BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 11-301, Volume 1

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Flying Operations

AIRCREW FLIGHT EQUIPMENT (AFE) PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 11-3, *Aircrew Flight Equipment*, and establishes objectives, responsibilities, administrative, training, and quality assurance guidance for the Regular AF (RegAF) AFE career field. The Air Reserve Components (ARC), (Air Force Reserves (AFR) and Air National Guard (ANG)), must comply with the requirements for AFE in this publication. This publication may be supplemented at any level, but all direct supplements must be routed for coordination prior to certification and approval to the Office of Primary Responsibility (OPR) of this publication, Headquarters (HQ) USAF/A3TF. HQ USAF/A3TF is used throughout the text and denotes the office of the 1P0X1 AFE Air Force Career Field Manager (AFCFM). Send comments and suggested improvements to this instruction on an Air Force (AF) Form 847, *Recommendation for Change of Publication*, through the chain of command, in accordance with (IAW) Air Force Instruction (AFI) 33-360, Volume 1, *Publications and Forms Management*, to HQ USAF/A3TF, 1480 Air Force Pentagon, Washington DC 20330-1480. Request for waivers must be submitted through the chain of command to the appropriate tier waiver approval authority utilizing the AF Form 679, *Air Force Publication Compliance Item Waiver Request Approval.* Intervening levels will evaluate all recommendations and forward the AF Form 847 to the next echelon. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363 Management of Records and disposed of in accordance with the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). The use of the name or mark of any specific manufacturer, Commercial-Off-The-Shelf (COTS) product, commodity, or service in this instruction does not imply endorsement by the AF.

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include (1) establishing AFE core competencies, (2) clarifying Quality Assurance (QA) guidance, (3) deleting all references to the Automated Life Sustaining Records & Tracking System, (4) deleting other guidance which is no longer required, (5) adds Aircrew Laser Eye Protection (ALEP) program guidance, (6) changes authorities to waive wing/unit level requirements as identified with tier waiver authority (e.g. T-0, T-1, T-2, T-3) following the compliance statement, (7) provides guidance relating to Lead Commands (LC), (8) moves guidance for the management and configuration of aircrew clothing and equipment to AFI 11-301, Volume 2, *Management and Configuration Requirements for Aircrew Flight Equipment* and (9) moves guidance for AFE Mobility, Chemical, Biological, Radiological, and Nuclear (CBRN), and contingency operations to AFI 11-301, Volume 3, *Aircrew Flight Equipment Combat Operations*.

Chapter 1

OVERVIEW

1.1. Mission. Provide USAF aircrew safe and effective flight equipment, while establishing programs to increase performance. Protect and sustain human life during flight operations. Prepare aircrew and passengers to survive, affect their rescue and return to duty if forced to abandon the aircraft during an emergency. Provide aircrew protection from CBRN weapons effects.

1.1.1. This instruction establishes minimum program requirements and outlines fundamentals, administrative and managerial requirements for all AFE operations.

1.2. Program Objectives:

1.2.1. Increase capability of the total weapon system by enhancing and maximizing the performance and survivability of the aircrew and passengers.

1.2.2. Reduce injuries and increase survival rates by providing aircrew and passengers with the most technologically advanced equipment available through quality systems training and maintenance.

1.2.3. Identify requirements for modernization and new equipment by analyzing customer-validated operational requirements, operational deficiencies, USAF suggestions and recommendations, USAF Technical Order (TO) improvement reports, aircraft mishap investigations, safety report recommendations, and joint developmental programs from other Department of Defense (DoD) agencies.

1.2.4. Train aircrew to use flight equipment and aid passengers in a manner that reinforces recall during emergencies. Aircrew training will be accomplished using training equipment that mirrors operational equipment and realistic scenarios, in which aircrews are likely to encounter and aid passengers. Realistic training will ensure aircrew and passengers have confidence in their equipment and increase their ability to use it.

1.2.5. Provide units the suitable resources to perform optimal equipment maintenance. Train and qualify AFE technicians IAW Air Force Specialty Code (AFSC) 1P0X1 to maintain equipment in optimum condition as well as conduct AFE Continuation Training (AFECT).

1.2.6. Conduct aircraft mishap safety investigations and analysis where AFE is involved IAW AFI 91-204, *Safety Investigations and Reports*.

1.3. Supplements and Waivers:

1.3.1. Major Command (MAJCOM) and Field Operating Agency (FOA) Functional Managers (FM) may develop supplements to this AFI in accordance with AFI 33-360. If developed, coordinate and forward a published copy of their supplement to this publication to HQ USAF/A3TF, 1480 Air Force Pentagon, Washington DC 20330-1480.

1.3.1.1. LC has precedence of supplemental guidance, then applicable MAJCOM/FOA. Exceptions to guidance will be incorporated into the LC supplement to the maximum extent possible. Exceptions not incorporated into LC guidance will be specifically addressed in applicable MAJCOM/FOA supplement. **(T-2)**

1.3.1.2. Wings or Groups may supplement the basic instruction and MAJCOM/FOA supplement to address wing/group specific requirements. Include MAJCOM/FOA AFE office as part of supplement coordination process prior to final publication.

1.3.1.3. The OPR who establishes a supplement to this publication will create Self-Assessment Communicators (SAC) to facilitate CC's/directors Self-Assessment (SA) programs. SACs will not be included as part of the publication, however, they must reference back to compliance areas within the source publication (e.g., AFI, AFMAN, MAJCOM and FOA/Wing Supplement). SACs will be uploaded and maintained within the *Management Internal Control Toolset* (MICT). Refer to AFI 90-201, *The Air Force Inspection System*, for detailed guidance on how to develop and distribute the SACs. **(T-1)**

1.3.2. Waiver authority for this volume is HQ USAF/A3TF unless otherwise indicated. Requests for waivers must be submitted through the chain of command to the appropriate Tier waiver approval authority or if a non-tier requirement, to the publication OPR for consideration. **(T-1)**

1.3.2.1. Waiver requests will be submitted using AF Form 679 and must be coordinated through the MAJCOM/FOA AFE FM. **(T-1)**

1.3.2.2. Waivers submitted from the unit level will be routed through the respective MAJCOM/FOA AFE Staff for review, approval, disapproval, or be forwarded to higher authority for a decision (e.g. HAF, MAJCOM Commander (CC), A3, etc.). **(T-1)**

1.3.2.3. When the MAJCOM functional manager (MFM) is the waiver authority, the waiver will be submitted by the SQ/CC or higher. All other waivers will be submitted by the Group CC or higher. **(T-2)**

1.3.2.4. The waiver period will adhere to guidance in AFI 33-360, or the stated period in the approved waiver request, whichever is shorter. **(T-1)**

1.4. Communications:

1.4.1. All subordinate units will ensure AFE matters, including requests for waivers, TO Improvement Reports, AF IMT 1000 *Idea Application*, deficiency reports, hazard reports, and other correspondence are channeled through their AFE MAJCOM/FOA Staff. Only AFE Officers (AFEO), AFE Superintendents (AFES), and the AFE Contracting Officer Representative (COR), their equivalents or higher are authorized to contact respective MAJCOM/FOA Staff. AFRC AFES/AFE CORs will work through HQ AFRC/A3RF. ANG AFES will work through their Weapon System Team Chief (WSTC) prior to contacting ANG/AFE Staff or MAJCOM AFE Staff. **(T-2)**

1.4.2. At the wing level, direct communication with HQ USAF/A3TF, Air Logistics Centers (ALC), Systems Program Offices (SPO) and Depot offices is not authorized without prior approval and coordination with respective MAJCOM/FOA. **Exception**: In a valid emergency, contact with such agencies (ALC, SPO, Depot etc.) is permitted; however, notify respective MAJCOM/FOA Staff immediately. **(T-2)**

1.4.3. Publish messages in a concerted effort to strengthen and clarify guidance, policy and procedures to the maximum extent possible. Provide information copies to all command agencies involved when sending messages requiring an action by Higher Headquarters (HHQ).

Units will ensure equivalent local coordination on messages prior to transmission when responding to coordinated messages. LCs/gaining MAJCOMs will ensure messages are coordinated with HQ AFRC/A3RF and NGB, and other MAJCOMs as applicable. Subordinate units should consult HQ AFRC/A3RF and ANG/AFE Staff, as applicable, concerning any policy or guidance message(s) where ARC applicability is in question. **(T-2)**.

1.4.4. Use written electronic communications to explain actions or request assistance from a higher echelon. Forward the request to the next HHQs for action and do not bypass any echelon. **(T-2)**

1.4.5. An organizational Non-classified Internet Protocol (IP) Router Network (NIPRNET) account is required for the AFES/AFE COR/AFEO to respond to MAJCOM/FOA correspondence. AFES/AFE COR/AFEO is not required to have a personal Secret Internet Protocol Router Network (SIPRNET) account. However, they will have access to the SIPRNET within the unit. **(T-2)**

1.4.6. Units will periodically check both the HQ USAF/A3TF AFE SharePoint® (**https://cs3.eis.af.mil/sites/OO-OP-AF-61/default.aspx**) and respective MAJCOM/FOA SharePoint® sites to ensure receipt of all applicable information. Membership is mandatory for all AFES/AFE COR and NCOIC AFE QA. Membership is encouraged for all others. **(T-2)**

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. Shared Responsibilities. MAJCOMs, Direct Reporting Unit (DRU), FOA Director of Operations (A3), NGB, comparable positions in the Numbered AF's (NAF), centers, and subordinate units, share responsibilities for execution of AFE policy.

2.2. HQ USAF/A3T (Director of Future Operations) through HQ USAF/A3TF (Total Force Aircrew Management [TFAM] Integration Division):

2.2.1. Is responsible for the AF AFE program. **(T-1)**

2.2.1.1. The Chief, Force Integration Division (HQ USAF/A3TF) oversees the entire AFE program. **(T-1)**

2.2.1.2. A RegAF AFE FM (1P000) will be assigned to manage AFE matters and serve as the AFCFM for AFSC 1P0X1. An additional RegAF AFES (1P091) will be assigned to assist in the management of AFE matters. **(T-1)**

2.2.1.3. The AFE Executive Committee (AFEEC) will convene annually, and as required based on career field needs. Membership includes the 1P000 AFCFM, MAJCOMs, ANG FM, and CMSgts (1P000). The intent of the working group is to communicate, resolve operations and training issues (aircrew and technician), and provide a course of action regarding the USAF AFE program. **(T-1)**

2.2.2. Coordinates on HQ's AF (HAF), MAJCOM, ANG, DRU, and FOA operations and training issues (aircrew and technician).

2.2.2.1. A3TF has AFE management and oversite responsibility over the 811OSS AFE section for related programs to include (but not limited too): information management (AFE messages etc.), data calls, Staff Assistance Visits (SAV) and Unit Effectiveness Inspections (UEI). AFES will contact AF/A3TF for overall AFE program guidance or issues.

2.2.2.2. As lead command, the 811OSS AFE section will follow AF Global Strike Command's (AFGSC) applicable Mission Design Series (MDS) and equipment guidance to include (but not limited too): AFI 11-301V1 and V2 supplements, TO Options Listing, and messages. Waiver and deviation requests will be routed through AF/A3TF to AFGSC AFE Staff for resolution. **(T-1)**

2.2.2.3. Refer AFI 11-301V2 for AFE aircraft equipment configuration guidance.

2.2.3. Coordinates with other HAF offices that affect AFE programs to include but not limited to: aircrew chemical defense equipment and procedures, Research and Development (R&D) of AFE, logistics, egress, Counter-CBRN (C-CBRN) defense doctrine, policy, training, and tactics, techniques, and procedures.

2.2.4. Hosts an annual Aircrew Performance Working Group (APWG) in cooperation with AF Life Cycle Management Centers Human Systems Division (AFLCMC/HSD), and all representatives involved with AFE and Aircrew Performance (AP) responsibilities. HQ USAF/A3TF will invite other interested functions, to include aircrew, if needed to resolve cross-functional issues with AFE. **(T-1)**

2.2.5. Advises on AFE related aircrew issues.

2.2.6. Briefs HAF directorates and other officials or organizations on AFE and training issues.

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

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

2.2.9. Biennially convenes a World-Wide AFE Workshop.

2.2.10. Participates in MAJCOM and ANG AFE workshops/training events, as required.

2.2.11. Manages the USAF Outstanding AFE of the Year Awards Program, IAW AFI 36-2807, *Air Force Deputy Chief of Staff, Operations, Plans And Requirements*.

2.2.12. Monitors:

2.2.12.1. MAJCOM/FOA Aircrew Performance Program (APP).

2.2.12.2. MAJCOM technical concerns effecting Aircrew Performance Systems (APS) and subsystems, manpower resources, and equipment and intervenes as required.

2.2.12.3. COTS or Non-Developmental Items (NDI) that AF aircraft and aircrews might use as flight equipment **(https://cs3.eis.af.mil/sites/OO-SC-MC-08/default.aspx).**

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

2.2.12.5. Development of Capabilities Development Document (CDD) and development of Initial Capabilities Documents (ICD).

2.2.12.6. Aircraft mishap investigation and safety reports in which aircrew have used AFE assets or systems.

2.2.12.7. Fielding new flight equipment. Works with OPR and the AF Materiel Command (AFMC) AFE System Manager to ensure they publish and distribute technical publications and training equipment before new flight equipment is fielded. Ensures technical schools have assets to support new training requirements. Evaluate the manpower requirements to fielding of new flight equipment.

2.2.12.8. The Undergraduate Program Guidance Letter (UPGL) and shortfalls with formal AFE program quotas.

2.2.13. The Aircrew Performance Executive Council (APEC) will convene annually, and as required based on career field needs. **(T-1)**

2.2.14. Provides input to the Master Configuration List (MCL) for all aircraft installed and aircrew issued performance related systems. The MCL provides a list of all authorized subsystems and equipment in the AF AP inventory. **(T-1)**

2.2.15. Provides oversight of AFE Core Competencies: Technician Training program IAW **chapter 4**, AFECT IAW **chapter 5**, Quality Assurance Program IAW **chapter 6**, approved safe-to-fly flight equipment IAW AFLCMC/HSD's SharePoint® at **https://cs2.eis.af.mil/sites/21562/afe/default.aspx**, applicable TOs, COTS manuals, and MAJCOM/FOA directives. **Note**: F-35 units will refer to 2ZCA12255, Rev AH, *Pilot Flight*

Equipment (PFE) Configuration Document, for approved flight equipment specific to the aircraft. **(T-1)**

2.2.15.1. HQ USAF/A3TF will develop policies and procedures to measure the effectiveness of AFE QA programs and the qualifications of assigned AFE Quality Inspectors(QI). See paragraph A3.2 and figure A3.3 in Attachment 3 for an example of how QA can be measured. **(T-1)**

2.2.16. Acquisition and Sustainment: The establishment of a proper Acquisition and Sustainment Life Cycle Management system, from requirements to disposal, is imperative to the future health of the AFE program. AFE must continually seek out opportunities to modernize the products and services they provide/maintain and ensure as new technologies are introduced, the future manning and sustainment requirements are included and funded. **(T-1)**

2.2.17. AFPD 11-3 establishes the following authorities and responsibilities for AFE and system LCs. LCs for weapons systems are contained in AFPD 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*. LC assignments for specific flight equipment items/types are listed in AFI 11-301 Vol 2. **(T-1)**

2.2.17.1. Designates AFMC as the AF Centralized Asset Management (CAM) Executive Agent. LCs will advocate for the sustainment of equipment/systems and support AFMC to ensure all requirements associated with equipment/system sustainment receive equitable consideration in AFMC's programming, budgeting and execution of resources to establish depot capabilities and sustain equipment/systems under CAM. **(T-1)**

2.2.18. Develops HAF level AFE SAC using MICT. Communicators will be developed and utilized IAW AFI 90-201, and AFI 33-360. **(T-1)**

2.2.19. Publish prioritization and sequencing guidance on which Unit Type Codes (UTC) should be postured by the MAJCOMs/FOA and made available for planning purposes based on component HQs' requirements and the Air and Space Expeditionary Task Force (AETF) force modules. **(T-1)**

2.2.20. Manage the Enlisted Development Team (EDT) process for 1P0 AF Specialty (AFS) IAW AFI 11-301 Volume 5, *Aircrew Flight Equipment (AFE) Career Field Development*. **(T-1)**

2.2.21. Oversees 1P0 Career Progression Group (CPG) process, when tasked through A1M channels. **(T-1)**

2.3. Aircrew Performance Executive Council (APEC):

2.3.1. The APEC is an O-6 level oversight and steering group body that provides direction and advocacy for all APPs. The purpose of the APEC is to prioritize and provide AF direction to resource sponsors and the Single Managers for APS acquisition and sustainment (AFLCMC/HSD/CC). The MAJCOM/FOA O-6 Level (voting member) or deputy and the AFE Senior Ranking Enlisted member will attend the APEC. **(T-1)**

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

2.3.3. The APEC will operate under a charter approved by HQ USAF/A3TF, and will meet annually to receive updates on APS programs and plans, discuss issues, and establish an Aircrew Performance Strategic Plan (APSP) 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 HQ USAF/A3TF. **(T-1)**

2.3.4. HQ USAF/A3TF and AFLCMC/HSD co-chair the APEC. The HSD Chief will arrange for a suitable conference site, announce the meeting, and via message provide an agenda and specific details related to the meeting. **(T-1)**

2.3.4.1. The HSD Chief will establish and maintain a history, background, status, and way ahead for each item on the APEC listing. **(T-1)**

2.3.5. Sub-groups of the APEC are the APWG and the Survival Component Working Group (SCWG). The APWG and SCWG will present updated roadmaps, acquisition status, and career field issues to the APEC. **(T-1)**

2.3.5.1. The APWG and SCWG will operate under a charter approved by HQ USAF/A3TF, and will meet at least 90 days prior to the APEC. Additional meetings whether in-person or via teleconference will be scheduled at the discretion of the chairpersons. **(T-1)**

2.4. HQ USAF Chief of Safety (SE). Through the HAF Safety Center, Human Factors Division (HQ AFSC/SEH):

2.4.1. Provides statistical data, analysis, and recommendations on all aircraft mishap investigations or incidents involving AFE or training.

2.4.1.1. Provides this information to MAJCOMs/FOA to improve their AFECT lesson plans.

2.4.2. Monitors the AF APP 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 World-Wide AFE Workshop and MAJCOM meetings, briefs attendees on aircrew use of flight equipment, their performance during aircraft mishap investigations, and general safety concerns.

