations management, and aircrew processing procedures. Only qualified ALS personnel will fit, inspect, maintain, and decontaminate ACDE as required by appropriate T.O.s and this instruction.

Table 7.1. AIRCREW CHEMICAL DEFENSE EQUIPMENT BASIS-OF-ISSUE (BOI).

Nomenclature	D-Bag Quantities	D-1 Bag (Mini) Quantities	Total Quantities	Training Quantities
MBU-19/P, Mask/Filter Manifold		1	1	15 per Activity
CQU-7/P, Blower and Hose Assembly		1	1	15 per Activity
Inline Filter Assembly	2	1	3	N/A
Filter, Oxygen Emergency Assembly	2	1	3	N/A
Blower Batteries, Lithium	4	2	6	30 per Activity
Aircrew Coverall, CWU-66/P, -77/P or JPACE (Notes 1 and 4)	2	1	3	N/A
Cotton Drawers	2	1	3	1 per Aircrew
Cotton Undershirt	2	1	3	1 per Aircrew
Filter Canister, C2A1	4	2	6	30 per Activity

Nomenclature	D-Bag Quantities	D-1 Bag (Mini) Quantities	Total Quantities	Training Quantities
Protective Gloves 7 Mil Butyl	2 pr	1 pr	3 pr	1 per Aircrew
Glove Inserts	2 pr	1 pr	3 pr	1 per Aircrew
Disposable Footwear Cover, Overboot	4 pr	2 pr	6 pr	2 per Aircrew
Suspension Straps		3	3	45 per Activity
Aircrew Cape, Disposable	4	2	6	2 per Aircrew
MXU-835/P, Intercom Unit	N/A	1	1	15 per Activity
MBU-13/P, CBO Mask (Note 2)		1	1	15 per Activity
HGU-41/P, Protective Hood (Note 2)	2	1	3	15 per Activity
CRU-80/P, Filter Pack (Note 2)		1	1	15 per Activity
M13A2, Filter Set (Note 2)	2	1	3	15 per Activity
M8 Paper (Note 5)	2	1	3	N/A
M9 Tape (Note 5)	2	1	3	N/A
Decon Kit, M291 (Notes 3 and 5)	2	1	3	N/A

NOTES:

1. Cotton undergarments are optional with the CWU-66/P and -77/P.
2. These items are authorized when the AERP system (mask and blower) is not available or assigned aircraft are not modified.
3. Use either the M295 or M291 Decontamination Kit.
4. Use of flightsuit is suitable for training purposes.
5. Use of simulated M8, M9 and M295 is suitable for training purposes.

7.9. Forms Prescribed. AFTO Form 22, **Technical Order Improvement Report and Reply**, AF Form 55, **Employee Safety and Health Record**, AF Form 1000, **Idea Application**, AF Form 1297, **Temporary Issue Receipt**, AF Form 1522, **AFORMS Additional Training Accomplishment Input**, AF Form 2420, **Quality Control Inspection Summary**, AFTO Form 46, **Prepositioned Life Support Equip-**

ment, AFTO Form 781A, **Maintenance Discrepancy and Work Document**, and AFTO Form 781F, **Aerospace Vehicle Flight Report and Maintenance Document**.

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

The following is a list of publications that are required to effectively manage an ALS Program. LSOs, LSSs, supervisors, and technicians should possess a working knowledge of these documents. This list is not all-inclusive. This list also includes general information T.O.s pertaining to inspection, maintenance, storage, and use of personal flying and survival equipment. Specific T.O.s for items authorized within the unit are required to maintain ALSE.

AIR FORCE PUBLICATIONS

AFI 10-201, *Status of Resources and Training System*

AFI 10-212, *Air Base Operability*

AFMAN 10-401, Vol 1, *Operation Plan and Concept Plan Development and Implementation*

AFI 10-402, *Mobilization Planning*

AFI 10-403, *Deployment Planning and Execution*

AFI 10-601, *Mission Needs and Operational Requirements Guidance and Procedures*

AFI 10-1101, *Operations Security*

AFI 11-2MDS-Series, Vol 1, *Aircrew Training*

AFI 11-202, Vol 1, *Aircrew Training*

AFI 11-202, Vol 3, *General Flight Rules*

AFI 11-215, *Flight Manuals Program (FMP)*

AFPD 11-3, *Life Support*

AFI 11-301, Vol 1, *Aircrew Life Support (ALS) Program*

AFI 11-302, Vol 1, *C-5, C-9, C-17, C-20, C-21, C-27, C-130, C-141, KC-10 and C/KC-135, Maintenance and Configuration Requirements for Aircrew and Aircraft-Installed Life Support Equipment (LSE)* (projected to be AFI 11-301, Vol 2, *Maintenance and Configuration Requirements for Aircrew and Aircraft-Installed Life Support Equipment [LSE]*)

AFI 11-301, Vol 3, *Aircrew Life Support (ALS) Combat Operations* (forthcoming)