2.4.6. Attends AF, joint agency, and industry meetings, boards, task forces, and conferences that deal with AFE.

2.4.7. Provides representation to the APWG.

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

2.5.1. Monitors the development and acquisition of new flight equipment (Program Element Code 0604706F, 0702833F & 0702833).

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

2.5.3. Monitors APS development and demonstration programs aimed to satisfy validated user requirements.

2.5.4. Attends the World Wide AFE Workshop and briefs attendees on flight equipment research, development, and acquisition issues.

2.5.5. Provides representation to the APWG.

2.6. HQ USAF Surgeon General. Through the AF Medical Support Agency (AFMSA/SG3PT) :

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 APP.

2.6.3. Sets guidelines for infection control.

2.6.4. Provides representation to the APEC and APWG.

2.6.5. Controls training products and reporting criteria for Laser Eye Protection (LEP) incidences according to AFI 48-139, *Laser and Optical Radiation Protection Program.*

2.7. Air Force Materiel Command:

2.7.1. Conducts an AFE science and technology program to ensure technologies will exist to satisfy future AF requirements. **(T-1)**

2.7.2. Through AFLCMC/HSD for acquisition management:

2.7.2.1. AFMC is the acquisition and initial procurement authority for APS. It manages specific AFE programs through developmental phases and initial procurement, and works with the 642nd Combat Sustainment Group (CBSG) (WR-ALC) on program transition for sustainment support and final systems disposition. **(T-1)**

2.7.2.2. Maintains Operational Safety, Suitability, and Effectiveness (OSS&E) compliance of developmental and future flight equipment items IAW AFI 63-101_20-101, *Integrated Life Cycle Management*. **(T-1)**

2.7.2.3. Manages, reviews, maintains and provides the 642 CBSG recommended updates to the MCL for all man-side flight equipment related systems published in TO 14-1-1, *U.S. Air Force Aircrew Flight Equipment Clothing And Equipment*. The MCL will provide a list of all authorized subsystems and equipment in the AF AFE inventory. **(T-1)**

2.7.2.4. Maintains and updates AF TO 00-25-06-2-1, *Intermediate Maintenance, 412A Aircrew Flight Equipment Work Unit Code (WUC) Manual*, when new equipment is fielded. LC will sponsor the update if new equipment items are command specific. AFMC will deconflict the creation/assignment of WUC of flight equipment with the aircraft SPO or responsible agency. **(T-1)**

2.7.2.5. Ensures flight equipment systems and subsystems are integrated with newly developed technologies, systems, and subsystems. **(T-1)**

2.7.2.6. Directs Engineering/Product Engineering evaluations and analysis with the purpose of providing users safe-to-fly certifications and recommendations. **(T-1)**

2.7.2.7. Manage the acquisition of flight equipment systems and subsystems for COTS aircraft converted for AF missions. **(T-1)**

2.7.2.8. Manage procedures for the acquisition of flight equipment items through the COTS/NDI programs. Monitors and tracks the procurement, approval, and capability of COTS/NDI systems used to meet AF requirements documented in formal equipment documents to include requirement letters. **(T-1)**

2.7.2.9. Works with and monitors other services' flight equipment acquisition and developments to avoid duplication of effort in programs. **(T-1)**

2.7.2.10. Develops a technology transfer plan to move exploratory and advanced development flight equipment technologies into full-scale development. **(T-1)**

2.7.2.11. Develops procedures to control and coordinate the configuration of developmental flight equipment subsystems and equipment among MAJCOMs and the ANG. **(T-1)**

2.7.2.12. Encourages operational input to AFE programs by ensuring MAJCOM, ANG, and 642 CBSG representatives attend key acquisition events. **(T-1)**

2.7.2.13. Co-authors in conjunction with 642 CBSG the development, publishing, and maintenance of an APSP outlining APS acquisition and sustainment strategies. The APSP will use APEC directed priorities as a basis for the strategic plan. **(T-1)**

2.7.2.14. Serves as the approval authority for implementation of new aircrew and aircraft installed flight equipment items through initial procurement and accomplishment of the Transfer Management Plan. **(T-1)**

2.7.2.15. Conducts initial procurement and accomplishes requirements outlined in the Transition Support Plan. **(T-1)**

2.7.2.16. Establishes procedures for intra-command coordination and configuration control of developmental AP subsystems and equipment. **(T-1)**

2.7.2.17. Assists MAJCOMs and ANG in determining training requirements for developmental systems. **(T-1)**

2.7.2.18. Assists MAJCOMs and ANG in developing initial production funding plans for each AP endeavor. **(T-1)**

2.7.2.19. Provides technical assistance and laboratory analysis to aircraft mishap safety investigation boards as requested and to the Defense POW/MIA Accounting Agency, assisting in determining the status of DoD warfighters missing in action. **(T-1)**

2.7.2.20. Ensures all development and COTS/NDI AFE programs include and meet the TO acquisition requirements set forth in AFI 63-101_20-101. **(T-1)**

2.7.2.21. Works with 642 CBSG on the transition management of developmental and procurement programs. **(T-1)**

2.7.2.22. Provides representation and the status of their APP to the APEC and APWG. **(T-1)**

2.7.2.23. Is recognized as the Milestone Decision Authority (MDA) on most acquisition research and development efforts except for CBRN, which is the Joint Program Executive Office. **(T-1)**

2.7.3. Sustainment management through the 642 CBSG/CC: **(T-1)**

2.7.3.1. The sustainment authority for APS, managing specific flight equipment items providing sustainment support and final systems disposition. **(T-1)**

2.7.3.2. Maintains OSS&E compliance of fielded flight equipment IAW AFI 63-101_20-101. **(T-1)**

2.7.3.3. Ensures fielded flight equipment systems and subsystems are integrated with newly developed technologies, systems, and subsystems. Conducts Engineering/Product Engineering evaluations and analysis, with the purpose of providing users safe-to-fly certifications and recommendations. **(T-1)**

2.7.3.4. Monitors and participates in the acquisition of COTS flight equipment systems and subsystems converted for AP and AF missions. **(T-1)**

2.7.3.5. Monitors and establishes procedures for the acquisition of flight equipment through the COTS/NDI processes. **(T-1)**

2.7.3.6. Develops procedures to control and coordinate the configuration of fielded flight equipment subsystems and equipment among MAJCOMs and the ANG. **(T-1)**

2.7.3.7. Encourages operational input to AFE programs by ensuring MAJCOM and ANG representatives attend key acquisition events. **(T-1)**

2.7.3.8. Employs a Human Systems Support Manager to provide centralized logistics support of the AFE systems. **(T-1)**

2.7.3.9. Serves as the approval authority for aircrew and aircraft installed flight equipment upon approval of the Transfer Management Plan. **(T-1)**

2.7.3.10. Establishes procedures for intra-command coordination and configuration control of fielded AP subsystems and equipment. **(T-1)**

2.7.3.10.1. AFLCMC/HSD Sustainment will ensure user input requests are forwarded to MAJCOM/FOA Staff prior to a scheduled meeting date. The Product Improvement Working Group (PIWG) will present updates to the AF APWG. **(T-1)**

2.7.3.10.2. AFLCMC/HSD Sustainment may act as chair for this working group.

2.7.3.11. Assists MAJCOMs/FOA in determining training requirements for system changes. **(T-1)**

2.7.3.12. Provides inspection intervals for shelf life of AP equipment. **(T-1)**

2.7.3.13. Leads effort to develop and submit Sustainment Engineering Requirements Plans (SERP). **(T-1)**

2.7.3.14. TO managers, in coordination with the equipment specialists, will analyze all legacy TOs and present the APWG/APEC with their recommendations for digitizing these materials IAW AFI 63-101_20-101. **(T-1)**

2.7.3.15. Assists MAJCOMs/FOA in developing out-year funding plans for fielded APS. **(T-1)**

2.7.3.16. Provides representation and the status of their APP to the APEC and APWG. **(T-1)**

2.7.3.17. Is recognized as the Product Group Manager (PGM) and System Sustainment Manager (SSM) for all flight equipment systems and sub-systems. **(T-1)**

2.7.3.18. Performs annual verification of top-level National Stock Numbers (NSN) and contracts (to include repair contracts) to ensure validity/applicability and availability to the field. Verification reports will be delivered annually to HQ USAF/A3TF and MAJCOMs/FOA NLT 31 Dec. **(T-1)**

2.7.3.19. Notify Lead MAJCOMs/FOA of equipment items that have been determined to no longer be sustainable and provide disposition instructions when items are removed from service and/or demilitarized to ensure they are disposed of properly. **(T-1)**

2.7.3.20. AFMC maintains current TOs for conventional flight equipment used in the laboratory. **(T-1)**

2.7.3.21. Maintains operations control of ALC AFE sections. **(T-1)**

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 AF systems and their ability to meet mission needs. **(T-1)**

2.8.2. Advises MAJCOMs and ANG on operational test issues.

2.9. MAJCOMs and NGB will assign a full time AFE MAJCOM/FOA FM (AFSC 1P000) to manage the APP. MAJCOM/FOA FM may delegate certain responsibilities to NAF points of contact (POC) or WSTC. WSTCs will be appointed in writing by the MAJCOM/FOA FM. **(T-1)**

2.9.1. AFE MAJCOM/FOA FMs will:

2.9.2. Provide representation and the status of their APP to the APEC and APWG. **(T-1)**

2.9.3. Establish MAJCOM specific AFE programs according to AFIs and applicable MAJCOM and ANG instructions. **(T-2)**

2.9.3.1. Establish and publish TO Options List for their respective MAJCOM. **Note:** ARC units will follow their respective gaining MAJCOM TO Options List. MAJCOM/FOA and ARC AFE Staff will coordinate TO Options List prior to release, which will ensure gained units are provided standardized and applicable guidance. The MAJCOM TO Options List is available on the MAJCOM SharePoint®/EIM website. ARC exceptions will be identified as "Not Applicable (N/A) to AFRC" or "N/A to ANG". Any ARC unit requests for deviations will be routed to MAJCOM/FOA (AFRC/A3RF or ANG/AFE Staff) for coordination/approval. **(T-2)**

2.9.4. Review aircraft mishap investigation and incident reports (command specific) involving AFE and resulting recommendations. Select qualified AFE technicians to augment mishap review boards as required. **(T-2)**

2.9.5. Through the Allowance Standard (AS) manager; annually reviews and validates AS 016, *Special Purpose Clothing and Personal Equipment*, AS 660, *Weapons Systems Communications Requirements*, and AS 450, *Aircrew Flight Equipment*, AS 538, *Security Police Equipment*, *Organizational Small Arms Equipment, Military Dogs, Associated Equipment, and Civil Disturbance Equipment*, for accuracy and adequacy, and attends the Allowance Source Review. **(T-2)**

2.9.6. Assist in identifying operational requirements and provide Subject Matter Expert (SME) level input in the preparation of Joint Capabilities Integration Development System (JCIDS) documents as required. Assist in coordinating efforts with appropriate outside agencies prior to submission. **(T-2)**

2.9.6.1. Maintain integrity of the OSS&E baseline for all AFE IAW AFI 63-101_20-101 by ensuring newly developed (COTS/NDI) flight equipment and modifications to existing flight equipment pursued by units for AF aircraft as well as for aircrew use are evaluated and approved by the appropriate organization. **(T-2)**

2.9.7. Participate in periodic Research, Development, Test and Evaluation (RDT&E) program reviews as requested by AFMC or other joint agencies. **(T-2)**

2.9.7.1. Provide and coordinate the inclusion of qualified AFE expertise early in the requirements definition phase and is involved throughout the RDT&E and acquisition process. Assigned technicians will be able to perform the following: **(T-2)**

2.9.7.2. Provide and coordinate AFE field SME's to participate in laboratory research and development of AFE and human-related studies. **(T-2)**

2.9.7.2.1. Research and develop will consist of, but not limited to, the fit, adjustment, assembly, inspection, and maintenance of flight equipment necessary to support the related studies. **(T-2)**

2.9.8. Submit TO improvement reports for flight equipment on both fielded items and those involved in test and evaluation. **(T-2)**

2.9.9. Draft, edit, and review reports/maintenance procedures necessary to support both fielded and prototype flight equipment under development. **(T-2)**

2.9.10. Participate in flight safety evaluation boards assessing safety of flight equipment prior to flight-related studies. **(T-2)**

2.9.11. Support System Program Offices during acquisition-related activities to include review edit and draft of acquisition-related documents. **(T-2)**

2.9.12. Participate in APWG activities as defined in the APEC charter to ensure executive leadership is kept apprised of emerging technologies and to address equipment and technical issues within the AFE community. **(T-2)**

2.9.13. Assess effectiveness of agencies supporting Operational Utility Evaluation (OUE) activities. **(T-2)**

2.9.14. Monitor tests involving live test subjects utilizing flight equipment. **(T-2)**

2.9.15. Evaluate performance of AFE deliverables related to acquisition, research and development contracts. **(T-2)**

2.9.16. Research field-queries/questions submitted from field units through each of the MAJCOMs/FOA. **(T-2)**

2.9.17. Encourage and request AFE volunteers to participate as test-participants during AFE-related studies, if appropriate. **(T-2)**

2.9.18. Construct/modify test assets necessary to support laboratory flight equipment studies. **(T-2)**

2.9.19. Brief AFE community on emerging technologies at worldwide AFE workshops. **(T-2)**

2.9.20. Appoint a qualified AFE investigator to participate on mishap review boards as required.

2.9.21. Participate in and monitors OT&E of flight equipment; if the item is of a MDS specific nature, the LC for that MDS (refer to AFPD 10-9) will oversee the process with AFMC. **(T-2)**

2.9.22. Monitor the introduction of new MDS into the command inventory and monitors modification programs of existing aircraft to ensure timely integration of flight equipment and training. Coordinate with the aircraft SPO to ensure AFE issues are addressed. **(T-2)**

2.9.23. Attend AF, joint agency, and industry meetings, groups, boards, task forces, committees, and conferences dealing with developing, modifying, or researching flight equipment. Conducts MAJCOM/FOA workshops during the biennial worldwide AFE Workshop. **(T-2)**

2.9.24. Establish MAJCOM AFECT program requirements. **(T-2)**

2.9.25. Coordinate AFE formal training requirements with Directorate of Personnel Staff when submitting class quotas for AFEOs and technicians to attend AETC courses. **(T-2)**

2.9.26. Convene an annual AFE Training Review Board (TRB) and Workshop. Biennially, the TRB will be held in conjunction with the worldwide AFE Workshop. **(T-2)**

2.9.27. Provide guidance to units using, controlling, and safeguarding flight equipment. **(T-2)**

2.9.28. Evaluate AFTO 22, *Technical Manual (TM) Recommendation and Reply*, IAW TO 00-5-1, *AF Technical Order System* and MAJCOM procedures. **(T-2)**

2.9.29. MAJCOM AFE Command Control Point (CCP) will evaluate and route AFTO 22 reports as follows (all T-2 unless stated). **(T-2)**

2.9.29.1. If the MAJCOM CCP disapproves the AFTO 22, the CCP will provide a complete rationale and return the report to the originator using MAJCOM routing procedures. **(T-2)**

2.9.29.1.1. If the MAJCOM CCP approves the AFTO 22, the CCP will send the report to other using MAJCOM CCPs for coordination. **(T-2)**

2.9.29.2. The MAJCOM CCP coordination process is as follows for routine AFTO 22s. **(T-2)**

2.9.29.2.1. The originating MAJCOM will send the proposed improvement report to all affected MAJCOM CCPs via electronic mail for coordination. Each MAJCOM CCP will have 10 calendar days to respond to the originating CCP via electronic email, using the "reply all" feature. Non-response within the 10 calendar day period constitutes concurrence with the improvement report. **(T-2)**

2.9.29.2.2. When conducting MAJCOM CCP coordination actions, the LC will provide both using command and LC coordination and fill out the LC block of the improvement report. LC for each type of equipment is defined in AFI 11-301 Vol 2. **(T-2)**

2.9.29.2.3. The originating MAJCOM CCP will consolidate all MAJCOM CCP coordination inputs and modify the improvement report as needed. The LC will adjudicate on contentious issues, and work to resolve through approval/disapproval of the improvement report. **(T-2)**

2.9.29.2.4. If improvement report is disapproved, the originating MAJCOM CCP will provide rationale and return the report to the originator IAW MAJCOM routing procedures. If approved, the originating MAJCOM CCP will forward and route the improvement report to the appropriate AFMC TO authority IAW originating MAJCOM routing procedures. **(T-2)**

2.9.29.2.5. On behalf of the 1P0 career field, HQ AMC/A3TL will compile and maintain the current AFE CCP POC list posted on the HQ USAF/A3TF AFE SharePoint®. **(T-2)**

2.9.30. Monitor command manning levels and coordinate with MAJCOM/FOA/DP/A1 to ensure AFE manning is optimized. Ensures units notify MAJCOM FMs prior to changing manpower authorizations. **(T-2)**

2.9.30.1. Establish requirement for COR concerning any organization with contractors/service providers. **(T-2)**

2.9.31. Monitor the forecasting of replacement requirements for calendar time-change items IAW TO 00-20-9, *Forecasting Replacement Requirements for Selected Calendar and Hourly Time-Change Items*. **(T-2)**

2.9.32. Monitor Deficiency Reports (DR) applying to the APS. **(T-2)**

2.9.33. Monitor the overall operation of AFE programs in subordinate units and serves as a focal point concerning unit AFE matters. **(T-2)**

2.9.34. Annually or as required, host a working group meeting with MAJCOM/FOA representatives involved with AP responsibilities. The intent of this working group is to foster a spirit of cooperation, keep lines of communication open, and resolve AP issues that are cross-functional in nature. Forward appropriate issues to HQ USAF/A3TF for resolution. **(T-2)**

2.9.35. Review and update Mission Capability statements (MISCAP) and manpower detail biennially or as needed on all UTCs with AFE technicians and or AFE Logistics Detail (LOGDET). **(T-2)**

2.9.36. When requested, may conduct site visits to subordinate units for providing HHQ level assistance and to remain connected to unit level requirements. **(T-2)**