AFI 11-401, *Flight Management*

AFI 11-403, *Aerospace Physiological Training Program*

AFI 14-105, *Unit Intelligence Mission and Responsibilities*

AFPD 16-8, *Arming of Aircrew, Mobility, and Oversea Personnel*

AFI 21-101, *Aerospace Equipment Maintenance Management*

AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*

AFI 21-112, *Aircrew Egress Systems Maintenance*

AFI 21-201, *Management and Maintenance of Non-Nuclear Munitions*

AFPD 21-3, *Technical Orders*

AFCAT 21-209, *Ground Munitions*

AFMAN 23-110, Vol 1 Part 1, *Basic AF Supply Procedures*

AFMAN 23-110, Vol 2, Part 2, *USAF Standard Base Supply System*

AFMAN 23-110, Vol 2, Part 13, *Standard Base Supply Customer's Procedures*

AFMAN 23-110, Vol 4, Part 1, *Air Force Equipment System Policy and Procedures*

AFI 23-111, *Management of Government Property in Possession of the Air Force*

AFMAN 23-220, *Reports of Survey for Air Force Property*

AFMAN 24-204(I), *Preparing Hazardous Materials for Military Air Shipments*

AFI 24-301, *Vehicle Operations*

AFI 24-302, *Vehicle Maintenance Management*

AFMAN 24-307, *Procedures for Vehicle Maintenance Management*

AFI 25-101, *War Reserve Materiel (WRM) Program Guidance and Procedures*

AFI 25-201, *Support Agreements Procedures*

AFI 31-207, *Arming and Use of Force by Air Force*

AFMAN 31-229, *USAF Weapons Handling Manual*

AFI 32-1024, *Standard Facility Requirements*

AFH 32-1084, *Facility Requirements*

AFI 32-2001, *The Fire Protection Operations and Fire Prevention Program*

AFPD 32-40, *Disaster Preparedness*

AFI 32-4001, *Disaster Preparedness Planning and Operations*

AFI 32-4002, *Hazardous Materiel Emergency Planning and Response Program*

AFMAN 32-4005, *Personnel Protection and Attack Actions*

AFI 33-322, *Records Management Program*

AFI 33-324, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*

AFH 33-337, *The Tongue and Quill*

AFI 33-360, Vol 1, *Publications Management Program*

AFI 33-360, Vol 2, *Forms Management Program*

AFI 36-2101, *Classifying Military Personnel (Officers and Enlisted)*

AFMAN 36-2108, *Enlisted Classification*

AFI 36-2201, *Developing, Managing, and Conducting Training*

AFI 36-2209, *Survival and Code of Conduct Training*

AFI 36-2217, *Munitions Requirements for Aircrew Training*

AFI 36-2226, *Combat Arms Program*

AFMAN 36-2236, *Guidebook for Air Force Instructors*

AFMAN 36-2241, Vol 1, *Promotion Fitness Examination (PFE) Study Guide*

AFMAN 36-2241, Vol 2, *United States Air Force Supervisory Examination (USAFSE) Study Guide*

AFMAN 36-2245, *Managing Career Field Education and Training*

AFPAM 36-2246, *Aircrew Survival*

AFI 36-2406, *Officer and Enlisted Evaluation Systems*

AFI 36-2803, *The Air Force Awards and Decorations Program*

AFI 36-2807, *Headquarters United States Air Force Deputy Chief of Staff Air and Space Operations Annual Awards Program*

AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*

AFI 36-2923, *Aeronautical, Duty and Occupational Badges*

AFI 37-138, *Records Disposition--Procedures and Responsibilities*

AFMAN 37-139, *Records Disposition Schedule*

AFI 38-101, *Air Force Organization*

AFI 38-201, *Determining Manpower Requirements*

AFI 38-204, *Programming USAF Manpower*

AFI 38-401, *The Air Force Innovative Development Through Employee Awareness (Idea) Program*

AFI 41-302, *Aeromedical Evacuation Operations and Management*

AFJI 44-117, *Ophthalmic Services*

AFI 48-101, *Aerospace Medical Operations*

AFI 48-116, *Food Safety Program*

AFI 48-123, *Medical Examinations and Standards*

AFI 48-145, *Occupational Health Program*

AFI 63-1201, *Assurance of Operational Safety, Suitability, & Effectiveness*

AFI 90-201, *Inspector General Activities*

AFI 90-901, *Operational Risk Management*

AFPAM 90-902, *Operational Risk Management (ORM) Guidelines and Tools*

AFMAN 91-201, *Explosives Safety Standards*

AFI 91-202, *The US Air Force Mishap Prevention Program*

AFI 91-204, *Safety Investigations and Reports*

AFI 91-205, *Nonnuclear Munitions Safety Board*

AFPAM 91-211, *USAF Guide to Aviation Safety Investigation*

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Prevention, and Health (AFOSH) Program*

AFI 91-302, *Air Force Occupational Environmental Safety, Fire Protection, and Health (AFOSH) Standards*

AFMS 13C1, *Current Operations Flight*

AFMS 31C1, *Life Support Section*

AFR 64-4, Vol 1, *Survival Training* (projected to be AFMAN 36-2216)

AFP 64-15, *Survival and Emergency Uses of the Parachute*

AFP 170-1, *Resource Manager's Handbook* (projected to be AFPAM 65-605)

CFETP 1T1X1, Parts 1-II, *AFSC 1T1X1, Aircrew Life Support Career Field Education and Training Plan*

DOD AND JOINT PUBLICATIONS

DODD 5000.1, *The Defense Acquisition System*

DOD 5100.76-M, *Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives*

JP 3-50, Vol 1, *National Search and Rescue Manual (National Search and Rescue System)*

JP 3-50.1, Vol 2, *National Search and Rescue Manual (Planning Handbook)*

AFOSH STANDARDS

AFOSH STD 48-8, *Controlling Exposures to Hazardous Materials*

AFOSH STD 48-19, *Hazardous Noise Program* (formerly AFOSH STD 161-19)

AFOSH STD 48-21, *Air Force Hazard Communication Program* (formerly AFOSH STD 161-21)

AFOSH STD 48-137, *Respiratory Protection Program*

AFOSH STD 91-22, *Walking Surfaces, Guarding Floor and Wall Openings and Holes, Fixed Industrial Stairs, and Portable and Fixed Ladders*

AFOSH STD 91-31, *Personnel Protective Equipment*

AFOSH STD 91-32, *Emergency Shower and Eyewash Units*

AFOSH STD 91-43, *Flammable and Combustible Liquids*

AFOSH STD 91-45, *Hazardous Energy Control and Mishap Prevention Signs and Tags*

AFOSH STD 91-46, *Materials Handling and Storage Equipment*

AFOSH STD 91-56, *Fire Protection and Prevention*

AFOSH STD 91-66, *General Industrial Operations*

AFOSH STD 91-67, *Liquid Nitrogen and Oxygen Safety*

AFOSH STD 91-68, *Chemical Safety*

AFOSH STD 91-100, *Aircraft Flight Line - Ground Operations and Activities*

AFOSH STD 161-21-1W, *Department of Defense, Federal Hazard Communication Training Program, Student's Workbook*

ALLOWANCE STANDARDS

AS 016, *Special Purpose Clothing and Personal Equipment*

AS 450, *Personal/Life Support Equipment*

AS 660, *Equipment Allowances for Non-Weapon Systems Communications Requirements*

TECHNICAL ORDERS

0-1-01, *Numerical Index*

0-1-02, *General Technical Orders*

0-1-11, *Armament Equipment*

0-1-12, *Airborne Electronic Equipment*

0-1-13, *Aircraft Furnishings and In-flight Feeding Equipment, Cargo Loading, Aerial Delivery and Recovery Equipment, Aircraft Fire Detection and Extinguishing Equipment*

0-1-14, *Deceleration Devices and Personal and Survival Equipment*

0-1-15, *Aircraft and Missile Temperature Control, Pressurizing, Air Conditioning, Heating, Ice Eliminating, and Oxygen Equipment*

0-1-31-4, *Ground Radio Electronic Equipment*

0-1-33-1, *General Purpose Test Equipment*

0-1-33-2 *Inspection, Laboratory and Special Purpose Test Equipment (Aircraft, Aircraft Accessories, Automatic Flight Control Systems, Aircraft Engines)*

0-1-33-3, *Special Purpose Test Equipment (Armament, Automotive, Electrical, and Electronic)*

0-1-40, *Commercial Air Conditioning, Heating, Plumbing, Refrigerating, Ventilating, and Water Treating Equipment*

0-1-42, *Coating, Cleaning and Sealing Compounds and Fuels, Gases, Lubricants, Chemicals and Materials*

0-1-43, *Test Sets*

00-5-1, *AF Technical Order System*

00-5-2, *Technical Order Distribution System*

00-5-2-2, *Automated Technical Order Management System (ATOMS) 4.2 User Manual*

00-5-2-102, *ATOMS Application Software*

00-5-15, *Air Force Time Compliance Technical Order System*

00-20-1, *Aerospace Equipment Maintenance General Policies and Procedures*

00-20-5, *Aircraft, Drone, Aircrew Training Devices, Engines, and Air-Launched Missile Inspections, Flight Reports, and Supporting Maintenance Documents*

00-20-7, *Inspection System, Documentation, and Status Reporting for Support and Training Equipment*

00-20-9, *Forecasting Replacement Requirements for Selected Calendar and Hourly Time-Change Items*

00-25-06-2-1, *Intermediate Maintenance 412A Survival/Life Support System Equipment Work Unit Code Manual*

00-25-213, *Transportation, Storage, Testing, Shelf Life, and Quantity Unit Pack Requisitioning of Dry Batteries*

00-25-241, *Parachutes Logs and Records*

00-35A-39, *Instructions for Procurement, Issue, Use, and Maintenance of Medical Kits*

00-35D-54, *USAF Materiel Deficiency Reporting and Investigating System*

00-110N-2, *Radioactive Waste Disposal*

00-110N-3, *Requisition, Handling, Storage, and Identification of Radioactive Material*

1-1-641, *Minimum Equipment Requirements for Overwater, Arctic, and Desert-Tropic Flights*

11A-1-1, *Conventional Munitions Restricted or Suspended*

11A-1-10, *General Instructions Munitions Serviceability Procedures*

11A-1-46, *Fire Fighting Guidance, Transportation, and Storage Management Data*

11A10-26-7, *Storage and Maintenance Procedures Pyrotechnic Signals*

11A10-30-7, *Storage and Maintenance Procedures Pyrotechnic Fuses and Fire Starters*

11C15-1-3, *Chemical Warfare Decontamination, Detection and Disposal of Decontamination Agents*

11D1-1-111, *Operation and Maintenance Instructions Decontamination Kit, Personal, M258A1*

11D1-1-131, *Operator's Manual Decontamination Kit, Skin: M291*

11P-1-7, *Storage and Maintenance Procedures Cartridges for Aircrew Escape Systems*

12S10-2AVS6-12, *General Support Maintenance Manual, Aviator's Night Vision Imaging System AN/AVS-6 (V) 1 and AN/AVS-6 (V) 2*