2.9.36.1. Ensure LOGDET is accurate and consistent with current AS policy statements in AFI 10-403, *Deployment Planning and Execution* and AFI 25-101, *War Reserve Materiel (WRM) Program Guidance and Procedures.* Upon receipt of a Logistics Force Module (LOGFOR) material listing from LOGDET Manager, conduct a thorough comparison of the UTC LOGDET against appropriate AS (USE Code "A" items) for consistency to ensure the pilot unit has not exceeded authorizations. Functional Area Managers (FAM) will use Air Force Equipment Management System (AFEMS), or request assistance from the AS Manager when comparing the LOGDET against the appropriate AS. LOGFOR Material Listings will be provided to Manpower and Equipment Force Packaging (MEFPAK) Responsible Agency (MRA) and/or Air Staff FAM on a first-time report of a newly developed LOGDET, when designated pilot units submit their UTCs to the LOGDET Manager because of semi-annual LOGDET reporting, and upon request. **(T-2)**

2.9.36.2. Fully coordinate all UTC development, changes, and cancellations with all using MAJCOMs/FOA, ANG/AFE Staff, HQ USAF/A3TF, and pilot unit if either has tasked non-pilot units in accordance with Unit Type Availability. **(T-2)**

2.9.37. Assists the AFE CBRN Liaison assigned to the Chemical-Biological Defense Systems Branch, Aberdeen Proving Grounds, Maryland, who acts as the focal point for developing AFE CBRN programs, plans, procedures, equipment, budget and training standards. **(T-2)**

2.9.38. Assists AFE CBRN Liaison and the Air Force Civil Engineer Center (AFCEC) validate Aircrew-CBRN (ACBRN) Passive Defense requirements (D-Bag). **(T-2)**

2.9.39. Address all AFE related Air Force Cost Analysis Improvement Group/Cost Per Flying Hour (AFCAIG/CPFH) program requirements with responsible MAJCOM entities and HQ USAF/A3TF as needed. **(T-2)**

2.9.40. Serve as 1P0X1 FAM for Aerospace Expeditionary Force IAW AFI 10-401, *Air Force Operations Planning and Execution* on all 9AL Series UTC AFE issues. Provides AFSC 1P0X1 inputs to 3* Series Aviation UTC FAMs and 7* Series UTC FAMs. **(T-2)**

2.9.41. Provide a synopsis of installation-level audit report results from units within command. This cross feed provides an awareness of potential issues that units may evaluate at their base and take corrective action as necessary. **(T-2)**

2.9.42. Assist subordinate units with review of AFI 25-201, *Support Agreements Procedures,* Inter-Service/Intra-Service Support Agreements (ISSA) and review host-tenant agreements involving AFE functions if required. **(T-2)**

2.9.43. MAJCOMs/FOA may develop and implement supplemental SACs using MICT. Communicators will be developed and utilized IAW AFI 90-201 and AFI 33-360. **(T-2)**

2.9.44. MAJCOMs/FOA will develop policies and procedures to measure the effectiveness of their AFE Technician Training programs, as well as the qualifications of assigned AFE technicians. See paragraph A3.1, Figure A3.1 and A3.2 in Attachment 3 for an example of how technician training qualifications can be measured. As a minimum, when reporting manning data it shall be reported by skill level. **(T-2)**

2.10. Operations Group Commander (OG/CC) or equivalent will:

2.10.1. Appoint a rated officer who is qualified and current in their primary aircraft of assignment to serve as the AFEO. AFEOs are required to complete training as defined in Table 4.1. AFEOs should serve a recommended 24-month period but no less than 12 months in the position. The AFEO position is an earned authorization and must be reflected on the Unit Manpower Document (UMD). **(T-2)** Guardian Angel (GA) units may utilize non-rated Combat Rescue Officers (CRO)/Special Tactics Officers-(STO) to fulfill AFEO duties. **(T-3)**

2.10.1.1. Appoint an AFE (1P0X1) Senior NCO (civil service or contractor equivalent) who will serve as the group AFES/AFE COR to manage the wing AFE Program with the AFEO, and identified as a "supervisor" on the UMD through coordination with A1 personnel. A civil service or contractor equivalent may be appointed as the AFES/AFE COR only when a funded UMD SNCO Superintendent (supervisor) position does not exist. Position Description (PD) states required responsibilities. **(T-2)**

2.10.1.2. Ensure the AFES/AFE COR/AFEO, personnel, functions, and manpower positions to include all military, civil service, and contractor equivalent are assigned and organizationally aligned (both administratively and operationally) to the Operations Support Squadron (OSS). The AFE Flight will be a single stand-alone flight with the office symbol "OSL." **Note:** Assigning AFE technicians to flying units in a "with duty at" status does not comply with this policy and is not authorized. **Exception:** RegAF Total Force Integration Association (TFIA) personnel will normally be assigned to the flying squadron as well as AFRC Flight Test Units aligned under a Flight Test Group/Flight Test Squadron/Flight Test Flight. GA/ST units will determine alignment of these positions in the applicable supplement to this instruction. ALC AFE technicians will be aligned under the applicable MXG, as ALCs do not have an OSS function. **(T-1)**

2.10.1.2.1. The AFES/AFE COR/AFEO are responsible to the Group CC, through the squadron, for the management of the wing/group AFE program to include manpower, training, rotations of AFE technicians, and budget. **(T-2)**

2.10.1.3. Ensure only approved positions/duty titles are established in the AFE organization and technicians assigned to these positions comply with the defined position requirements IAW AFI 11-301 Vol 5. **(T-1)**

2.10.1.4. Ensure at a minimum, the NCOIC AFE QA and AFES/AFE COR is appointed to the Wing Inspection Team (WIT) to evaluate and ensure compliance with AFE areas of responsibility. **(T-2)**

2.10.1.4.1. Ensure AFE WIT member(s) provide AFE exercise scenarios and inspection data points based on Wing IG guidance and plans. **(T-3)**

2.10.1.5. Ensure contracted organizations will continue to comply with the provisions of their existing contracts. Contracted documentation will be modified to acknowledge the transfer of functional liaison to the Group CC as described in paragraph 2.10.1.1. Contracted organizations will be utilized for AFE maintenance training, and/or resources for military and civil service technicians in all aspects of the career field IAW *AFSC 1P0X1, Aircrew Flight Equipment Career Field Education and Training Plan*, 01 Oct 2015 (CFETP), as applicable. **(T-2) Note:** All civilian and contracted organizations performing AFE functions are subject to HHQ level assistance from Director of Operations (A3).

2.10.2. Ensure at least one fully qualified 1P071 or civilian/contractor equivalent is appointed to fill the NCOIC AFE QA position with authority and visibility over all AFE activities. The AFE QA program will reside and be organizationally aligned to the OSS AFE Flight. **Note**: AFE programs with up to 29 1P0X1s will assign one 1P071 member to execute an effective QA program. AFE programs with 30 or more 1P0X1s assigned will assign up to two 1P071 members to execute and effective QA program. MAJCOMs and ANG/AFE Staff may determine applicability of QA programs for units with seven (7) or less full-time technicians assigned. **Note:** ANG units will delineate and assign NCOIC AFE QA duties as required if no full time QA manpower position is authorized on the UMD. **(T-2)**

2.10.2.1. Ensure the AFES/AFE COR has developed a rotation plan for the NCOIC AFE QA. When possible, appointed NCOIC AFE QA will be a minimum of one year. NCOIC AFE QA at ARC, civil service, and COR locations, do not have any time requirements and will remain assigned to the 4818 series core document of their position. **(T-2)**

2.10.2.2. Designated AFE (1P071 or civilian/contractor equivalent) QI may augment the NCOIC AFE QA, as necessary, in the various AFE activities/sections. **(T-2)**

2.10.3. Ensure the AFECT program is actively managed and instructors are qualified and certified. **(T-2)**

2.10.3.1. Ensure funding is available to maintain Emergency Procedures Trainers (EPT) and related training equipment to support the wing AFE training program. Contact Det 1 ACC/TRSS, Luke AFB, AZ for major overhaul, modification, or reconfiguration to EPT. **(T-2)**

2.10.4. Ensure adequate distraction-free training facilities, sites and equipment are available to conduct all AFECT events. **(T-2)**

2.10.5. Ensure AFE facilities meet standards in AFI 32-1024, *Standard Facility Requirements*, and AFMAN 32-1084, *Facility Requirements*. Ensure all flight equipment is stored/maintained within approved AFE facilities and IAW applicable technical data. AFRC units will also refer to AFRCH 32-1001 *Standard Facility Requirements* and ANG units will refer to ANGH 32-1084 *Standard Facility Requirements*. **(T-2)**

2.10.5.1. Ensure AFE facilities are adequate to afford maximum protection of flight equipment and sufficient in size to support equipment inspection, storage (to include mobility bins), training, aircrew ready room, and office space for program management. Facilities must satisfy requirements identified in 15X/14D-series TOs and 32/91-series publications. **(T-2)**

2.10.6. GA AFE sections will establish Memorandums of Agreement (MOA) for use of facilities external to those that are GA owned to support equipment maintenance operations. **(T-2)**

2.10.7. Ensure funds are allocated for the continued management of Consolidated Sustainment Activity Group (CSAG) and all AFE programs and contingency plans. This includes having access to a government purchase card for the Cost Per Flying Hour (CPFH), Operations & Maintenance (O&M), and CBRN assets. **(T-2)**

2.10.7.1. Support sending, as a minimum, AFES/AFE COR/AFEO to annual AFE workshops, symposiums and training review boards. **(T-2)**

2.10.8. AFE skill sets are critical to combat operations. Ensure AFE technicians are not assigned duties that will detract from wartime proficiencies and requirements. IAW AFI 36-2101, *Classifying Military Personnel* (*Officer and Enlisted*), CC's and supervisors shall limit the use of enlisted Airmen outside their Control-AFSC (CAFSC). Local Military Personnel Section may approve use outside of CAFSC up to 130 days; Air Force Personnel Center Assignment Managers, ANG and AFRC FMs may approve using Airman Basic through Senior Master Sergeant members outside their CAFSC in excess of 130 days. Use outside of CAFSC includes full time Squadron Superintendent, Unit Deployment Manager (UDM), Unit Training Manager (UTM), etc. AFE technicians authorized to perform such duties outside their AFSC for over 130 days must return to their primary AFSC for a minimum of one consecutive year to maintain currency. **(T-2)**

2.10.8.1. Ensure AFE technicians are knowledgeable of unit Operations Plan (OPLAN), Designed Operational Capabilities (DOC) Statements, Special Instructions (SPINS), Mission Essential Task (MET) and UTCs as they relate to the operation and maintenance of flight equipment at deployed and/or in-place contingency response locations. **(T-2)**

2.10.9. Ensure AFE functions are advised of changes to applicable contingency plans in time to ensure required equipment is available for deployment. **(T-2)**

2.10.10. Ensure compliance with minimum AFE requirements as established by the provisions of AFI 11-202, Vol 3, *General Flight Rules*, AFI 11-301 Vol 2, this instruction, applicable TOs, and aircraft flight manuals. **(T-2)**

2.10.11. Ensure flight equipment utilized for flight operations are approved safe-to-fly IAW AFLCMC/HSD's SharePoint® at **https://cs2.eis.af.mil/sites/21562/afe/default.aspx** authorized by the AFEMS, TOs, aircraft -specific manuals, Joint Technical Data (JTD), 2ZCA12255, Rev AH and this instruction. All other items require approval from appropriate MAJCOM/FOA AFE focal point prior to use (e.g. items that do not require a safe-to-fly process). AFLCMC/HSD determines what items require a safe-to-fly and if MAJCOM assumption of risk can be delegated. See TO 14-1-1 and ASC 016 for authorized equipment and clothing. **(T-2)**

2.10.11.1. HQ USAF/A3TF, MAJCOM/FOA AFE and unit level AFE are not the focal point for requirements and acquisition of uniform items, to include the basic flight suit, two-piece flight suit, etc. These items are listed in AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*. Units requesting flight suit wear deviation or approval will refer to AFI 36-2903 and route questions through local Force Support and Logistics Readiness Squadrons to the Air Force Uniform Office at Wright Patterson AFB. **(T-2)**

2.10.11.2. Ensure personnel charged with procuring aircrew flight clothing are trained and knowledgeable of the requirements/limitations related to safe-to-fly and authorized.

2.10.12. Ensure an AFE liaison will be appointed by the Aeromedical Evacuation (AE) SQ/CC for AFE integration purposes. **(T-2)**

2.11. Operations Support Squadron Commanders (OSS/CC) or equivalent will : **Note*:*** GA SQ/CC's will assume all CC related responsibilities within this chapter when AFE technicians are assigned to the unit. **(T-2)**

2.11.1. Be responsible for the wing/group AFE program to include manpower, training, rotation of technicians, and budget, etc. In addition, monitors related contractor operated locations. **(T-2)**

2.11.1.1. Ensure aircrew are provided required AFE and configurations support mission requirements. **(T-1)**

2.11.2. Fund and provide personal protective equipment to all assigned AFE using O & M expense account non-CPFH program items, e.g., Gortex©, steel toed boots, hearing protection. **(T-3)**

2.11.3. Ensure results of AFE assessments are input into MICT to ensure Group CC is aware of the overall health of the AFE program. **(T-3)**

2.11.4. Ensure funding of e-Tools (and/or equivalent), instructions, publications, manuals, procedures, and Time Compliance Technical Orders (TCTO) pertaining to the inspection, maintenance, and use of assigned flight equipment, systems, and subsystems are maintained according to HHQ's directives. **(T-2)**

2.11.5. Ensure AFECT is accomplished IAW **Chapter 5** of this instruction, the appropriate AFI 11-2MDS-series, Volume 1, *Aircrew Training*, publications, and command supplements to this instruction. **(T-2)**

2.11.6. Ensure the AFE program is in compliance with all applicable safety directives. **(T-2)**

2.11.7. Ensure adequate funding is provided to sustain non-CPFH hour program items. **(T-2)**

2.11.8. Implement policies and procedures as HHQs direct. **(T-2)**

2.11.9. Exempt all trainees in 5-level upgrade training from additional duties for nine months (start from date officially placed in upgrade training) and newly assigned technicians (through PCA/PCS) for the first 120 days of assignment. Exemption from additional duties for ANG 5-level upgrade trainees is eighteen (18) months. **(T-3)**

2.11.10. Assign AFE technicians to support Temporary Duty (TDY) flying operations in excess of seven days or operations utilizing helmet mounted devices. **Exception**: N/A to Mobility AF (MAF) home station departure/return, with multi-leg missions as part of a single mission and GA. **(T-3)**

2.11.11. Notify MAJCOM/FOA when AFE technicians cannot attend scheduled courses, e.g., AFE Program Manager Course (AFEPMC). The annual allocation of school quotas is based on the number used, and repeated cancellations reduce the number available for future use. CC's must carefully review these cancellations and provide the MAJCOM with cancellation justification. **(T-3)**

2.12. Flying Squadron Commanders will :

2.12.1. Identify instructor aircrew, officer and/or enlisted, to instruct Emergency Egress (LL02), Emergency Egress, Non-Ejection Seat (LL03) and Emergency Egress with ACBRN (LL05) training. Provide the list to the AFEO and follow paragraph 5.3.5. **(T-2)**

2.12.1.1. Ensure assigned aircrew and/or personnel flying onboard unit aircraft are properly equipped and trained IAW 11-301 Series publications. **(T-1)**

2.12.2. Support test and evaluation events on flight equipment when requested by HHQ. **(T-2)**

2.12.3. Ensure all aircrew in-process and out-process through the AFE section upon assignment or PCS. In addition, ensure aircrew issued individual equipment process through AFE before and after flying duties. **(T-2)**

2.12.4. Ensure crew members return all previously signed out equipment to the AFE section at the end of each flying day or upon returning from alert, TDY, deployments, exercises, etc. **(T-3)**

2.12.5. Notify the AFE section in advance of any changes in mission/configuration requirements. **(T-3)**

2.12.6. Ensure aircrew members perform preflight inspections and operational checks using in-shop test equipment on all flight equipment prior to the first flight of the day. **(T-2)**

2.12.7. Coordinate with the OSS/CC on AFE program requirements or issues as needed, this includes but is not limited to, aircrew equipment, technician training, readiness reporting, QA/QC trend analysis and AFECT programs. **(T-1)**

2.13. AFES/AFE COR/AFEO will:

2.13.1. When approved equipment modifications are made that change ground egress, ejection procedures, or affect crew comfort, etc., the AFEOs will fly with the new equipment to identify required changes to operational and training procedures. This duty may be delegated to squadron level rated officer for those units with more than one MDS. **Exception:** GA/ST units may utilize a non-rated CRO/STO to fulfill AFEO duties. **(T-2)**

2.13.2. Ensure all equipment modifications are approved in accordance with TO/COTS manual guidance, official TO content manager or MAJCOM/FOA guidance. **Note**: F-35 units will follow programmatic guidance concerning approved modifications. **(T-2)**

2.13.3. Plan and manage the organizational structure for AFE functions, including functional responsibilities, manpower/staffing requirements, and assignment of AFE technicians to and within the wing, IAW guidance contained in this instruction. **(T-3)**

2.13.3.1. AFES/AFE COR/AFEO will vet and appoint, via an appointment letter and endorsed by the unit CC, the following AFE positions.