12S10-2AVS6-21, *Operational Support and Intermediate Maintenance Manual for Aviator's Night Vision Imaging System AN/AVS-6 (V) 1*

12S10-2AVS9-1, *Operator's and Organizational Maintenance Manual, Image Intensifier Set, Night Vision, Type AN/AVS-9 (V)*

12S10-2AVS9-2, *Maintenance Manual, Intermediate with Illustrated Parts Breakdown, Image Intensifier Set, Night Vision, Type AN/AVS-9 (V)*

13A1-1-1, *Repair, Cleaning, Inspection, and Testing of Aircraft Safety Belts, Shoulder Harness, and Miscellaneous Personnel Restraint Equipment*

14-1-4, *Identification Marking of Clothing and Personal Type Flying Equipment*

14D1-1-1, *Styles of Parachutes To Be Used In Various Type Aircraft*

14D1-1-2, *Cleaning of Parachute Assemblies*

14D1-2, *TCTO Series*

14D1-2-1, *Personnel Parachutes*

14D2-8, *TCTO Series*

14D2-8-1, *Use, Operation Inspection, Arming and Disarming Instructions With Illustrated Parts Break-down Automatic Parachute Ripcord Release P/N 6010100 - Series*

14D3-11, *TCTO Series*

14D3-11-1, *Operation, Inspection, Maintenance, and Packing Instructions for Emergency Personnel Recovery Parachute (Chest, Back, Seat Style, and Torso Harness)*

14P3-1, *TCTO Series*

14P3-1-112, *Maintenance Instructions Nomex ® Flight Gear, Coveralls, Gloves, Jackets*

14P3-1-121, *Custom Fitting Procedures for Flying Helmet Assemblies, HGU-55/P*

14P3-1-131, *Operation and Maintenance Instructions With Illustrated Parts Breakdown Aircrew Chemical-Defense Ensemble*

14P3-1-141, *Operation and Maintenance Instructions Groundcrew Chem-Defense Ensemble*

14P3-1-151, *Operation and Maintenance Instructions With Parts Breakdown Aircrew Eye/Respiratory Protection (AERP) Equipment*

14P3-1-161, *Combined Advanced Technology Enhanced Design "G" Ensemble (COMBAT EDGE Equipment)*

14P3-4, *TCTO Series*

14P3-4-151, *Operation and Maintenance Instructions With Illustrated Parts Breakdown HGU-55/P Flyer's Helmet*

14P3-4-181, *Operation and Maintenance Instructions With Illustrated Parts Breakdown SPH-4AF Helmet*

14P3-5-61, *Operation, Service, and Maintenance Instructions Quick-Donning Anti-Exposure Flying Coverall Type CWU-16/P*

14P3-5-81, *Use, Inspection, Fitting and maintenance Instructions, Anti Exposure Assembly Type CWU-21/P or CWU-21A/P*

14P3-5-91, *Operation and Maintenance Instructions with Illustrated Parts Breakdown, CWU-74/P Flyers Anti Exposure Coverall*

14P3-6-121, *Use, Operation, and Maintenance. Anti-G Cutaway Garment Type CSU-13B/P*

14P3-9, *TCTO Series*

14P3-9-12, *Service Instructions Fixed Filter Nuclear Flash Blindness Protective Helmet Visors and Goggle Lenses*

14P3-9-21, *Operation and Maintenance Instructions With Illustrated Parts Breakdown Goggles, Flyers, Flash Blindness Type EEU-2/P and EEU-2A/P*

14P3-12-1, *Use, Fitting, Installation and Repair. Inflatable Lumbar Support Pad Type MXU-22/P*

14P4-1-151, *Chemical-Biological Canisters and Filter Element Procedures*

14P4-15-1, *Operation and Maintenance Instructions With Illustrated Parts Breakdown Chemical-Biological Mask Type MCU-2A/P*

14S-1, *TCTO Series*

14S-1-102, *Maintenance Instructions With Parts Breakdown USAF Flotation Equipment*

14S1-3, *TCTO Series*

14S1-3-51, *Base Assembly, Use and Maintenance of Survival Kits*

14S1-4-22, *Operation, Maintenance and Disposition Instructions Desalter Kit Type MK-2*

14S3-1, *TCTO Series*

14S3-1-3, *Type and Number of Individual Survival Kit Containers and Life Rafts to Be Used In Various Type Aircraft*

14S3-7, *TCTO Series*

14S3-7-3-2, *Intermediate Maintenance Instructions With Illustrated Parts Breakdown Life Raft Assembly, Part Number 60485-101 (C-17, 46 Person Life Raft)*

14S3-8-2-1, *Aviation Crew Systems Inflatable Survival Equipment (LRU-14A/A Life Raft)*

14S5-27-1, *Operation and Maintenance Instructions With Illustrated Parts Breakdown Helicopter Emergency Egress Device (HEED), SRU-36/P*

14S5-31-2, *Intermediate Maintenance Instructions With Illustrated Parts Breakdown Emergency Oxygen Mask Container (C-17 Aircraft Passenger Oxygen Masks)*

14S6-3, *TCTO Series*

14S6-3-1, *Operation and Maintenance With Parts List Forest Penetrator, Rescue Seat Assembly*

14S10-2-2, *Operation and Service Distress Marker Light, Part No. SDU-5/E*

15X-1-1, *Maintenance Instructions, Oxygen Equipment*

15X1-2-2-1, *Operation and Maintenance Instructions with Illustrated Parts Breakdown, Intermediate Maintenance, Portable Oxygen Unit, P/N 802501-15*

15X1-4-2-4, *Illustrated Parts Breakdown Types MD-1, MD-2, CRU-10/P and H-2 Emergency Bail-Out Oxygen Cylinders*

15X1-4-2-12, *Operation and Field Maintenance Instructions Emergency Bail-Out Oxygen Cylinder Assemblies*

15X5-2-4-1, *Operation and Maintenance Instructions Mask, Passenger Type and Emergency Passenger Oxygen System (EPOS), 289-601AF Kit*

15X5-3-6-1, *Operation, Fitting, Inspection and Maintenance Instructions With Illustrated Parts Break-down MBU-12/P Pressure-Demand Oxygen Mask*

15X5-4-1-101, *Operation, Maintenance and Inspection Instructions Oxygen Mask to Regulator Connector Assemblies*

15X5-4-5-3, *Overhaul Instructions With Illustrated Parts Breakdown Mask Assembly Oxygen Breathing Part No. 249-350 and 249-355*

15X5-4-10-1, *Operational and Maintenance Instructions With Illustrated Parts Breakdown for Mask Assembly, Folding, Quick-Don Part No. 358-1506V or 358-1506V-1*

15X5-5-3-1, *Operation and Maintenance Instructions With Illustrated Parts Breakdown Fire Fighters and Oxygen Smoke Mask Assemblies*

31R2-1-251, *Transmission* of False Distress Signals on Emergency Frequencies

31R2-2PR, *TCTO Series*

31R2-2PR-101, *Operation, Organizational, and Field Maintenance Instructions Radio Set AN/PRC-90 and Radio Test Set AN/PRM-32*

31R2-2PRC90-1, *Operation and Maintenance Instructions Radio Set AN/PRC90-1 and Radio Set AN/PRC90-2*

31R2-2PRC90-2, *Intermediate Maintenance Instructions Radio Set AN/PRC90-1 and Radio Set AN/PRC90-2*

31R2-2PRC112-1-1, *Operation and Intermediate Maintenance Instructions, Radio Set AN/PRC-112B*

31R4-2URT33, *TCTO Series*

31R4-2URT33-2, *Maintenance Instructions Radio Beacon Set AN/URT-33C/M*

31R4-2URT33-11, *Operation and Maintenance Instructions With Parts Breakdown Radio Beacon Set AN/URT-33B.1 and AN/URT-33C/M*

33A1-12-1109-1, *Operation Instructions Maintenance Instructions Illustrated Parts Breakdown Test Set, Battery BT-2B*

33D2-10-10, *TCTO Series*

33D2-10-10-51, *Operation and Maintenance Instructions With Illustrated Parts Breakdown Oxygen Mask, Headset, Microphone, and EEU-2P Goggles Tester*

33D2-10-63-1, *Operation and Maintenance Instructions With Illustrated Parts Breakdown Oxygen Leak-age Regulator Tester, Model MH-2*

33D7-71-42-1, *Operation and Maintenance Instructions With Illustrated Parts Breakdown Radio Test Set Model ACR/TS-24 (B)*

40W4-15-1, *Operation and Maintenance Instructions With Illustrated Parts Breakdown Manual Reverse Osmosis Desalinator MROD-35-LA-1*

40W4-16-1, *Operation and Maintenance Instructions With Illustrated Parts Breakdown Manual Reverse Osmosis Desalinator MROD-06-LL-1*

42C-1-12, *Quality Control of Chemicals*

SB 3-30-2, *Army Service Bulletin (SB), Serviceability Status of Canister and Filter Element Lots*

Operations Manual J-1603, *Life Support Applique (J-Box)*

Operations Manual TS-3417-3, *Manual for J-Box Communications Service Monitor*

Abbreviations and Acronyms

AC—Aircraft Commander

ACC—Air Combat Command

ACCA—Aircrew Contamination Control Area

ACDE—Aircrew Chemical Defense Ensemble

ACDT—Aircrew Chemical Defense Training

AEF—Aerospace Expeditionary Forces

AERP—Aircrew Eye/Respiratory Protection

AETC—Air Education and Training Command

AEW—Air Expeditionary Wing

AFCAIG/CPFH—Air Force Cost Analysis Improvement Group/Cost Per Flying Hour

AFCAT—Air Force Catalog

AFH—Air Force Handbook

AFI—Air Force Instruction

AFIND—Air Force Index

AFJI—Air Force Joint Instruction

AFJMAN—Air Force Joint Manual

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFMS—Air Force Manpower Standard

AFORMS—Air Force Operations Resource Management System

AFOSH STD—Air Force Occupational, Safety, and Health Standard

AFPAM—Air Force Pamphlet

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFSC—Air Force Specialty Code