2.13.3.1.1. AFE Flight Chief (AFEFC). **(T-1)**

2.13.3.1.2. NCOIC AFE QA. **(T-1)**

2.13.3.1.3. Lead AFECT Instructor (AFECTI). **(T-1)**

2.13.3.1.4. AFE Lead Trainer (AFELT). **(T-2)**

2.13.4. Plan and budget for the annual AFE TRB & Workshop, unit funded formal training courses (e.g., AFEPMC and Initial Physiological Hypoxia Training) and any AFE workshops to the maximum extent possible. **(T-3)**

2.13.5. As senior AFE representatives, the AFES/AFE COR/AFEO will serve as the focal point for Group/Wing/MAJCOM/FOA communications. **(T-2)**

2.13.6. Ensure AFE technicians are trained and qualified IAW this instruction, CFETP 1P0X1 and AFI 36-2201, *Air Force Training Program*. Additionally, ensure AFE technicians with special/unique training have applicable SEI's in their records and are assigned to duty positions maximizing those qualifications (e.g., premeditated personnel parachute inspection/packing, pararescue/special tactics equipment maintenance). When moving these personnel, supervision should carefully consider the airman's career development, equipment/shop continuity and return on investment of time and funds spent training and qualifying these individuals. **(T-2)**

2.13.6.1. All civil service and contractor equivalent personnel, internal and external new hires for this career field must be a graduate of the AFE (1P0X1), prior Aircrew Life Support (AFSC 1T1X1) and/or Survival Equipment (AFSC 2A7X4) technical training courses (or equivalent), sister-service equivalent courses, or Federal Aviation Administration certified equivalent background. Ensure this is written into the position(s) requirement, contract, and/or Statement of Work as applicable. **Exception**: ALC AFE related technicians who were permanently waived via a memorandum from HQ USAF/A3TF may continue working in those areas as identified. AFMC may authorize other methods of training for ALC AFE related hires with the express permission of HQ USAF/A3TF to best meet mission needs. **(T-1)**

2.13.7. Ensure units have required flight equipment to support unit contingencies. **(T-2)**

2.13.8. Ensure NCOIC AFE QA monitors the TO Distribution Account (TODA), authorized as their own TO Distribution Office (TODO), at each AFE section assigned within the OG using the web-based Enhanced Technical Information Management System (E-TIMS). Electronic TOs will be filed and maintained IAW TO 00-5-1. Ensure that AFE sections maintain a current file of electronic publications, TOs, manuals, and messages pertaining to issue, inspection, maintenance and use of assigned flight equipment, and ensure compliance with instructions contained therein. **(T-2)**

2.13.8.1. Familiarization Program: All AFE personnel are responsible for ensuring they are familiar and knowledgeable on the TO library, TO options, publications, manuals, and messages applicable to their daily assigned duties. **(T-2)**

2.13.8.2. Review MAJCOM TO Option List to determine unit positions, and publish within 14 calendar days; ensure data is current and accessible to each technician performing equipment maintenance. **(T-2)**

2.13.8.3. Functions as OPR on all related proposed TO changes. As the functional experts, superintendents are responsible for reviewing and evaluating wing-initiated AFTO 22, dealing with AFE related issues to ensure reports are correct prior to submitting reports to HHQs. Forward validated AFTO 22s to the originator's MAJCOM/FOA Staff for review. **Exception**: Air Mobility Command (AMC) units will use the PHOENIX STAR process to assign improvement report control numbers and route AFTO 22 to the HQ AMC PHOENIX STAR office. **Note:** C-17A TO improvement reports must be submitted using a Microsoft Word version AFTO 22 to be able to process. **(T-2)**

2.13.8.4. Ensure an account for Automated Computer Program Identification Number System (ACPINS) and Electronic Software Download System (ESDS) is established so the TODO can receive software updates when released. Links are available in the applicable TO and/or HQ USAF/A3TF AFE SharePoint®. **(T-3)**

2.13.9. Conduct assessments of overall AFE Program IAW AFI 1-2, paragraph 3.4.3 and the Wing Commander's Inspection Program (CCIP). The FM will determine assessment frequencies for the AFRC. **(T-2)**

2.13.10. Ensure Personnel Evaluations (PE) are conducted as part of the QA program. The AFES/AFE COR and NCOIC AFE QA will determine the type of PEs to be conducted, how many PEs are required, and who will be evaluated. **(T-2)**

2.13.10.1. The AFES/AFE COR/AFEO, along with the AFELT, will determine additional AFE Technician Training Task Evaluation (TE) requirements. **Exception:** HQ AFRC/A3RF will determine TE criteria for AFRC units. **(T-2)**

2.13.11. AFES/AFE COR will ensure an effective SA program is conducted. At a minimum, utilize HQ USAF/A3TF and MAJCOM SACs in MICT as AFE management tools. Use MICT to communicate all aspects of program management successes and limiting factors to the chain-of-command. If not already determined by the CCIP, AFES/AFE COR will set local review intervals and monitor observations listed in MICT until observations are resolved. Units may create locally developed checklists, as they deem necessary per AFI 90-201 guidance. Locally developed checklists are managed at the unit level and fall within the CCIP. **(T-2)**

2.13.12. Prepare and evaluate AFE related portions of local support agreements. The AFES/AFE COR is responsible for conducting an annual review. Units providing host support to tenant units will maintain authorized flight equipment according to support agreements and directives. **(T-2)**

2.13.13. Monitor status of discrepancies identified during no-notice inspections of AFE programs, SAVs, UEIs, SAs and outside agencies until corrective actions have been completed. Corrective actions will be documented as prescribed by governing instructions or as required to reflect status and actions taken. AFE Quality Assurance Program (AFEQAP) and MICT are the primary tracking systems for all discrepancies. **(T-2)**

2.13.13.1. Monitor the status of HQ USAF/A3TF, MAJCOM, Wing SACs located in MICT, HQ SAVs (if requested), and IG Capstone/On-site visits. Ensure NCOIC AFE QA provides monthly updates until findings are corrected. Deficiencies will be reviewed monthly by AFES/AFE COR. **(T-2)**

2.13.14. Ensure PEs of Red X qualified 1P0X1s are conducted IAW para 3.7.3. **(T-2)**

2.13.15. Ensure newly assigned Flight Chiefs/NCOICs are reevaluated IAW 4.2.3.2. to verify qualification in previously trained areas prior to them performing unsupervised work IAW AFI 36-2201. Includes military, civilian, and contractor equivalent. **(T-2)**

2.13.16. Ensure AFEO and AFE personnel complete training as defined in Table 4.1. ANG units will ensure at least one trained and qualified 1P SNCO investigator is appointed for each assigned MDS. Provide functional expertise representation to the base Disaster Control Group for response to major peacetime accidents. **(T-2)**

2.13.17. Will contact their applicable MAJCOM/FOA when contractors/vendors contact them regarding product use. No personnel are authorized to take receipt of vendor’s products for testing or integration without full MAJCOM coordination and approval. **(T-2)**

2.13.18. Review and approve local In-Process Inspection (IPI) tasks annually for applicability. Document the annual review on the front of the IPI sheet. Ensure IPI qualified technicians

only perform IPIs on equipment they are qualified on, IAW CFETP requirements. Ensure IPI qualified technicians are designated by unit CC via appointment letter, or as determined by applicable MAJCOM/FOA. **Exception:** ALC locations may use Work Control Documents (WCD) to satisfy IPI form requirements, as long as the format and content is approved by the AFES. The AFES must be included in annual reviews/modifications of the WCDs. **(T-2)**

2.13.19. Ensure items not maintained by AFE are not commingled and stored with flight equipment (e.g. CBRN groundcrew ensemble). **(T-2)**

2.13.20. Ensure QI personnel only perform Quality Control Inspections (QCIs) on equipment they are qualified on, IAW CFETP requirements. Ensure those authorized to perform QCI's are at a minimum appointed in writing by the AFES/AFE COR/AFEO. **(T-2)**

2.13.21. Provide required personnel and equipment readiness status to the UDM, the Defense Readiness Reporting System (DRRS)/Air Force Input Tool (AF-IT) Unit Administrator, and/or Unit User based on AFE MET AFTA 4.9 assessments. **(T-2)**

2.13.22. Requisition Out-of-Cycle or supplementary munitions requirements through the supporting Munitions Accountable Systems Officer (MASO). Review AFI 21-201, *Munitions Management*, for requisition procedures. AFES/AFE COR will also inform MAJCOM/FOA of shortages and status. **(T-3)**

2.13.23. Ensure units maintain a master configuration data list to assist in determining unit Equipment Authorization Inventory Data (EAID) equipment requirements. The master configuration data list will be updated every 180 days. **Exception**: The master configuration document for ANG units is the annual AFEMS Adhoc Configuration Report available from NGB/A4RMS through the installation Equipment Accountability Element (EAE). **(T-2)**

2.13.24. Gather squadron-level acquisition and sustainment recommendations from unit AFE and aircrew to identify AFE systems requirements. MAJCOMs and ANG/AFE Staff will task each wing/unit for inputs in preparation for annual APWG & APEC meetings. **(T-2)**

2.13.25. Submit operational AFE requirements for evaluation and action via the AFES/AFE COR/AFEO through the OG/CC. ANG units will forward requirements through respective WSTC to ANG/AFE Staff for visibility and assistance. **(T-2)**

2.13.26. Ensure deficiency and hazard reports; Joint Deficiency Report System (JDRS) and 00-35D-54, *USAF Materiel Deficiency Reporting and Investigating System,* AFTO 22, AF Form 457, *USAF Hazard Report*; and suggestions, as appropriate, are submitted for all flight equipment or system deficiencies. All AFTO 22, AF Form 457, and suggestions pertaining to flight equipment will be evaluated by the AFES/AFE COR prior to submittal to the next higher level. The host base safety office will review and process reports as required by AFI 91-204. Ensure applicable MAJCOM/FOA staff is provided a copy of any report not specifically addressed to their office. **(T-2)**

2.13.27. Plan, direct, organize, manage, and evaluate AFE programs. **(T-2)**

2.13.28. Provide training on the functional use and operation of flight equipment that may be encountered during local rescue operations when requested. Local agencies should be apprised of any changes in equipment type or operation. **(T-2)**

2.13.29. Establish, manage, and supervise centralized AFECT program IAW this AFI. **(T-2)**

2.13.30. Ensure training equipment, which mirrors operational equipment, is made available for Fire Department (FD) personnel as required. **(T-2)**

2.13.31. Establish liaison and coordinate with other organizations supporting the AFE function to ensure equipment is adequately maintained. **(T-3)**

2.13.32. Report time change component requirements IAW TO 00-20-9 and HHQs directives. **(T-2)**

2.13.33. Ensure all manning documents are accurate. Assign personnel to the manpower positions based on their rank and skill level. At bases with multiple Personnel Accounting Symbol (PAS) codes within a single command, the AFES/AFE COR will determine which PAS code the gaining member is initially assigned based on the overall needs of the base AFE program. The AFES/AFE COR is authorized to change the initial PAS assigned using local procedures established by the Force Support Squadron. **(T-2)**

2.13.34. Implement current AFE policies, regulations, and guidance established by HHQs directives. **(T-2)**

2.13.35. Ensure a Restricted and Suspended Munitions listing is available and current. Use the Global Ammunition Control Point (GACP) link: The listing will include all applicable munitions. Update the listing upon release of new suspended/restricted instructions if applicable. Post listing in all areas where an explosive operation is performed. **(T-2)**

2.13.36. Ensure compliance with all safety standards to include, but not limited to, AF Occupational, Safety, and Health (AFOSH) Standard Training, documentation, and increased precautions for storage and handling of lithium batteries. **(T-2)**

2.13.37. Ensure equipment involved in physiological incidents is properly managed IAW this instruction. **(T-1)**

2.13.38. Determine the desired number of AFE technicians for attendance at formal courses IAW Table 4.1. Formal AETC/MAJCOM/FOA courses will be requested through owning MAJCOMs. ANG units will forward requests through their UTM and courtesy copy ANG/AFE Staff. **(T-3)**

2.13.39. Ensure technicians remain current in aircraft egress/cockpit familiarization training for ejection seat aircraft IAW MDS specific guidance if required locally. This ensures technicians are available to respond to flight equipment serviceability concerns on Egress systems as required. AFE technicians assigned to MAF units will remain current in emergency ground egress training with a 24-month recertification. AFE technicians will get initial and refresher emergency ground egress training by attending LL03. **(T-3)**

2.13.40. Ensure all support/test equipment is current (e.g., CSEL radios, loaders, test sets and beacon interface) by checking appropriate TOs **(T-2)**

2.13.41. Ensure NCOIC AFE QA and QI are trained and certified using the QA Certification Course PowerPoint® located on the HQ USAF/A3TF AFE SharePoint®. **(T-1)**

2.13.42. Ensure AFEQAP database is used to document all QA inspections and evaluations requirements as outlined in paragraph 2.15.5. **Exception:** ALC AFE related work centers, 413 FTG and associated GSUs are exempt from using AFEQAP, however, they will establish and utilize AFRC/AFMC approved processes for QA/QC. **Note:** ALC locations may utilize

occupational series 1910 personnel to conduct QA responsibilities in AFE related work centers; however, those personnel must be qualified IAW guidance within this instruction, or they must use qualified personnel (QI's/SME's) to assist in satisfying program requirements. **Note:** AFEQAP is an automated QA database, which is mandated by HQ USAF/A3TF for use by the NCOIC AFE QA. The AFEQAP program and users guide is located on the HQ USAF/A3TF AFE SharePoint®. **(T-1)**

2.13.43. TFIA. The host unit (unit that owns the aircraft) AFES/AFE COR/AFEO will be responsible for the overall management of the entire AFE Program (host unit and TFIA unit), unless under specific exception as stated in this instruction. **(T-2)**

2.13.43.1. The host unit AFES/AFE COR/AFEO will provide Operational Direction (OPDIR). OPDIR includes the authority to assign tasks, designate objectives, and provide direction necessary to accomplish the mission. Supervisors in functionally integrated shops will exercise OPDIR over subordinate technicians assigned to their activity, regardless of component, in order to accomplish the mission. **(T-2)**

2.13.43.2. If the TFIA unit is administratively matrixed to a geographically separated parent wing (i.e. at a different base), the parent OG AFES/AFE COR/AFEO will assist in ensuring TFIA specific tasks separate from the host unit (data calls, ACBRN funding validation/execution) are completed. The parent unit AFES/AFE COR/AFEO will assist the TFIA unit as needed. **(T-2)**

2.13.43.3. Parent unit AFES/AFE COR/AFEO will visit their TFIA units periodically and ensure visits are part of the annual travel budget request. **(T-2)**

2.13.44. Ensure the intent of this AFI is adapted to F-35 programmatic processes as necessary.

2.13.45.1. Ensure F-35 personnel submit Action Requests (AR) for the following:

2.13.45.1.1. Any time a deficiency with JTD or PFE is identified.

2.13.45.1.2. Any time a sortie is lost as a result of PFE.

2.14. AFE Flight Chief will :

2.14.1. Monitor and manage daily operations of the entire AFE flight, and ensure scheduled equipment inspections are properly accomplished. **(T-2)**

2.14.2. Maintain a current file of directives, procedures, TOs, and manuals pertaining to issue, inspection, maintenance, and use of flight equipment and systems possessed. File and maintain electronic TOs IAW TO 00-5-1, TO 00-5-3, *Air Force Technical Order Life Cycle Management* and AFI 63-101_20-101. **(T-2)**

2.14.3. Monitor aircraft conversion and TCTO modification programs to ensure satisfactory integration of flight equipment with aircrew recovery systems. Advise AFES/AFE COR/AFEO and NCOIC AFE QA of program delays or supply problems as they occur. **(T-2)**

2.14.4. Ensure compliance with all AFE administrative, training, clothing, equipment, and mobility requirements as designated in the applicable chapters of this instruction. **(T-2)**

2.14.5. Forward unit level acquisition and sustainment requirements to the AFES/AFE COR/AFEO. These inputs are the root of flight equipment requirements that feed the APEC process. **(T-3)**

2.14.6. Ensure compliance with AFI 11-410, *Personnel Parachute Operations*, as applicable. **(T-2)**

2.14.7. Ensure compliance with AFI 13-217, *Drop Zone and Landing Zone Operations*, as applicable. **(T-2)**

2.14.8. Ensure the capability exists to clean, repair, package and perform in-shop inspection on aircraft thermal curtains and thermal radiation barriers, if required. A qualified Aircraft Maintenance crew chief will remove thermal protective devices, complete on-aircraft inspections, and reseals serviceable devices. Aircraft Maintenance will deliver unserviceable curtains/barriers to AFE for in-shop inspection and repair. Devices and shields remaining sealed are not re-inspected. **(T-2)**

2.14.9. Ensure only authorized repairs and modifications are performed on flight equipment IAW applicable TOs and AFIs. Owning individuals are responsible for sewing on rank and hook/pile tape as required by AFI 36-2903. **Note**: F-35 units will follow programmatic guidance. **(T-3)**

2.14.10. Provide TO authorized local manufacture capability to meet unit flying mission requirements and monitor all AFE local manufacture work order requests. **(T-3)**

2.14.10.1. AFE is only responsible for performing local manufacture jobs that are required by the TO. Local manufacture projects related to flight equipment include items maintained internally by the AFE section, as well as TO/AFI directed local manufacture maintenance requests when the requests directly support aircraft. **(T-3)**

2.14.10.2. Recommend outsourcing and/or contract commercially local manufacture jobs when AFE does not have the capability (e.g. material, manpower, expertise). It is the responsibility of the requesting agency to seek alternate solutions through commercial sources. **(T-2)**

2.14.11. Evaluate the extent of damage and wear to material and equipment IAW TOs, and determine whether to repair or replace. **(T-2)**

2.14.12. Contact the AFES/AFE COR/AFEO when contractors/manufacturers contact them directly regarding product use. **(T-2)**

2.14.13. Develop and coordinate a work center specific local explosive safety program through the AFES/AFE COR/AFEO and wing safety office. **(T-2)**

2.14.14. In consultation with AFE QA, recommend tasks that require IPI's to the AFES/AFE COR for approval. **(T-3)**

2.14.15. Conduct monthly scheduling meeting with Egress and Wing Plans Scheduling & Documentation, as applicable. **(T-3)**

2.14.16. Accomplish a SA when directed by the AFES/AFE COR. Ensure QA PEs are included in the SA. Forward copies of the SA to the AFES/AFE COR/AFEO. This program assessment will not be conducted concurrently with AFES/AFE COR or WIT inspections. **Exception**: N/A to ANG single MDS units. **(T-3)**

2.14.17. Ensure all AFE technicians are initially qualified on all core tasks and identified MDS specific requirements IAW CFETP 1P0X1. Q&A sessions alone do not qualify as TE or qualification; however, Q&A may be used in conjunction with TEs to validate a person's

qualifications. TE and qualification will include a total review of all applicable guidance and associated TOs. Document the TE using Training Business Area (TBA). **(T-2)**

2.14.18. Utilize the processes, tools, and intent of paragraph 2.13.11 in support of the SA and CCIP program. **(T-2)**

2.14.19. Ensure mission termination inspections (MTI) are accomplished on pre-positioned flight equipment for accountability and serviceability. **(T-2)**

2.14.20. Notify AFES/AFE COR/AFEO immediately when aircrew fail to return all previously signed out flight equipment to AFE at the end of each flying day (or upon returning from alert, TDY, deployments, missions, exercises, etc.) for required inspection, maintenance, and fit. **(T-3)**