ALS—Aircrew Life Support

ALSCT—ALS Continuation Training

ALSE—Aircrew Life Support Equipment

ALSMS—Automated Life Support Management System

ANG—Air National Guard

ANGIND—Air National Guard Index

ARC—Air Reserve Component

AS—Allowance Standard

BFT—Basic Fighter Training

BOI—Basis Of Issue

C—Celsius

CFETP—Career Field Education and Training Plan

CTK—Composite Tool Kit

DCS—Deputy Chief of Staff

DRU—Direct Reporting Unit

DSN—Defense Switched Network

EEIC—Element of Expense/Investment Code

EPT—Egress Procedures Trainer

F—Fahrenheit

FM—Functional Manager

FOA—Field Operating Agency

FOD—Foreign Object Damage

FTU—Fighter Training Unit

HEED—Helicopter Emergency Egress Device

HHQ—Higher Headquarters

IAW—In Accordance With

IG—Instructor Guide

LOGDET—Logistics Detail

LSO—Life Support Officer

LSS—Life Support Superintendent

MAJCOM—Major Command

MDS—Mission Design Series

N/A—Not Applicable

NAF—Numbered Air Force

NCO—Noncommissioned Officer

NCOIC—Noncommissioned Officer In Charge

NSN—National Stock Number

NVG—Night Vision Goggles

O.I.—Operating Instruction

OJT—On-The-Job Training

OPLAN—Operations Plan

OPR—Office of Primary Responsibility

OSS—Operations Support Squadron

OSS&E—Operational Safety, Suitability, & Effectiveness

OT&E—Operational Test and Evaluation

PAI—Primary Aircraft Inventory

PCS—Permanent Change of Station

POC—Point of Contact

PQDR—Product Quality Deficiency Report

QI—Quality Inspector

TCTO—Time Compliance Technical Order

TDY—Temporary Duty

TMDE—Test, Measurement, and Diagnostic Equipment

T.O.—Technical Order

TPFDD—Time-Phased Force Deployment Data

UMD—Unit Manpower Document

UTC—Unit Type Code

WST—Water Survival Training

TERMS

Aircrew Contamination Control Area (ACCA)—A self-sustaining aircrew only decontamination control area that minimizes cross contamination to aircrew and is staffed by certified ALS personnel.

Aircrew Chemical Defense Ensemble (ACDE) Equipment—Individually fitted aircrew unique chemical protective equipment for the sole purpose of protecting operators from chemical/biological warfare agents who fly into and out of a chemically contaminated environment.

Aeromedical Evacuation (AE)—The movement of patients under medical supervision to and between medical treatment facilities by air transportation. (Joint Pub 1-02)

Aeromedical Evacuation Crew Members (AECM)—Qualified flight nurses (FN), aeromedical evacuation technicians (AET), and unqualified student trainees under the direct supervision of a qualified instructor or FN, performing AE duties.

Aircrew Life Support Equipment (ALSE)—ALSE encompasses all equipment that is part of the 412A life support system or as designated by ANG/DOOS.

Aircrew Eye/Respiratory Protection (AERP) Equipment—AERP equipment is designed to protect

the crewmember from toxic chemical exposure to the head, neck, face, eyes, and respiratory tract. This equipment is designed to provide protection without imposing operational or physiological burdens, degrading mission capability, or combat effectiveness.

Area of Operations (AO) (DOD)—An operational area defined by the joint force commander for land and naval forces. Areas of operation do not typically encompass the entire operational area of the joint force commander, but should be large enough for component commanders to accomplish their missions and protect their forces. Also called AO. See also area of responsibility; joint operations area; joint special operations area.

Arctic Flight—Any flight conducted above the 50th parallel of north latitude.

Antarctic Flight—Any flight conducted below the 56th parallel of south latitude.

Bare Base—A base having minimum essential facilities to house, sustain, and support operations to include, if required, a stabilized runway, taxiways, and aircraft parking areas. A bare base must have a source of water that can be made potable. Other requirements to operate under bare base conditions form a necessary part of the force package deployed to the bare base.

Chemical Threat Area (CTA)—An area that may be subject to attack with chemical warfare agents from a number of sources.

D-1 Bag—One complete Aircrew Chemical Defense Ensemble carried by aircrews when deploying to chemical threat environment.

D-Bags—Full compliment of ACDE equipment. May or may not include the D-1 bag during deployment.

Desolate Terrain Flight—Any flight conducted over uninhabited areas (excluding the Continental United States [CONUS]) exceeding one hour flight time.

Ground Crew Contamination Control Area (CCA)—Area managed by civil engineering readiness flight to safely process ground crew personnel

Logistics Detail (LOGDET)—The LOGDET defines standard passenger and equipment movement requirements for each UTC. Equipment detail is provided at the NSN level. Lists all material in an UTC, prioritizes increment movement, provides increment characteristics, and is the standard equipment listing for planning.

Nomex®—Nomex® fabric is a high-temperature resistant and inherently flame retardant synthetic fabric with no-hot-melt point or drip characteristics. The fabric is light in weight, will not support combustion, but will begin to char at 700° to 800° F. The fabric has good abrasion resistance similar to nylon and is also nonabsorbent like nylon and other synthetic fabrics.

Operational Support Crewmember—Personnel on flying status but not occupying a UMD "A" prefix position.

Operation Plan (OPLAN) (DOD)—Any plan, except for the Single Integrated Operational Plan (SIOP), for the conduct of military operations. Plans are prepared by combatant commanders in response to requirements established by the Chairman of the Joint Chiefs of Staff and by commanders of subordinate commands in response to requirements tasked by the establishing unified commander. An OPLAN identifies the forces and supplies required to execute the CINC's Strategic Concept and a movement schedule of these resources to the theater of operations. The forces and supplies are identified in time-phased force deployment data (TPFDD) files. OPLANs will include all phases of the tasked

operation. The plan is prepared with the appropriate annexes, appendixes, and TPFDD files as described in the Joint Operation Planning and Execution System manuals containing planning policies, procedures, and formats. OPLANs are prepared in either a complete format (OPLAN) or as a concept plan (CONPLAN). The CONPLAN can be published with or without a TPFDD file. An OPLAN for the conduct of joint operations that can be used as a basis for development of an operation order (OPORD).

Overwater Flight—Any flight taking off or landing over water, exceeding power-off glide or auto-rotational distance from land.

Passenger (PAX)—Individual aboard aircraft for the purpose of transportation.

Pilot Unit—Unit designated by the MAJCOM FM to handle LOGDET management responsibilities for an UTC. Pilot units are listed in the header record of each UTC and LOGDET.

Primary Aircraft Inventory (DOD)—The aircraft assigned to meet the primary aircraft authorization. Also called PAI.

Primary Crewmember—Any person, rated or nonrated, and required on aircraft to accomplish flying mission.

Theater (DOD)—The geographical area outside the continental United States for which a commander of a combatant command has been assigned responsibility.

Unit Manpower Document (UMD)—A detailed staffing list reflecting the distribution of staffing allocations into a finite structure of authorizations (by work center).

Unit Type Code (UTC)—A five-character, alphanumeric code that uniquely identifies each type unit of the Armed Forces.

Attachment 1 (AFMC)

THE GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

A1.1. (Added-AFMC) The following publications are required to effectively manage and support an AFMC Life Support program. These publications are listed for reference only and are not at all inclusive. LSOs, superintendents, NCOICs, supervisors, and technicians should possess a working knowledge of these publications and supplements, where applicable.

Publications

AFIND18, Index of Air Force Manpower Standards

AFMAN 10-100, Airman's Manual

AFJI 10-220, Volume 1, Contractor's Flight and Ground Operations

AFJI 10-220, Volume 2, Government Flight Representative Guidance

AFI 11-404, Centrifuge Training for High-G Aircrew

AFI 21-202, Combat Ammunition System Procedures

AFI 21-208, Munitions Forecast, Allocation, and Buy Budget Processes

AFMAN 24-309, Vehicle Operations

AFI 31-101, Vol 1, The Air Force Physical Security Program

AFH 31-223, The Air Force Resource Protection Program

AFI 34-217, Air Force Aero Club Program

AFCAT 36-2223, USAF Formal Schools (automated by Air Force Education and Training Course Announcements (ETCA), **http://hq2af.keesler.af.mil/etca.htm**)

AFP 64-15, Survival and Emergency Uses of the Parachute (projected to be AFPAM 36-2242)

AFI 90-501, Criteria for Air Force Assessments

AFI 90-901, Operational Risk Management Program

AFPAM 90-902, Managing Risk and Operational Decision Making (forthcoming)

AFOSH STD 48-1, Respiratory Protection Program

CFETP 1T0X1, Parts 1-2 AFSC 1T0X1, Survival Evasion, Resistance, Escape (SERE) Training Instructor Career Field Education and Training Plan

DoD 4515.13-R, Air Transportation Eligibility

DPSC Manual 4155.2, Appendix A, Medical Inspection Procedures for Operational Rations

AFMCI 21-107, Tool Control and Accountability Program

AFMCI 21-119, Test/Evaluation Aircraft Maintenance Management Policy

AFMCI 90-203, Flight Operations Inspections

TO/TCTO-SERIES TECHNICAL ORDER TITLE

0-1-CD-1, Numerical Index (CD-ROM version)

00-CD-1, Technical Manual Set, Methods and Procedures TOs, (CD-ROM version, contains most 00-Series TOs)

11P10-6-7, Storage and Maintenance Procedures--PCU-63(V)/P--Universal Water Activated Release System (UWARS), P/N 1814-017-01 and 1814-017-02

11P12-15-7, Cutter Reefing Line, P/N C1-1.15 and C1-4.0

14D3-10, TCTO Series

14D3-10-1, Inspection, Repair, and Packing Instructions Ejection Seat Aircrew Recovery Parachute P/N J114509 - Series (ACES II)

14P3-5, TCTO Series

14P3-6, TCTO Series

14S-1-131, Operation and Maintenance Instructions, Survival Vest Assembly (formerly contained in 14S1-3-51)

14S1-9-1, Operation and Maintenance Instructions with Illustrated Parts Breakdown, Survival Actuator P/N 025-750000-1, -5 (H Koch)

14S1-11, TCTO Series

14S1-11-3, Overhaul Instructions with Illustrated Parts Breakdown, ACES II Survival Kits

15X5-4-4-12, Intermediate Maintenance Instructions Pressure-Demand Breathing Oxygen Mask USAF Type MBU-5/P

15X5-4-4-13, Overhaul Instructions with Illustrated Parts Breakdown Pressure-Demand Breathing Oxygen Mask USAF Type MBU-5/P

33D2-10-10-1, Instructions With Illustrated Parts Breakdown, MQ-1 Test Set (Sun Electric)

33D2-10-32-1, Instructions With Illustrated Parts Breakdown, MQ-1A Test Set (P/N 6504/Tec Air Serv)

33D2-10-68-1, Pressure Breathing Oxygen Flight Ensemble Test Set, TTU-529/E

Abbreviations and Acronyms

AAC—Air Armament Center

AFFTC—Air Force Flight Test Center

AFRL—Air Force Research Laboratory

GFR—Government Flight Representative

HSW—Human Systems Wing

MEGP—Mission Essential Ground Personnel

MESP—Maintenance/Engineering Support Personnel

TPP—Test Parachute Program

Attachment 2 (Added-AFMC)

GLOSSARY OF MAJCOM T.O. OPTIONS, REFERENCES AND SUPPORTING INFORMATION

A2.1. (Added) List Of Options: Technical Order options listed below are applicable to AFMC. Options marked "Mandatory" will be implemented if your unit maintains the affected equipment. Options marked "Unit" may be implemented at the discretion of the DFO.