2.14.21. Ensure items not maintained by AFE are not commingled and stored with flight equipment (e.g. CBRN groundcrew ensemble. See AFI 11-301 Vol 2). **(T-2)**

2.14.22. Provide training on the functional use and operation of flight equipment that may be encountered during local rescue operations when requested. Local agencies should be apprised of any changes in equipment type or operation. **(T-2)**

2.14.23. Establish liaison and coordinate with other organizations supporting the AFE function to ensure equipment is adequately maintained. **(T-3)**

2.14.24. Ensure a Restricted and Suspended Munitions listing is available and current. Use the Global Ammunition Control Point (GACP) link: **https://www.my.af.mil/wm/Login.aspx** The listing will include all applicable munitions. Update the listing upon release of new suspended/restricted instructions if applicable. Post listing in all areas where an explosive operation is performed. **(T-2)**

2.14.25. Ensure all support/test equipment is current (e.g., CSEL radios, loaders, test sets and beacon interface) by checking appropriate technical guidance. Ensure TODO has an ACPIN account established to receive software updates. **(T-2)**

2.14.26. Ensure the equipment of newly assigned aircrew is initially inspected and configured for local mission requirements and aircrew accomplishes an LL07 fit check prior to first flight. **(T-1)**

2.15. NCOIC/Assistant NCOIC, AFE Quality Assurance will:

2.15.1. Perform AFE COR duties and responsibilities at related contractor operated locations, as applicable. MAJCOMs/FOA units may supplement this instruction to further outline roles, responsibilities, training and other program requirements as appropriate. Furthermore, as contractors cannot perform AFE COR duties, the owning MAJCOM/FOA will determine who will perform these duties at location where no RegAF, ANG or AFRC AFE are assigned. **(T-2)**

2.15.2. Ensure AFE QA program is effectively managed in accordance with this instruction and all applicable technical data and instructions. **(T-1)**

2.15.3. In coordination with the AFES/AFE COR, establish Acceptable Quality Levels (AQL) for PEs and equipment Quality Control Inspections (QCI). **(T-3)**

2.15.4. Monitor the Joint Acquisition CBRN Knowledge System (JACKS) website (**https://jacks.jpeocbd.osd.mil**) monthly to ensure serviceability of ACBRN assets. **(T-2)**

2.15.5. Publish and define the trend program in the unit supplement to this instruction or operating instruction. When trends are noted, recommend/lead corrective action and assign an OPR/Office of Collateral Responsibility until closed. Provide monthly trend analysis to the OSS/CC (or equivalent) and AFES/AFE COR/AFEO. The OSS/CC will determine when it is appropriate to up channel trend status to the Group CC. Maintain trend data IAW AF Records Disposition Schedule. **(T-2)**

2.15.6. Coordinate on all requests for locally designed tools or equipment. **Exception**: Process Engineering/Engineering is the authority for approving locally designed tools and equipment at ALC locations. **(T-3)**

2.15.7. Locally manufactured tools/equipment used on aerospace equipment must be approved IAW AFI 21-101, *Aircraft and Equipment Maintenance Management*. Maintain records of all approved locally manufactured, developed, or modified tools and equipment, include pictures/drawings and a description of use for each item used in AFE. **Exception**: This paragraph does not apply to specific tools and equipment authorized in applicable technical data. **(T-3)**

2.15.8. Manage TCTO programs to ensure satisfactory integration of flight equipment with aircrew recovery systems, in cooperation with the AFES/AFE COR. Advise AFES/AFE COR of program delays or supply problems as they occur, and upon completion of the TCTO. Flight Equipment Records Management System (FERMS) or Defense Property Accountability System (DPAS) may be used to track TCTOs. Maintain file copies of all applicable TCTOs for two years after rescission date. **(T-2)**

2.15.9. Manage TODA for each AFE section assigned within the OG, in cooperation with the AFES/AFE COR. Ensure that AFE sections maintain a current file of publications, TOs/COTS manuals as outlined in paragraph 2.13.8. F-35 units may use program specific processes as directed. **(T-2)**

2.15.10. Serve as the AFE Product Improvement Manager (PIM). Provide guidance, evaluate, process, assign report number, submit and track all AFTO 22, *Deficiency Reports; JDRS and 00-35D-54* and suggestions affecting AFE in cooperation with the AFES/AFE COR. **(T-3)**

2.15.11. Develop and maintain applicable flight equipment IPI listings and accomplish annual review(s) with AFES/AFE COR to validate all TO steps are up to date and current. The IPI list must include nomenclature, specific TO, paragraph, and step number within the TO task where the IPI is required. When developing the IPI list, consult with AFES, Flight Chief, NCOICs, and QIs to identify trends or problem areas within the AFE section. Each IPI list must be forwarded to AFES/AFE COR for coordination/approval. **(T-2)**

2.15.12. Ensure IPIs are performed IAW para 6.1.4. **(T-2)**.

2.15.13. Perform and document random non-mission impact no-notice monthly QA inspections on at least one of the following major AFE programs on a rotational basis: Technician Training program IAW **chapter 4**, AFECT program IAW **chapter 5**, Quality Assurance program IAW **chapter 6**, Red X program (if applicable) IAW para 3.7, Supply Accounts IAW para 3.3, HAZCOM program IAW para 3.14, Composite Tool Kit (CTK)

program IAW para 3.8, Munitions program IAW para 3.12.2, PMEL/TMDE, TODA IAW para 3.9, Automated Data Systems (e.g. FERMS, DPAS, IMDS) IAW para 3.16 - 3.18, Resource Protection/Storage IAW para 3.11, AFE Facilities IAW para 3.10., Safety program IAW para 3.12, and Vehicle program IAW para 2.17.2. **Note:** This list is not all-inclusive, nor are the references all-inclusive, and may be expanded on by the MAJCOM and/or AFES/AFE COR/AFEO. **(T-2)**

2.15.14. Provide direct oversight of discrepancies identified during no-notice inspections of AFE programs, SAVs, UEIs, and unit SAs until corrective actions have been completed. Inspections will be documented in AFEQAP and maintained for two years to reflect the applicable program's status, discrepancies and corrective actions taken. AFES/AFE COR/AFEO will be immediately notified of any major discrepancies. **(T-2)**

2.15.15. Monitor Detected Safety Violations (DSV), Technical Data Violations (TDV), and Unsatisfactory Condition Reports (UCR). These categories represent observed events or conditions with safety implications or technical violations not related to an inspection or evaluation and are considered unsafe, not IAW established procedures, or in the case of equipment, unfit to operate. The AFEQAP database will be used to document any of these conditions. **(T-3)**

2.15.16. Attain 100% qualification on assigned flight equipment, as well as trained and certified using the AFE QA Certification Course PowerPoint® located on the HQ USAF/A3TF AFE SharePoint®. **(T-1)** In the event the NCOIC/ANCOIC AFE QA is not 100% qualified on all unit assigned flight equipment, they may appoint QA augmentees to assist with the AFE program inspections and PEs, until the NCOIC/ANCOIC AFE QA is 100% qualified. **(T-2)**

2.16. Lead AFECTI and AFELT.

2.16.1. The Lead AFECTI will serve as primary AFECTI conducting LL training events. **(T-3)**

2.16.1.1. Ensure AFES/AFE COR annually approved lesson plans are used for AFECT events. Provide SME input to development/review of lesson plans and Emergency Action Plans (EAP) to include the integration of newly fielded equipment and/or components. **(T-2)**

2.16.1.2. Conduct and manage AFECTI training and qualification as directed by the AFES/AFE COR. **(T-3)**

2.16.1.3. Manage AFECT equipment and training classroom/areas. **(T-2)**

2.16.1.4. Coordinate and validate EAP. **(T-3)**

2.16.2. The AFELT will serve as primary Technician Training program manager and lead trainer. **(T-2)**

2.16.2.1. Ensure all AFE technician training is conducted by qualified and appointed trainers. **(T-2)**

2.16.2.2. Ensure all AFE technician training is performed using the applicable TOs/COTS manuals, and all associated support equipment and tools. **(T-1)**

2.16.2.3. Ensure the status and progress of all AFE technician training is documented via TBA Journal Entries in the technician's Individual Training Plan (ITP). **(T-2)**

2.16.2.4. Implement and execute training IAW the Lead MAJCOM Master Training Plan (MTP) and Master Task Listing (MTL) requirements. **(T-2)**

2.16.2.5. Coordinate and/or perform TEs on assigned AFE technicians in training. **(T-2)**

2.16.2.6. Ensure AFE personnel complete training as defined in Table 4.1.

2.17. NCOIC, AFE Section/Satellite Shop will:

2.17.1. Monitor and manage daily operations pertaining to the section they are assigned, (e.g., daily workloads, flying schedule coverage, leave, and appointments). **(T-3)**

2.17.2. Ensure vehicles (full size preferred) are maintained and operated IAW AFI 24-302, *Vehicle Management*. **(T-3)**

2.17.3. Ensure AFE section access is restricted during flight equipment inspections to the maximum extent possible. This is to prevent tampering, damage, and/or contaminants getting on equipment. **(T-3)**

2.17.4. Ensure all personal electronic devices (e.g. cell phones, tablets, and MP3 devices) are kept in a central area or the administrative section within the AFE shop to prevent distractions while inspecting and maintaining flight equipment. **(T-3)**

2.17.5. Evaluate the extent of damage and wear to material and equipment IAW TOs and JTD to determine whether to repair or replace. **(T-2)**

2.17.6. Maintain accurate copies of AFTO Form 392, *Parachute Repack Inspection and Component Record*, for all versions of parachutes maintained. **Note**: Computer database equivalent (e.g. FERMS/DPAS) may be used in lieu of AFTO Form 392. **Exception**: ALC AFE related work-centers are not required to maintain records once equipment has been returned to the home unit. **Exception**: F-35 units are not required to maintain records at locations where parachute inspections and repacks are handled by Martin-Baker. **(T-1)**

2.18. Aircraft Commanders (AC) will:

2.18.1. Ensure all prepositioned flight equipment is serviceable, inventoried, and certified on the AFTO Form 46, *Prepositioned Aircrew Flight Equipment* (or computer generated equivalent), prior to local flights, prior to departing home station for TDY or deployment, or when the aircraft configuration changes or aircraft crew changes while TDY or deployed. Notify the AFE section of any onboard equipment shortages or unserviceable conditions. Note discrepancies on AFTO Form 781A, *Maintenance Discrepancy and Work Document*. **(T-2)**.

2.18.2. 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. **(T-2)**

2.18.3. Ensure any missing flight equipment and/or enroute configurations are annotated on AFTO Form/ 781A and AFTO Form 46 (or computer generated equivalent). Entries will include as much information as possible to assist AFE in locating and recovering missing flight equipment (e.g., 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*. **(T-2)**

2.18.4. Ensure all flight equipment, (e.g., survival kits, life preservers, anti-exposure suits, EPOS, parachutes, etc.), is returned to their proper storage locations. **(T-2)**

2.19. Aircrew Members will:

2.19.1. Obtain personal flying clothing (e.g., flight suits, jackets, boots, gloves, etc.) from assigned/attached squadron supply, or F-35 equipment, and maintain accountability and serviceability. **(T-2)**

2.19.1.1. Reference TO 14P3-1-112 and the AFE Human Performance and Protective Systems SharePoint®, **https://cs2.eis.af.mil/sites/21562/afe/default.aspx**, for authorized undergarment approval and wear of Nomex® flight gear. Do not use nylon/polyester or unauthorized undergarments in situations of increased risk of fire exposure (forward operations, flying, fuel handling, etc.). AFMCs Air Force Uniform Office at Wright Patterson AFB is the focal point for authorized undergarments. **(T-2)**

2.19.1.2. Ensure Nomex® flight gear is worn IAW TO 14P3-1-112 and the Aircrew Flight Equipment Training (LL06) AF Master Lesson Plan (AFMLP) when performing flight operations. Failure to adhere to this guidance may result in serious injury. **Note:** F-35 units will use F-35 program guidance. **(T-1)**

2.19.2. Ensure flight equipment is made available to AFE technicians for required inspection, maintenance, and fit. **(T-2)**

2.19.3. Notify AFE technicians prior to going TDY with flight equipment, to ensure flight equipment inspections are current through projected return date.

2.19.4. Ensure only flying helmets, oxygen masks, and padded NVG cases are carried in the main compartment of the helmet bag to and from the AFE facility. Carry the headset in the helmet bag outer pocket. F-35 aircrew will use F-35 program guidance. **(T-2)**.

2.19.5. Ensure items such as food, bug spray, batteries, petroleum-based products, or other items that may cause contamination to oxygen equipment, are not in helmet bags or equipment lockers. Items of this nature are not authorized and will be removed/discarded when discovered. **(T-2)**

2.19.6. Possess all required ACBRN items prior to deploying to a chemical threat area or serving on conventional warfare alert as required by reporting instructions. Ensure ACBRN has been fit and issued prior to deployment. D-1 ACBRN bags will not be palletized or floor loaded unless placed in a durable nesting box or hard protective case to prevent damage. **(T-2)**

2.19.7. Maintain responsibility of all flight equipment (e.g. NVGs, ACDE, Helmet Mounted Display) when issued on an AF 1297, *Temporary Issue Receipt*, and ensure flight equipment is returned to the AFE section upon completion of training, alert tour, deployment or TDY. **(T-2)**

2.19.8. Hand-carry fragile personal flight equipment (e.g. helmet, NVDs, radio) unless packed in a hard protective case while traveling on any commercial flight. **(T-2)**

2.19.9. Perform preflight inspections on all assigned or prepositioned flight equipment as required by appropriate aircraft manuals, TOs, JTD, local policies, and HHQ's directives. Operational checks using in-shop equipment will be accomplished on personal flight equipment prior to flight (e.g. Oxygen equipment, communications devices and NVDs). **(T-2)**

2.19.10. Ensure all issued flight equipment fits properly. Promptly notify AFE technicians of fluctuations in weight or any other circumstances that would affect fit of equipment. This is to validate equipment fits IAW TO guidance, and includes but is not limited to; weight gain/loss, aging/use/stretching of material, and bulkiness or lack of hair.

2.19.11. Ensure flight equipment is sanitized when mission dictates. **(T-2)**

2.19.12. Do not perform any modifications or use any unauthorized equipment without prior coordination through MAJCOM/FOA channels. **(T-2)**

2.20. Support Agencies:

2.20.1. Egress Elements are responsible for removal, installation, and tracking of integrated parachutes, survival kits and oxygen connectors (while aircraft installed) as listed in applicable Job Guides. **Exception**: AF Global Strike Command AFE will install B-52H aircraft flight equipment. **(T-2)**

2.20.1.1. Egress technicians will locate inadvertent beacon activation on the flightline. Egress responsibilities are further defined in AFI 21-101. **Note:** AFE technicians will locate inadvertent beacon activations within their shops/vehicles and on a flightline where Egress technicians are not assigned. **(T-2)**

2.20.2. Optometry Clinic: Provides optometry support for ACBRN eyepieces, contact lenses, interpupillary distance measurements, screening of users for ALEP, High Contrast Visors (HCV), and Night Vision Devices (NVD).

2.20.2.1. Perform annual eye exams on maintainers of NVDs and provide documented proof of the annual eye exam. Technicians must have 20/20 (correctable) vision to perform NVD maintenance IAW TO 12S10-2AVS9-2, *Maintenance Manual, Intermediate with Illustrated Parts Breakdown, Image Intensifier Set, Night Vision, Type AN/AVS-9 (V)*. **(T-2)**.

2.20.2.2. Modifies aircrew spectacle temple bars used with the MBU-13/P mask. **(T-2)**

2.20.3. Flight Medicine: Conducts annual visits to AFE sections to ensure compliance with TO 15X-1-1, *Maintenance Instructions, Oxygen Equipment* standards. MAJCOM/FOAs will determine visit frequency for geographically separated units. The flight surgeon inspects AFE sections for compliance with occupational health and safety standards and assists in resolving mask-fitting problems. Maintain completed checklists and documentation for one year. **(T-2)**

2.20.3.1. Provide units a listing of pilots/aircrew members not approved to use HCVs, ALEP, and NVDs. **(T-2)**

2.20.3.2. Creates aircrew ear impressions and performs initial fit/comfort testing for aircrew communication systems. **(T-2)**

2.20.4. Medical Supply/ Equivalent Agency: Inspects and maintains first aid kits IAW applicable directives and replaces unserviceable components as necessary. Medical supply

may be used as a POC for procuring first aid kits, isopropyl alcohol, gauze pads, and other medical supplies used for cleaning and maintaining flight equipment. **(T-3)**

2.20.5. Bioenvironmental Engineering: Conducts occupational health surveillance IAW AFI 48-145, *Occupational Health Program*. Determines adequacy of controls established for occupational health hazards. **Note**: As outlined in AFI 48-145, these requirements do not include employees working under government contracts. **(T-3)**

2.20.6. Avionics: Routes all Helmet Mounted Cueing System (HMCS) related flight equipment issues and coordinates inspection of HMCS helmets used for aircraft maintenance through the AFES/AFE COR/AFEO for resolution. **(T-2)**

2.20.6.1. Conducts solder repairs for flight equipment as required. e.g.: NVG, DU… **(T-2)**

2.20.7. Maintenance Elements: Responsible for the removal and installation of escape slides, wing-well and over-wing life rafts, 25-man life rafts, and 46-man life rafts (to include the Age Limited Kits). **Exception**: AFE is responsible for removal and installation on KC-135 only. AFE will only remove and install for periodic inspection of escape slides. Aircraft Electrical Environmental System Specialists (2A6X6), or qualified contractors, are responsible for servicing, inspecting, recharging, testing, and overhaul of inflation cylinders. **(T-1)**

2.20.8. Air Force Safety Center (AFSC): Provides AFE experience data through the Life Sciences Division of the Directorate of Aerospace Safety. Information derived from USAF aircraft mishaps is collected, evaluated, stored, and distributed as required to AFE programs. AFSC may also recommend specific programs to correct flight equipment system deficiencies. All requests for mishap related information will be processed through local safety channels to HQ AFMC/SE who will request the information from HQ AFSC to ensure the release of requested information complies with the requirements of AFI 91-204. This can be accomplished by telecom or e-mail. **(T-2)**

2.20.9. Physiology: Provides technical expertise and training regarding the Reduced Oxygen Breathing Device (ROBD), and provides operational and medical support in the event that physiological events occur. **(T-2)**

2.20.10. Wing Safety (or equivalent): IAW AFI 91-202, *The USAF Mishap Prevention Program,* manages and has available all mishap investigation kits/items. **(T-2)**

Chapter 3

AFE PROGRAM MANAGEMENT

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

3.2. Budgeting.

3.2.1. Each AFE section will prepare and submit an annual budget and/or financial plan to their unit CC. **(T-2)**

3.2.1.1. Each AFES/AFE COR should closely coordinate with their wing/group Resource Advisor and Financial Management offices to ensure AFE requirements are identified during various budget cycles. **(T-2)**

3.3. Supply Accounts.

3.3.1. The OSS AFE section will establish its own supply account(s) IAW AFI 23-101, *Air Force Materiel Management*/AFMAN 23-122, *Materiel Management Procedures*. **(T-2)**

3.3.2. Ensure adequate number of equipment custodians are properly trained and appointed IAW AFI 23-101 and AFMAN 23-122 for both home station and deployed operations. **(T-3)**

3.3.3. Develop procedures to track supply, equipment and non-uniform item expenditures to provide quantitative requirements to the unit CC and resource manager to assist in and justify budgeting and funding requirements. **(T-3)**

3.3.4. Equipment Custodians will thoroughly review and accurately answer configuration data set questions provided by EAE annually as a minimum. AFES/AFE COR/AFEO will validate all data sets and return signed data set(s) to EAE by their suspense date. **(T-2)**

3.3.4.1. Based on configuration data, each equipment custodian and NCOIC will provide an equipment assessment of AFE requirements by detail number, noun, NSN, authorizing AS, number authorized, number on-hand, and Basis of Issue (BOI). Coordinate assessments with AFES/AFE COR/AFEO through the SQ/CC responsible for the account. AFES/AFE COR/AFEO will validate the assessment and direct adjustments, as required. This process will keep equipment authorizations to minimum (authorized) levels to meet mission requirements. **(T-2)**

3.3.5. Ensure applicable Force Activity Designators (FAD) code is used when requisitioning flight equipment. 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). Use advice code "2G" to ensure assets received from depot have the most service-life remaining on item. F-35 units will order items IAW program directives. **(T-2)**

3.3.6. Report time-change component requirements IAW TO 00-20-9 and HHQs directives. AFRC associate units will provide information copies to their respective AFRC/A3RF. **(T-2)**

3.3.6.1. Ensure munitions account custodian submits their munitions forecast annually, using the Forecast and Allocation Module (FAM) of the Agile Munitions Support Tool located at 784th Combat Sustainment Group website **https://www.my.af.mil/ammoprod/wm/**. If required, coordinate supplemental and out-

of-cycle munitions changes, to the initial forecast, through the base MASO using the FAM. **(T-2)**

3.3.7. Units will annually review appropriate AS to ensure current authorizations for unit-specific mission requirements IAW AFI 23-101 paragraph 5.4.4. Equipment in excess of AS is not authorized. **(T-2)**

3.3.7.1. Use AS 016, AS 450, AS 538, AS 660, aircraft configuration instructions, mission requirements, LOGDET, AFEMS, MAJCOM/FOA specific guidance and this instruction to determine the basis of equipment required. **(T-2)**

3.3.8. AFE supply account representative(s) should monitor status of backorder requisitions and contact local Customer Support Liaison Element (LGRMCC) for items that have not been received within 180 days. Provide LGRMCC with mission impact statement(s), as needed, in support of LGRMCC forwarding supply assistance request(s) to AFMC. Provide information copies of supply difficulty and mission impact statement submissions and any supply status updates or responses to the AFES/AFE COR and NCOIC AFE QA. Contract AFE units will forward a copy to their local quality assurance office. **(T-3)**

3.3.8.1. Supply difficulty and mission impact letters are not required for Custodian Authorization Custody Receipt Listing (CA/CRL) items. **(T-3)**

3.3.9. Units will standardize supply account naming conventions by utilizing the following shop codes: FE (Flight Equipment) for O&M SBSS accounts; FH (Fly Hour) for CPFH accounts; AC (Aircrew Chemical) for ACBRN accounts. Units will work supply account name changes through their local customer support section. **(T-2)**

3.3.10. Spare Equipment. Spare equipment is often required for maintenance and turn-around time for AFE. Spare equipment, to include EAID reportable (e.g. CA/CRL items), and non-accountable (e.g. expendable items), are authorized as follows **(T-2)**:

3.3.10.1. Spare Set Authorization. Equipment set quantity, per set, is determined by specific AFI 11-2MDS Vol 3, Addenda or AFI 11-301 Vol 2. AFE may possess and maintain one spare set of equipment (e.g. survival vests, life rafts, etc.) per 10 aircraft possessed (Total Aircraft Inventory), with a minimum of one spare set for units with less than 10 aircraft possessed. Units may adjust their total spare set quantity downward to best suit unit needs or if other MAJCOM/FOA guidance exists, (i.e. C-17A raft spare sets are determined by HQ AMC and Special Purpose Recoverables Authorized Maintenance [SPRAM] account authorizations).

3.3.10.1.1. If EAID reportable items are contained within the set, use the higher-level assembly AS configuration code/configuration description and BOI to determine authorizations (e.g. radios installed in survival vests, life raft containers, etc.). **(T-2)**

3.3.10.1.2. Any EAID reportable items contained within spare sets will be considered Use Code B, base support, under AS450AOOB (CAF), AS450EOOB (MAF) and AS660NKAV. **(T-2)**

3.3.10.2. Additional 10 Percent Spares Authorization. Some items may require an additional 10 percent spares authorization due to the nature of the equipment maintenance concept, depot level repair, or individual issued items (e.g. radio sets, ACBRN items, etc.). In cases where equipment is built in sets, the additional 10 percent authorization is in

addition to the spare sets. Example: An unserviceable radio is removed from a survival vest. It has to be sent to Depot for repair but the survival vest needs immediate radio replacement to remain serviceable. The stand-alone 10 percent radio authorization in this example enables immediate replacement/serviceability. **(T-2)**

3.3.10.2.1. When authorized, the additional 10 percent authorization is calculated against the total BOI calculation. When figuring the additional 10 percent authorization for items contained in sets, add the BOI authorization, plus spare set authorization(s), and then calculate the 10 percent authorization. **(T-2)**

3.3.10.2.2. For EAID reportable items, the additional 10 percent authorization may only be cited if the AS (e.g. AS450*, AS660NK*) provides the specific configuration code for maintenance and inspection for the NSN being calculated. The AS450 and AS660 configuration codes for the additional 10 percent authorization will be unique for each affected NSN. **(T-2)**

3.3.10.3. Mobility Equipment. Mobility equipment, EAID reportable and non-accountable, is authorized and calculated by specified UTC and NSN (or stock class), as determined by UTC pilot and non-pilot units, with coordination of the responsible MAJCOM/FOA IAW AFI 10-401.

3.3.10.3.1. EAID reportable items for mobility are considered Use Code A, Mobility, and must be on hand or on requisition. Units will cite the appropriate configuration code and configuration description in the mobility sections of AS (e.g. AS450AOOA [CAF], AS450EOOA [MAF], AS660NKAU). Mobility equipment does not count against or as additional 10 percent authorization. **(T-2)**

3.3.10.3.2. An additional 10 percent spares is not authorized for mobility equipment. UTC pilot and non-pilot units, with coordination of the responsible MAJCOM/FOA, determine the specific BOI quantities required for mobility by specific UTC and NSN. **(T-2)**

3.3.10.3.3. UTC pilot units will ensure EAID reportable NSN authorizations as stated in the AS match the UTC LOGDET data. Since LOGDET data is by NSN, items like radios may or may not match the quantities of survival vests and rafts contained in the UTC LOGDET. **(T-2)**

3.3.10.3.4. If EAID reportable equipment BOI authorizations has stated the AS are deemed incorrect when comparing the UTC LOGDET data, the UTC pilot unit will coordinate with the responsible MAJCOM/FOA to request guidance on changing or correcting the AS in AFEMS. **(T-2)**

3.3.11. Classic associate and active associate TFIA AFE sections will use the following business rules for managing equipment EAID reportable equipment **(T-2)**

3.3.11.1. The host AFE (i.e. the unit that owns the aircraft) will manage and account for all EAID reportable items with the exception of EAID reportable ACBRN D-Bag items.

3.3.11.2. The host unit and associate AFE will maintain EAID reportable ACBRN D-Bag items on separate CA/CRLs. **(T-2)**

3.3.12. Aircraft installed EAID reportable equipment.

3.3.12.1. Due to the nature of the way large frame aircraft (LFA) deploy and or transition through areas of responsibility, aircraft installed flight equipment, to include EAID reportable equipment, will not be put into deployed or transferred status. **(T-2)**

3.3.12.2. Accountability of aircraft installed EAID reportable equipment is actively managed and properly documented using the AFTO Form 46. **(T-2)**

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

3.4.1. Aircraft and aircrew (other than uniforms and personal items) flight equipment components either on or off aircraft, to include prepositioned, used solely for flying operations are included as part of the CPFH program. To purchase these items, use EEIC 644 for Materiel Support Division (MSD) items, EEIC 605 for General Support Division (GSD) items, and EEIC 61952 for Government Purchase Card (GPC) items. Units should use the most recent FY standardized CPFH RC/CC and PFMR/ORG codes applicable to their unit. Centrally managed and accountable support equipment items are not funded through the CPFH program. **(T-0) Note**: Flight Test Squadrons (Depot Support) utilize CSAG funding. **(T-1)**

3.4.2. AFE and A4 AFCAIG/CPFH managers will identify and define, (by decision-tree method), total APP AFCAIG/CPFH requirements for each MDS aircraft configuration. Items not passing the decision-tree method for AFCAIG/CPFH AFE funding will be considered non-fly items. **(T-1)**

3.5. Equipment Redistribution.

3.5.1. In the event AFE becomes excess to organizational needs, the AFES/AFE COR will notify respective MAJCOM/FOA for possible redistribution prior to turn-in. **(T-2)**

3.5.2. Once notification is made, disposition instructions (redistribution, turn-in, etc.) will be provided to the unit within 30 calendar days. AFES/AFE COR will notify their MAJCOM/FOA when they have unserviceable flight equipment, which can be used as training equipment. **(T-2)**

3.6. Transfer of Flight Equipment.

3.6.1. During aircraft transfers or movement of flight equipment, 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*, and TO 00-20-1, *Aerospace Equipment Maintenance General Policies and Procedures*. **(T-2)**

3.6.2. AFE units will ensure maximum inspection serviceability on all flight equipment accompanying aircraft to depot. Units will also send a copy of flight equipment records with the aircraft to include IPI sheets, as required. **Exception:** 46-man life raft (C-17) will remain on its current inspection cycle. **(T-2)**

3.7. Red-X Certification.

3.7.1. At a minimum AFE technicians certified to clear "Red-X" discrepancies will be identified on an appointment letter signed by the OG/CC or on a Special Certification Roster (SCR) if SCR is locally approved by OG/CC. **(T-2)**

3.7.2. AFE "Red-X" certified technicians will be a 1P071 (or equivalent). The first O-6 in the chain of command may waive the 7-level requirement down to the minimum rank of SrA

(civilian or contractor equivalent) to clear "Red-X" discrepancies based on their experience and technical expertise; such a waiver will terminate once a sufficient quantity of 7-levels (civilian/contractor equivalents) are available. **(T-2)**

3.7.3. If Red X certification is required due to MDS or mission requirements, the AFES/AFE COR and NCOIC AFE QA will develop a one-page checklist denoting the minimum areas to be evaluated for Red X certification. **Note:** May coordinate with Maintenance QA or utilize their checklist as long as the minimum areas are included.

3.7.3.1. The minimum areas to be evaluated include: checking for currency of cockpit familiarization/egress training, completion of maintenance forms documentation training, completion of CTK inventories prior to departing the shop, vehicle preparation and configuration, removal of jewelry, review of aircraft forms, ensure aircraft is safe for maintenance, accomplishment of applicable equipment pre-installation inspection(s), use of safety devices, familiarity with job guide checklists, effective use of voice command and response, verification procedures, Foreign Object Damage (FOD) checks, aircraft forms documentation, and accomplishment of CTK inventories after job completion IAW AFI 21-101 and MAJCOM Supplement to AFI 21-101. **(T-3)**

3.7.3.2. Based on MDS or mission requirements, the AFES/AFE COR and NCOIC AFE QA will train NCOICs on the use of this checklist during the NCOIC's initial training and qualification. NCOICs will train technicians on checklist requirements. **(T-2)**

3.8. Composite Tool Kit Program.

3.8.1. The objective of the CTK program is to prevent and eliminate FOD to aircraft, engines, missiles, training and support equipment, and to reduce tool replacement cost through effective control of assets.

3.8.2. AFES/AFE COR/AFEO will establish a CTK Program IAW AFI 21-101, **Chapter 8**, to include MAJCOM/FOA, and wing/unit policy directives. **(T-1)**

3.8.2.1. AFES/AFE COR/AFEO will ensure CTK program includes specific lost tool procedures (i.e. who to contact when a tool is lost, and what actions to take), in order to control and account for tools used in each AFE section. **(T-1)**

3.8.3. AFE sections are authorized to manually track their CTKs and are not required to use TAS/FEMS/TcMax for accountability and control of tools and equipment. **(T-1)**

3.8.4. Tool Accountability. AFES/AFE COR/AFEO, through CTK custodians, is responsible for tool and equipment accountability and control (i.e. knowing where all tools are and who has responsibility for them). **(T-1)**

3.8.5. AFES/AFE COR/AFEO will ensure when technicians sign out a CTK, individual tool, or piece of equipment, they are effectively responsible and accountable for the item/s until it is returned to its proper location and signed back in, at which point accountability transfers back to the CTK custodian. **(T-1)**

3.8.6. AFE units performing any aircraft/flightline maintenance with tools (to include red-ball maintenance), will develop a dispatchable flightline CTK IAW AFI 21-101. **(T-1)**

3.8.7. GA/ST units utilizing personal rigger CTKs will maintain these CTKs IAW this instruction and AFI 21-101. **(T-2)**

3.8.8. Units will develop local procedures to track all oxygen connectors (e.g. CRU-60 and CRU-94) dispatched to and from the flightline. **Note:** Egress personnel are responsible for documenting location of connector local IDs installed on ejection seat aircraft. **(T-2)**

3.9. Technical Orders (TO), Publications, Operating Instructions (OI) and Product Quality Deficiency Reports (PQDR).

3.9.1. A recommended TO and publications list (see Attachment 1) 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.

3.9.1.1. AFE sections will maintain specific electronic TOs unless required TOs are not managed electronically for items serviced by the unit. TOs will be filed and maintained IAW TO 00-5-1, TO 00-5-3, AFI 63-101_20-101 and managed through ETOOL IAW 31S5-4-ETOOL-1. **(T-1)**

3.9.1.1.1. Refer to TO 00-5-1 for use of manufacturer's manuals in support of approved COTS/NDI equipment. **(T-1)**

3.9.1.1.2. Duties that require printing of TOs or portions of TOs must comply with TO 00-5-1. **(T-1)**

3.9.1.1.3. Locally prepared checklists and guides developed from TOs must comply with TO 00-5-1. **(T-1)**

3.9.1.2. MAJCOM/FOA and units will determine when TO options are mandatory within their respective MAJCOMs or units, and publish a TO Options List IAW paragraph 2.13.8.2. **(T-2)**

3.9.1.2.1. MAJCOM TO Options Lists are posted on the respective MAJCOM SharePoint®. **(T-2)**

3.9.1.2.2. ANG units will utilize their gaining MAJCOM TO Options List IAW paragraph 2.13.8.2. **(T-2)**

3.9.1.3. As the unit's TODO and AFE PIM, the NCOIC AFE QA/COR is responsible for reviewing and processing wing-initiated AFTO 22s and DR affecting flight equipment. QA/COR personnel will establish procedures within the group to assign improvement report numbers to AFTO 22, as prescribed in TO 00-5-1. Units may use the supporting wing/base TODO. Ensure AFES/AFE COR is informed on all AFTO 22's and DR's prior to submittal. **(T-2)**

3.9.2. Policy, procedures, and responsibilities for PQDR submission and exhibit handling and processing are outlined in TO 00-35D-54. **(T-1)**

3.9.3. Units will comply with AFI 33-360 when developing unit OIs, or local directives. To ensure continuity throughout the unit, the AFES/AFE COR will address procedures including but not limited to; response to emergency action (recall), radio operation, vehicle control and use, fire protection, explosive and ground safety, security standards and practices, work-center schedules and processes, and TO familiarization. Unit OIs will be annually reviewed by the AFES/AFE COR/AFEO, and forwarded to the applicable CC for final approval. **(T-2)**

3.9.3.1. OIs affecting only OSS shop operations will be signed by the OSS/CC. OIs providing direction to aircrews/AFE operations from multiple supported units will be signed by the OG/CC. **(T-3)**

3.9.3.2. At a minimum, interaction and procedures involving organizations outside of AFE functions (maintenance, medical, safety, operations, etc.) will be defined in a local MOA's or Memorandum of Understanding (MOU). MOA/MOUs must be reviewed annually. **Note:** AFRC informational copies of MOAs will be forwarded to HQ AFRC/A3RF for awareness. **(T-2)**

3.10. AFE Facilities.

3.10.1. Facilities will be maintained IAW applicable (AFOSH) standards, TO 15X-1-1, 12S10-2AVS9-2, and 14D3-11-1, *Operation, Inspection, Maintenance, and Packing Instructions for Emergency Personnel Recovery Parachute (Chest, Back, Seat Style, and Torso Harness)* standards. The sensitivity of flight equipment requires environmental and climatic controls. Refer to AFI 32-1024 and AFMAN 32-1084, 14S and 14D series TOs for guidance on spatial and environmental requirements. ANG units utilize ANGH 32-1084 in lieu of AFMAN 32-1084. AFRC units will also consult AFRCH 32-1001 **(T-1)**

3.10.2. Store items neatly and separately to prevent co-mingling of serviceable, repairable, and unserviceable items. Provisions will be made to protect shelf stock components from dust, impurities, and direct sunlight. Maintain in original packaging or plastic bags when able. **(T-2)**