Table A2.1. (Added-AFMC) List Of Options

MAJCOM T.O.	T.O. Options Reference	Subject	Option
13A1-1-1	PARA 3-5	180 Day inspection of PCU-17/P Restraint Harness and HBU-6/P Safety Straps	Mandatory
	PARA 2-19	Optional restraint line stowage pocket	Mandatory
14-1-4	2-6, Note 2	Use of local control numbers	Mandatory
14D1-2-1	3-4h	Routing of chest straps through V-ring	Mandatory
14D3-11-1	5-10h, Note	Installing webbing and snaps for stowing zero delay lanyard	Mandatory
	5-16c	Installation of SDU-5/E light on torso harness	Mandatory
	5-16f, Note	Installation of SRU-16/P minimum survival kit	Mandatory
	5-16f(1) or (2)	SRU-16/P in minimum survival kit pocket	Unit
	5-16g(12), Note	Direct beacon plug-to-riser hookup	Mandatory
	11-8m, Note	Installation of AN/URT-33c/m beacon	Mandatory
	11-8o, Note	Installation of hook blade knife	Mandatory
	13-9g, Note	Installation of personnel lowering device	Unit
	18-1e, Note	Installation of minimum survival kit	Mandatory
	18-1f, Note	Installation of SDU-5/E strobe light	Mandatory
	18-1k	Installation of Backpad	Unit
	18-n, Note	Installation of AN/URT Series Beacon	Mandatory
14P3-1-112	2-4, Note	Location of MC-1 knife on outer garment	Mandatory
	2-16	Rework of flight jacket for wear with combat edge equipment	Unit
14P3-4-151	1-2.7.1	High contrast visors wear	Unit
	3-2.6, Note	Manufacture/Installation of Night Vision System Mounts	Unit
	5-4.3	Life Support performs postflight inspection responsibilities	Mandatory

MAJCOM T.O.	T.O. Options Reference	Subject	Option
14P3-5-81	2-8	Wear of Anti-Exposure suit accessories Mandatory	
14P3-5-91	1-14, Note	Determination of essential clothing and equipment requirements Mandatory	
14P3-6-121	6-1, Note	Garment cleaning will be accomplished by Life Support technicians	Mandatory
	4-3.2. Note	Check the garment fit on each aircrew and re-accomplish as necessary during the periodic inspection	Mandatory
14S-1-102	5-1. Note	Information pertaining to organization, unit and activity on all flotation equipment will be deleted	Mandatory
	5-1.1.3. Note	Initial functional test will be accomplished	Mandatory
	Table 7-3, Note 4	Spare battery	Mandatory
	Table 7-3, Note 7	Use of SDU-5/E	Mandatory
	Table 7-3, Note 8	Use of desalter kit	Mandatory
	Table 7-4, Note 4	Spare battery	Mandatory
	Table 7-4, Note 10	Use of SDU-5/E	Mandatory
14S1-3-51	1-1.3. Note	ALSMS	Mandatory
	2-7.2.	ALSMS	Mandatory
	7-1, 7-3	Options approved by MAJCOM	Mandatory
15X5-3-6-1	4-7.1, Note	Taping mask for temporary use	Unit
	4-13	Postflight inspection (MBU-12/P)	Mandatory
	5-6	Frequency of 12/P mask disassembly Every 30 days	Mandatory
	5-19.5a	Strap fastener in lieu of hose clamp	Mandatory
	5-19.5b	Use of strap fastener installation tool	Mandatory
	5-19.9a	Torquing of MBU-12/P valve	Mandatory
15X5-4-1-101	3	Recording of CRU inspection in ALSMS	Mandatory
	3b, Note	Use of MQ-1 and MH-2	Mandatory
15X5-4-4-12	4-4d(5), Note 3	Alternate method for securing 5/P mask straps	Unit
	5-2	Frequency of 5/P mask disassembly every 30 days	Mandatory
	5-5e	Use of strap fastener on MBU-5/P masks	Mandatory
	5-11a, Note	Postflight inspection by Life Support	Mandatory

MAJCOM T.O.	T.O. Options Reference	Subject	Option
15X5-4-4-13	3-2e	Use of strap fastener	Mandatory
15X5-4-5-3	7a(3)	Use of strap fastener	Mandatory
15X5-4-8-1	6-2	Life support personnel inspect and repair MBU-10/P masks	Mandatory
	6-2	Complete disassembly of masks will not Exceed 120 days	Mandatory
	6-4i	Use of strap fastener	Mandatory
15X5-4-10-1	4-2a(8)	Quick don mask vent valve will be in closed position when smoke goggles are not in use	Mandatory
	5-2d	Complete disassembly of masks will not exceed 120 days	Mandatory
	5-5.3.3.	Use of strap fastener	Mandatory
15X5-5-3-1	5-5b(6), Note	Record periodic inspection in ALSMS, DD Form 1574 and pressure sensitive Tape	Mandatory
	5-8o	Use of strap fastener on smoke/quick –don masks	Mandatory