3.10.2.1. All equipment/shop stock items/supplies will be considered serviceable unless otherwise marked with repairable and unserviceable condition tags. Repairable and unserviceable items will be properly tagged and stored neatly and separately to prevent comingling and accidental use. **(T-2)**

3.10.3. 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. **(T-2)**

3.11. Resource Protection/Storage.

3.11.1. Installation CC's designate controlled areas and storage facilities IAW AFI 31-101, *Integrated Defense (FOUO).* AFE will assist with the CC's resource protection program if applicable IAW AFI 31-101. **(T-3)**

3.11.1.1. AFE maintains and stores mission essential equipment that is by nature valuable and desirable. AFES/AFE COR/AFEO will ensure the AFE sections are designated as limited access areas to prevent unauthorized entry, and to safeguard flight equipment. AFES/AFE COR/AFEO will use discretion when allowing visitors to gather in AFE sections, and ensure visitors are escorted at all times. **(T-3)**

3.11.2. Maintain munitions storage facilities within AFE sections IAW **chapter 3**.13. of this instruction, DOD 5100.76-M, *Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives*, AFI 31-101 and AFMAN 91-201, *Explosives Safety Standards.* **(T-1)**

3.11.3. AFE sections storing firearms will ensure facilities are maintained IAW AFI 31-101. **(T-1)**

3.12. Safety.

3.12.1. Administer Mishap Prevention and Risk Management programs tailored to the needs of AFE technicians. Refer to AFI 91-202 and AFI 90-802 *Risk Management*. **(T-1)**

3.12.2. Contact local wing or group safety staff, bioenvironmental engineering services, and FD to ensure section hazards are identified and corrective actions are addressed. **(T-2)**

3.12.3. Maintain an AF IMT 55, *Employee Safety and Health Record,* for all assigned technicians IAW AFI 91-202 and local wing safety standards. **(T-2)**

3.12.4. Units will establish and develop an explosive and munitions storage safety program IAW AFMAN 91-201, AFI 91-202, and local wing safety requirements. **(T-2)**

3.12.5. AFE sections will not store non-flight equipment munitions items. Non-flight equipment munitions are those items not inspected and not physically placed into and removed from service by AFE technicians. **(T-2)**

3.12.6. Technicians will follow universal precautions, including the use of impermeable gloves when contact with body fluids (e.g. saliva) is likely, IAW AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, AFI 91-202, and AFI 48-101, *Aerospace Medical Enterprise*. **(T-1)**

3.12.6.1. AFE technicians will wear impermeable gloves as specified by Bioenvironmental Engineering Flight when performing post flight and periodic oxygen mask inspections. This requirement applies to in shop and on aircraft inspections. A replacement supply of gloves must be included in the flightline CTK or consumables kit, as required. **(T-2)**

3.13. Hazardous Communications (HAZCOM) Program.

3.13.1. Each AFE section will ensure hazards in the work environment are identified to Military Public Health (MPH) for resolution. **(T-3)**

3.13.2. Document the training provided, and abatement equipment for each individual exposed to shop hazards on the individual's AF IMT 55. **(T-2)**

3.13.3. Units will coordinate with the responsible agencies to perform annual review of Safety Data Sheet (SDS) for currency and document appropriately. **(T-3)**

3.14. Aircrew Small Arms Program.

3.14.1. Small Arms/Light Weapons (SA/LW) used by aircrew (regardless of purpose e.g. anti-hijacking/self-defense etc.) are managed IAW AFMAN 23-122. **(T-1)**

3.14.2. AFE's role at home-station or deployed will be restricted to the installation and removal of approved Aircrew Self-Defense Weapon in approved aircraft survival kits. **(T-1)**

3.15. Outstanding AFE Awards Program.

3.15.1. The purpose of the Outstanding AFE Awards Program is to acknowledge AF military and civilian individuals and units for outstanding performance in duty, exceptional contributions to AFE operations and management, and enhancements to AFE readiness. It establishes the criteria and procedures for submitting nominations for the following categories, and applies to all AF AFE (1P0X1) technicians. **(T-2)**

3.15.1.1. Outstanding USAF AFE Headquarters Staff Member of the Year.

3.15.1.2. Outstanding USAF AFEO of the Year.

3.15.1.3. Outstanding USAF AFE SNCO of the Year.

3.15.1.4. Outstanding USAF AFE NCO of the Year.

3.15.1.5. Outstanding USAF AFE Airman of the Year.

3.15.1.6. Outstanding USAF AFE Civilian of the Year Award (Category I).

3.15.1.7. Outstanding USAF AFE Civilian of the Year Award (Category II).

3.15.1.8. Outstanding USAF AFE Large Program of the Year.

3.15.1.9. Outstanding USAF AFE Small Program of the Year.

3.15.1.10. Outstanding USAF ARC AFE SNCO of the Year.

3.15.1.11. Outstanding USAF ARC AFE NCO of the Year.

3.15.1.12. Outstanding USAF ARC AFE Airman of the Year awards.

3.15.2. The Outstanding AFE Awards Program is administered by HQ USAF/A3TF, and HAF TFAM Integration Division will approve and announce final selection of award winners. **(T-1)**

3.15.3. Units submit nominations via electronic mail to respective MAJCOMs/FOA as outlined in AFI 36-2807, NLT suspense dates set by each MAJCOM/FOA. **(T-2)**

3.15.4. Once RegAF MAJCOM and ARC winners have been selected, nominees for the HAF level awards will follow the same procedures as stated in the above paragraph, by submitting nominees to HQ USAF/A3TF. **(T-1)**

3.16. Flight Equipment Records Management System (FERMS).

3.16.1. FERMS is an AFE specific data collection/tracking system available and approved for use by AFE technicians.

3.16.2. Units will use FERMS to best suit their needs. **(T-2)**

3.16.3. Units tracking equipment with the FERMS program are not required to duplicate the data maintained in the computer on status boards, shop inspection cards, or forms.

3.16.4. AFES/AFE COR will standardize equipment tracking methods within their respective groups. **(T-2)**

3.16.5. Ensure a back-up process is maintained to prevent loss of data. **(T-2)**

3.17. Defense Property Accountability System

3.17.1. DPAS is a DoD property management system. It is the Accountable Property System of Record (APSR) for over 33 DoD Agencies and Military Services.

3.17.2. DPAS contains four modules, Property Accountability, Supply Store, Maintenance & Utilization and Warehouse.

3.17.3. This program is administered by the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (OUSD AT&L).

3.17.4. Units will use DPAS to track ACBRN and flight equipment IAW HHQ guidance. **(T-1) Exception:** F-35 units are authorized to use Autonomic Logistics Information System (ALIS) to track F-35 related AFE.

3.17.5. Units tracking equipment in DPAS are not required to duplicate that specific data within another system (e.g. status boards, FERMS).

3.17.6. AFES/AFE COR will standardize equipment tracking methods within their respective groups. **(T-1)**

3.18. Integrated Maintenance Data System (IMDS)/G081.

3.18.1. If deemed necessary by MXG/CC and OG/CC, AFE functions supporting MAF aircraft will sign off required tasks in G081 and the aircraft forms IAW TO 00-20-1. If required locally, contact the unit G081 manager to obtain G081 access. ARC AFE sections will abide by local agreements between MXG/CC and OG/CC. **(T-2)**

3.19. Premeditated Jump, Jump Support Operations and Requirements.

3.19.1. AFI 11-410 is the authority guidance for premeditated jump operations. AFE will not support any AFSC with jump programs without properly established guidance and coordination with MAJCOM/FOA Staff and MAJCOM/FOA A1M. J-prefix billets must be validated annually through the MAJCOM/FOA to AF/A3O-AS. **(T-2)**

3.19.2. AFE technicians assigned as malfunction officers must be qualified IAW AF Joint instruction (AFJ) 13-210(I) *Joint Airdrop Inspection Records, Malfunction/Incident Investigations, and Activity Reporting*. When qualified and performing malfunction officer duties, follow the guidance in AFI 11-410 and AFJ 13-210(I). **Note:** ARC AFE technicians are not authorized to perform these duties. **(T-2)**

3.19.3. If AFE technicians are assigned Drop Zone Controller (DZC) and Drop Zone Safety Office (DZSO) duties they must follow guidance in AFI 13-217. **Note:** ARC AFE technicians are not authorized to perform these duties. **(T-2)**

3.19.4. AFE sections directed to support jump repack support operations (e.g. SERE, Physiological personnel) that do not have funded positions to perform such operations will notify their MAJCOM immediately. **(T-2)**

3.20. Post Misfortunate Happenstance (MISHAP) procedures.

3.20.1. Flight equipment used in any aircraft ejection will not be reused. **(T-1)**

3.20.2. Flight equipment subjected to a Class A incident not involving an ejection, will be immediately segregated. Equipment may be reused after all investigations have been completed, released by the Safety Investigation Board and/or the Accident Investigation Board president and a thorough inspection IAW TOs to verify serviceability. **(T-1)**

3.21. Physiological Events. Physiological incidents and reporting procedures are governed under AFMAN 91-223, *Aviation Safety Investigations and Reports*.

3.21.1. AFE technicians will use the AFE Physiological Incident Response Checklist, located on the HQ USAF/A3TF SharePoint®. Attach all affected flight equipment database records (e.g. FERMS, IMDS, and DPAS) to the checklist and submit them to the Investigating Officer, Flight Surgeon or Aerospace Physiologist. **(T-1)** Units will maintain a copy of these

documents for 12 months and will notify the owning MAJCOM AFE Staff of the incident and provide a current update/status. **(T-2)**

Chapter 4

TECHNICIAN TRAINING

4.1. Purpose.

4.1.1. The purpose of this chapter is to provide guidance for managing the AFE Technician Training program (AFETT). The AFETT program must ensure AFE technicians (military and civilian), are properly trained to become task qualified on assigned tasks determined by the AFES/AFE COR. The documentation of training is paramount to a successful training program.

4.1.2. The AFETT program is the cornerstone of an overall effective AFE program. The establishment of an effective AFETT program is critical to the maintenance and sustainability of flight equipment and to the safety and health of aircrew. **(T-2)**

4.1.3. AFETT is an instructional process that leads to task qualification through initial qualification, continuation, or upgrade training, and is conducted IAW AFI 36-2201, 1P0X1 CFETP, and Table 4.1 of this instruction. **(T-1)**

4.1.4. TBA is the automated program used for the management and documentation of individual AFETT records. TBA refers to the individual AFETT records as an ITP.

4.1.5. Attached Resource Computer Network (ARCNet) is a fully accredited DoD information technology system. Individual Readiness Reports display medical, fitness, security clearance, AFSC training readiness information, and performance appraisal information.

4.1.6. ALC AFE related technicians will track appropriate training and task qualification using Part II of CFETP 1P0X1 or civilian Training Scheduling System (TSS-PAC) program parts II and III. **(T-2)**

4.2. Training Responsibilities.

4.2.1. **AFES/AFE COR/AFEO will:**

4.2.1.1. Follow local procedures for documenting training. Contact UTM for specific wing, group, and squadron guidance. Ensure training program is managed IAW AFI 36-2201. **(T-2)**

4.2.1.2. Use the following guidance as a baseline tool to develop and manage the local AFETT program. **Note**: If the AFES is a Traditional Reservist/Guardsman, some responsibilities may be delegated to a full time 1P0X1 civil service Technician/AGR NCOIC. **(T-1)**

4.2.1.3. Develop a MTP IAW AFI 36-2201 and with assistance from the UTM to ensure 100 percent task coverage. At a minimum, the MTP will include: **(T-2)**

4.2.1.3.1. MTL, using the current 1P0X1 CFETP tailored in TBA, to include 1P0X1 core tasks, duty tasks, and MDS specific tasks. **(T-2)**

4.2.1.3.2. Milestones for completion of required tasks, Career Development Course (CDC) completion, and skill level upgrade. **(T-2)**

4.2.1.3.3. Locally developed or electronic equivalent AF Form 797, *Job Qualification Standard (JQS) Continuation Sheet* (if applicable). **(T-2)**

4.2.1.4. Ensure all deployable AFE technicians are qualified to support applicable UTC requirements. In commands without a primary warfighting mission (e.g. AFMC, AETC) that have AFE technicians postured against 9AL series UTCs, ensure these deployable AFE technicians are task qualified on Aircrew Contamination Control Area (ACCA) operations and are familiar with deployment requirements. **(T-2)**

4.2.1.5. Develop a rotation plan to ensure personnel are trained and remain proficient in assigned AFE sections. The AFES/AFE COR/AFEO may extend key personnel in mission critical areas based on mission requirements, manning and skillsets available. **Note***:* Contracted AFE and technicians contracted to work in parachute shops are exempt from being rotated in other AFE sections. **(T-2)**

4.2.1.6. Follow local procedures for Red X certifications. Review and be familiar with TO 00-20-1. **(T-2)**

4.2.1.7. Develop a standardized program to track formal training to include ECI/CDC participation. Contact UTM for specific guidance. **(T-2)**

4.2.2. **Flight Chief/NCOICs, (or civil service or contractor equivalent) will:**

4.2.2.1. Follow guidance IAW AFI 36-2201, CFETP 1P0X1, and policy defined by the UTM, AFES/AFE COR, wing guidance, in order to effectively manage unit MTPs. **(T-2)**

4.2.2.2. Ensure all AFE technicians requiring training are trained and evaluated by a qualified trainer/certifier IAW paragraph 4.2.3., of this instruction. **(T-2)**

4.2.2.2.1. In the event the trainer determines the trainee failed to meet the CFETP defined "Go" level, the trainee will continue with training until the trainer determines the trainee is ready to be evaluated once again. Status of training will be documented in TBA utilizing the Journal Entry feature. **(T-2)**

4.2.2.3. Ensure all technicians scheduled to attend formal training courses have completed all prerequisites before attendance. **(T-2)**

4.2.2.4. Evaluate all technical school graduates to ensure proficiency levels as specified in the approved CFETP. Forward evaluations to the AFES/AFE COR for coordination. **(T-2)**

4.2.2.4.1. Use the Customer Service Information Line listed in the CFETP to report training deficiencies IAW AFI 36-2201. Send information copies of AETC questionnaires concerning recent technical school graduates to respective MAJCOM/FOA, as applicable. **(T-2)**

4.2.2.5. Plan, schedule, evaluate, and administer training. **(T-2)**

4.2.2.6. Counsel trainees and take administrative actions as necessary. **(T-2)**

4.2.2.7. Document all training IAW AFI 36-2201, current CFETP, and any additional guidance from UTM, AFES/AFE COR, and this instruction. **(T-2)**

4.2.2.7.1. Follow local guidance for managing technician records. TBA is the database for AFE automated technician training records. **(T-2)**

4.2.2.8. Ensure, in addition to the requirements identified in AFI 36-2201, RegAF AFE MSgts at the wing-level or below, who perform equipment inspection duties (includes IPIs,

QCIs, PEs, and TEs), maintain on the job training (OJT) records. **Note:** ARC SNCOs who perform equipment inspections or certify others to perform equipment inspection duties (includes IPIs, QCIs, PEs, and TEs) will maintain OJT records. **(T-2)**

4.2.2.9. Ensure periodic ancillary training and task qualification training is conducted as required IAW AFI 36-2201. **(T-2)**

4.2.3. **AFE Task Trainer/Certifier.**

4.2.3.1. The AFE task trainer/certifier is a highly qualified and experienced AFE technician for those tasks that they are training/certifying. The UTM and AFES/AFE COR will ensure task trainer/certifier meets requirements outlined in AFI 36-2201. **(T-2)**

4.2.3.2. Reevaluate newly assigned technicians to ensure proficiency in previously trained areas prior to them performing unsupervised work IAW AFI 36-2201. Includes military, civilian, and contractor equivalent. **(T-2)**

4.2.3.3. TE's conducted by certifiers will include observation of task performance and on-the-spot instruction to correct deficiencies. Question and answer sessions alone do not qualify as task evaluations. **(T-2)**

Table 4.1. AFETT REQUIREMENTS (T-2).

Course Title	Course ID	Note	1P031	1P051	1P071	AFES	AFECTI	T1P0X1	AFEO
AFE Apprentice	J3ABR1P031 048C	-	M	-	-	-	-	-	-
SERE Training	S-V80-A	-	D	D	D	D	D	D	M
Emergency Parachute Training	S-V80-B	-	D	D	D	D	D	D	M
Arctic Survival Training	S-V87-A	-	D	D	D	D	D	D	D
Water Survival Training	S-V90-A	-	D	D	D	D	D	D	M
Over-Water Emergency Parachute Training	S-V90-B	-	D	D	D	D	D	D	M
USAF Underwater Egress Training	S-V84-A	2	D	D	D	D	D	D	D
Ira C. Eaker Center Academic Instructor Course	MCPD001	1	-	D	D	M	M	M	-
USAF NVG Academic Instructor Course	NVGAIC	-	-	-	-	-	D	D	-
ACCA Course	3J5ACC1P0X1 005	6	D	D	D	D	M	-	-
AFE Program Managers Course	3J5ACC1P0X1 000	9	-	-	D	M	-	-	M

AFE Deployed Leadership Course	3J5ACC1P0X1 003	7	D	D	D	D	D	D	-
AFE CSEL	3J5ACC1P0X1 001	-	D	D	D	D	D	D	-
USAF LSEI Course	3J5ACC1P0X1 004	8,9	-	D	D	M	D	D	M
Contingency Wartime Planning Course	MCADRE002	4	-	-	D	D	-	-	-
Initial Physiological Hypoxia Training	S-O-B/A-APH-I	-	D	D	D	D	D	D	M
Refresher Physiological Hypoxia Training	S-O-B/A-APH-R	-	D	D	D	D	D	D	D
Airborne Parachutist	L9AZA1XXX X 0A1A	-	D	D	D	D	D	D	D
Static Line Parachute Systems (MC-1)	J3AZT1P051 0M1A	3	D	D	D	D	-	-	-
Static Line Parachute Systems (MC-6)	J7AZR1P051 0S1A	3	D	D	D	D	-	-	-
Ram Air Parachute Systems (MC-4/5)	J3AZR1P051 0R1A	3	D	D	D	D	-	-	-
Automatic Ripcord Release Assembly (8600F6)	J5AZA2A7540 F6A	3	D	D	D	D	-	-	-
1P0 Parachute Certification Course (Phase 2/3)	L9AZA1P0510 0A	5	M	M	M	M	-	-	-
LEGEND: M = Mandatory, D = Desirable									
Notes:									
1. The following courses are suitable substitutes: - Principles of Instruction (J3AIP3S2X1 EF3A, J7AZTTXXXX 0P1A) - ANG Instructor Certification Program (ANGC ICP) - ACC Classroom Instructor Course (3J5ACC3S200 000) - Basic Instructor Course (All 0B2B versions) - Courses Y120006 and Y120022 - Any other CCAF accredited Methods/Principles of Instruction type course may be used to satisfy the AFECTI requirement, with approval from the member's owning MAJCOM/FOA. **Exception:** Not required for AFEOs and instructor aircrew**. Sub note 1:** ARC AFESs who feel they have an equivalent teaching standard, may submit for a permanent waiver to their applicable ARC AFE Staff. **Sub note 2:** ANG AFE personnel who were trained, qualified and certified as an AFECTI prior to 06 Sep 1996 are permanently waived from the training requirement.									

2. Only applicable to instructors who train rotary wing aircrew.
3. Mandatory for technicians supporting these parachute systems who have not completed the 1P0 Parachute Certification Course. Scheduled to be replaced by the Parachute Cert Course
4. Mandatory for 1P0s on MAJCOM Staff, and AFES/AFE COR performing pilot unit duties.
5. Only mandatory for technicians supporting equipment/systems taught in this course. See ETCA Listed requirements.
6. This is a "Train the Trainer" designed course. Priority students will be lead AFECTIs. MAJCOMs may approve a 12-month waiver until training is accomplished at Dyess schoolhouse or via approved Mobile Training Team (MTT).
7. Mandatory when listed in deployment line remarks.
8. See paragraph 2.13.16 for details.
9. Desirable requirement only for AFEO assigned to the USAF Air Demonstration Squadron
Note: **Table 4.1** lists all AF AFE mandatory and desirable training. Requirements are identified for military and civilian/contractor equivalents.

Chapter 5

AFE CONTINUATION TRAINING (AFECT)

5.1. Purpose.

5.1.1. AFECT 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 ejection seat passengers to refresh and enhance their proficiency and knowledge in all AFECT events. This chapter establishes specific requirements and applies to all AFECTI, aircrew and personnel who fly.

5.2. AFECT Responsibilities.

5.2.1. AFECT will be conducted IAW Table 5.1 of this instruction. MAJCOMs/FOA may supplement this instruction to tailor AFECT courses to fulfill their specific requirements. The 436 TS/AFE will annually update and review their AFE AFMLP based on current safety information provided by the AFSC and MAJCOMs/FOA. AFMLPs are posted on the Aircrew Flight Equipment Training Instructional Materials SharePoint®. **(T-2)**

5.2.2. LL coded events will be taught by an AFEO, qualified instructor aircrew, or 1P0X1 AFECTI (see paragraphs 5.3.4 and 5.3.5 for further definition). MAJCOMs/FOA and ARC units may supplement this instruction with additional requirements for assigning and certifying AFECTIs. **(T-2)**

5.2.3. AFE is not authorized to instruct any Survival Evasion Resistance Escape (SERE) Code of Conduct Continuation Training (CoCCT)/SERE SS events. **Exceptions**: ANG CC's can authorize AFE to instruct SS events if no SERE personnel are assigned. If authorized, ANG AFE will follow requirements in AFI 16-1301, *Survival Evasion Resistance Escape (SERE) Program*. AFE/1P0X1 personnel assigned to USAFADS are authorized to instruct SS06 (only) for USAFADS media/familiarization flights only when TDY and SERE/1T0X1 personnel are not available at the TDY location. These AFE/1P0X1 members will comply with the intent of AFI 16-1301 requirements to instruct SS06. **(T-1)**

5.3. Formal Training Requirements.

5.3.1. Formal training courses are outlined in Table 4.1 of this instruction. **(T-2)**

5.3.2. Requests for courses will be forwarded to MAJCOM POC NLT 1 November of each year. N/A to ANG. **(T-2)**

5.3.2.1. To obtain formal supplemental course allocations for AFE technicians, forward the full name, rank, Social Security Number, and organization of technicians requiring training to the appropriate MAJCOM AFE focal point at least 60 days in advance of the requested training date. AFRC and ANG will request quotas IAW AFRC and ANG/AFE Staff procedures. MAJCOM/FOA will notify the field of course allocations near the end of the fiscal year and units should be prepared to fill training requirements. AFES/AFE COR should prepare for course allocations to be unit funded and budget appropriately. **(T-2)**

5.3.2.2. The AFES/AFE COR/AFEO will control and manage the wing's AFE formal supplemental course allocations. Cancellations or substitutions will be accomplished by

contacting the appropriate MAJCOM or ANG/AFE Staff NLT 30 days prior to class start date. Return all allocations that cannot be used to the appropriate MAJCOM or ANG/AFE Staff for redistribution at least 30 days prior to class start date. **(T-2)**

5.3.3. LL01/LL07/LL08: These three LL events have no specific AFECTI qualification requirements.

5.3.3.1. LL01 will be provided using the MAJCOM approved AFE LL01 Training Guide and applicable local information. Technicians providing LL01 to assigned aircrew must be familiar with local AFE operations, aircraft and equipment configurations and signed off in TBA on the fundamentals of all equipment discussed in LL01.

5.3.3.2. LL07/08 will be performed by 1P0X1 technicians who are CFETP task-certified in TBA for the event, and all applicable equipment tasks involved in completing a detailed fit check (e.g. fundamentals, donning, fit, inspection, operational checkout etc.). **(T-2)**

5.3.4. LL04/LL06: Will only be instructed by qualified 1P0X1 AFECTIs IAW section 5.4. of this instruction. **(T-2)**

5.3.5. LL02/LL03/LL05: Will only be instructed by an AFEO or a qualified instructor aircrew, who have been designated and certified in writing by the AFEO, and identified by the Flying SQ/CC IAW paragraph 2.12.1. **Exception:** Based on manning/experience limitations, ANG Group CC's may authorize additional qualified aircrew members to perform these duties after being trained and certified by the AFEO and endorsed by the SQ/CC. The AFEO is responsible for developing and managing a local certification/recertification process (e.g. record review or instructor evaluation). **Exception**: Civil service personnel, technicians or contractor equivalent may conduct AFECT courses if specifically hired for that purpose. **Note:** ANG AFE T32/T5 technicians do not fall under this exception and are not authorized to instruct LL02/LL03/LL05. See paragraph 5.5.8 for AE personnel "Just in Time" training. **(T-2)**

5.4. AFECTI Qualifications.

5.4.1. The term AFECTI only applies to qualified 1P0X1 AFE technicians. MAJCOMs/FOA and ANG units may supplement this instruction for assigning and certifying AFECTIs. **(T-2)**

5.4.2. The OSS/CC will certify by memorandum that the AFES/AFE COR/AFEO are qualified to certify AFECTIs or qualified instructor aircrew (as applicable) for AFECT events. **(T-2)**

5.4.3. AFECTIs will be trained and certified by the AFES/AFE COR for LL04 and LL06. The AFES/AFE COR may delegate the training responsibility to the Lead AFECTI. **(T-1)**

5.4.4. Upon each new assignment, AFECTIs will be certified by the gaining AFES/AFE COR. Previously certified AFECTIs will first undergo any/all required "fundamentals" OJT equipment training (if not previously qualified) prior to conducting AFECT events. **Note**: If the AFES/AFE COR actively teach AFECT events (LL04/06), they will be certified IAW all AFECTI qualification requirements in this section by the unit's Lead AFECTI. **(T-1)**

5.4.5. AFECTI certification will include:

5.4.5.1. Attendance of mandatory courses IAW Table 4.1. **(T-2)**

5.4.5.2. An initial "start-to-finish" evaluation conducted by the AFES/AFE COR for each AFECT LL event instructed, documented on an AETC Form 281, *Instructor Evaluation*

Checklist, or MAJCOM equivalent. **Note:** The AFES/AFE COR will use the Unit Lesson Plan (ULP) to perform instructor evaluations. **(T-2)**

5.4.5.3. CFETP task qualified and documented in the members TBA ITP, for each LL event and all equipment fundamentals required for each LL event. **(T-2)**

5.4.6. The AFES/AFE COR will ensure all certified AFECTIs are assigned SEI 123. **(T-2)**

5.5. AFECT Requirements.

5.5.1. Minimum Training Requirements. Table 5.1 of this instruction specifies the required AFECT events and frequencies for aircrew members and passengers. **(T-2)**

5.5.1.1. Any AFECT requirement scenario not covered in this instruction will be considered for waiver by the responsible MAJCOM/FOA. **(T-2)**

5.5.2. If an aircrew member, current in all AFECT events, is TDY to perform flying duties to a location where a training capability does not exist and the individual becomes due in an AFECT event, training must be accomplished before first flight at home station. **(T-2)**

5.5.3. Flight Surgeons will receive AFECT at frequencies listed in Table 5.1. In addition, if not covered by specific MDS guidance, flight surgeons will receive egress training once every 90 days for ejection seat aircraft and triennial for non-ejection seat on primary assigned aircraft. The AFEO may waive this requirement up to 180 days for those flight surgeons who demonstrate proficiency in the aircraft on a case-by-case basis. **(T-2)**

5.5.4. Newly assigned or visiting aircrew are not required to re-accomplish egress, if currency can be verified in assigned MDS, e.g. Aviation Resource Management System (ARMS) records. Units will ensure AFE Familiarization (LL01) is accomplished prior to first flight. **(T-2)**

5.5.4.1. Newly assigned or visiting aircrew are required to be trained on unique/local AFE requirements to include equipment configurations and individual survival components. This will be accomplished during LL01. Aircrew being assigned from a training unit to an operational (non-training) unit experience significant MDS differences in AFE equipment/aircraft configurations from their previous training location and will need to re-accomplish LL06 at their new operational unit/squadron. **(T-2)**

5.5.5. 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. **(T-2)**

5.5.6. Aircrew members in transition from one type of ejection seat equipped aircraft to another and awaiting a Formal Training Unit (FTU) slot will receive LL02 at intervals determined as defined in MDS specific AFI 11-2MDS, Vol 1. **(T-2)**

5.5.7. Student aircrew members assigned to an FTU will receive LL02 or LL03 training IAW applicable syllabus. **(T-2)**

5.5.8. Qualified AECM instructors and non-instructor boom operators and loadmasters may instruct “Just in Time” LL03 for AE personnel prior to flight. “Just in Time” training is

intended to support AECM personnel who are forward deployed/operating on non-primary MDS aircraft, often without advanced notice. **(T-2)**

5.5.8.1. The training will be "hands on" student centered, and cover all related material in the applicable MDS "Dash-1" Flight Manual Emergency Procedures. **(T-2)**

5.5.8.2. Training will be documented on AF 1522, *ARMS Additional Training Accomplishment Report*, utilizing ARMS task identification codes for non-unit assigned aircraft are as follows: LL03A - C-130 Emergency Egress, LL03B - C-17 Emergency Egress, LL03C - KC-135 Emergency Egress, and LL03D - C-21 Emergency Egress. **(T-2)**

5.5.8.3. AE personnel will continue to maintain LL03 currency for their unit assigned aircraft IAW Table 5.1. **(T-2)**

5.5.9. The Air Armament Center (AAC) and AF Flight Test Center (AFFTC) should maintain the ability to send qualified 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. **(T-2)**

5.6. Passenger and Incentive Flyer/Miscellaneous Training.

5.6.1. Passenger and Incentive flyer training is required for the following categories; orientation, distinguished visitor, familiarization, incentive, and spouse orientation flights addressed in AFI 11-401 *Aviation Management*. **(T-2)**

5.6.2. Passengers scheduled for flight aboard ejection seat equipped aircraft will receive, as a minimum, LL02 and LL06 no earlier than 72 hours prior to flight. If the 72 hours are exceeded before flight, training will be re-accomplished. Emergency egress training includes emergency ground egress, cockpit familiarization, oxygen regulator and mask procedures during an emergency, use of oxygen/communication controls and switches, and manual bailout procedures training. Reference AFI 16-1301 and MAJCOM/FOA SERE communications for passenger EPT and overwater flight requirements. **(T-2)**

5.6.3. Non-aircrew personnel/Operational Support Fliers who fly occasionally to perform official duties (e.g., enroute ground support, security, etc.) will receive LL02 and LL06 only if specified by AFI 11-2MDS Vol 1 or specified in MAJCOM/FOA guidance coordinated with the MAJCOM AFE Staff. MAJCOM/FOA guidance must state what specific functions require LL06. Training intervals will be determined by the respective MAJCOM. These individuals, to include members in casual status awaiting pilot training, aerospace physiologists, flying maintenance personnel, intelligence personnel, and developmental/test engineers may be placed on a 120-day currency after meeting the following requirements: Members must first complete emergency egress training (as applicable to the MDS) a minimum of three times during a 120-day period. Member must complete LL02 or LL03 and LL06 as required. After the above two conditions are met, the AFEO will evaluate/validate the members proficiency and forward a memorandum recommending the member be placed on a 120-day currency for the MDS specific AFECT training to the OG/CC for approval. OG/CC is the approval authority for the 120-day currency. **(T-2)**

5.6.4. In support of AFI 32-2001, *Fire Emergency Services Program*, AFE provides training on flight equipment fundamentals and hazards as it relates to local aircrew extraction training requirements. AFE is only responsible for training the FD lead trainer and providing updates on newly fielded equipment. See para 5.9.4.1 of this instruction for lesson plan requirements. **(T-2)**

5.7. AFECT Event Descriptions.

5.7.1. Lead Commands (LCs), IAW AFPD 10-9 will be OPR for developing core curriculum for each of the following blocks of instruction. LCs will provide AFECT event guidance in applicable AFI 11-2MDS-series, Vol 1 publications. **(T-2)**

5.7.2. AFECT event instruction may be consolidated as long as curriculum requirements are met and individual events are tracked by the designated identifiers in ARMS.

5.7.3. MDS specific training equipment will be available and presented during LL06. Perform TCTO or modifications on all training equipment to ensure it mirrors and functions the same as operational equipment. **(T-2)**

5.7.4. AFE Familiarization (LL01).

5.7.4.1. A one-time event, per every base assignment. It should be conducted during aircrew in processing. Ensure this requirement is complete prior to the first flight at home station. **(T-1)**

5.7.4.2. The event will familiarize aircrew members with local AFE policies and procedures to include equipment issue, use, local aircraft and equipment configurations (includes survival components), inspection and fit-check cycles, pre-flight, and post-flight requirements. **(T-1)**

5.7.4.3. The AFES/AFE COR and NCOICs will ensure the MAJCOM approved AFE LL01 Training Guide includes applicable local information and is used to complete the LL01 requirement. **Note**: AFE technicians do not need to be AFECTI certified to instruct and sign off LL01 events, see **paragraph 5.3.3.1**, for details. **(T-2)**

5.7.5. Emergency Egress Training, Ejection Seat (LL02).

5.7.5.1. Evaluates aircrew and passenger ability to demonstrate proficiency in air and ground emergency egress/ejection procedures.

5.7.5.2. In aircraft with multi-crew ejection seat capability, stress importance of aircrew coordination actions in emergencies.

5.7.5.3. Ensure aircrews are aware of their responsibilities for conducting safety and passenger briefings IAW AFI 11-202, Vol 3. **(T-2)**

5.7.6. Emergency Egress Training, Non-Ejection Seat (LL03).

5.7.6.1. Evaluates aircrew ability to demonstrate proficiency in air and ground emergency egress procedures.

5.7.6.2. Stress the importance of aircrew coordination, aircrew responsibilities and use of appropriate emergency egress equipment.

5.7.6.3. Ensure aircrews are aware of their responsibilities for conducting safety briefings IAW AFI 11-202, Vol 3.

5.7.7. Aircrew Chemical, Biological, Radiological, Nuclear Training (LL04).

5.7.7.1. An academic and equipment training session in which the aircrew member demonstrates and performs donning, doffing, and buddy dressing procedures using ACBRN equipment.

5.7.7.2. This training also includes information on hazards and limitations of wearing the equipment properly and improperly, preflight procedures, aircraft integration, and aircrew processing.

5.7.7.3. Each aircrew will demonstrate procedures during their initial class; subsequent classes require a minimum of 10 percent of aircrew participants to dress out and demonstrate ACCA mitigation processing procedures. **(T-2)**

5.7.7.4. An aircrew member may be credited with ACBRN (LL04) during local Attack Response Exercises (ARE); provided all AFECT requirements and objectives are satisfied, (i.e. crewmember donned ACBRN equipment and subsequently processed through ACCA). **(T-2)**

5.7.8. Egress Training with ACBRN (LL05).

5.7.8.1. A one-time event per MDS and evaluates the aircrew's ability to demonstrate proficiency in the use of primary, as well as secondary, air and ground egress procedures while wearing ACBRN equipment.

5.7.8.2. Training will stress the unique changes in procedures to include added difficulties aircrew would and could experience as a result of wearing ACBRN equipment. **(T-2)**

5.7.8.3. This training must be accomplished before the aircrew's one-time ACBRN flight requirement. **(T-1)**

5.7.8.4. This event should be taught concurrently with LL04.

5.7.9. Aircrew Flight Equipment Training (LL06).

5.7.9.1. An academic and equipment training event, in which aircrew members demonstrate their ability to locate, preflight, and use all aircrew and passenger AFE carried aboard unit aircraft or issued to aircrew members.

5.7.9.2. This training includes the limitations and safety issues related to AFE. Additionally, include aircrew clothing items and information on hazards associated with improper wear and failure to use only authorized clothing and equipment items.

5.7.10. AFE Fit Check (LL07).

5.7.10.1. Ensure a comprehensive sizing and fit check of all flight equipment worn in ejection seat aircraft specifically that which is sized/fitted/adjusted for a particular aircrew member (e.g., helmet and O2 mask, survival vest, torso harness and anti-G-suit) is accomplished prior to first flight at every new assignment and every four months unless otherwise directed by AFI 11-202, Volume 1, *Aircrew Training*, and AFI 11-2MDS-series, Vol 1. **Exception**: Pilots accomplishing U-2 high altitude flights, using the Full Pressure Suit, perform fit and leak tests prior to each flight and are exempt from LL07. **(T-2)**

5.7.10.2. AFE gear worn during flight in non-ejection seat aircraft (e.g. any sized/fitted item to include PLZT mounting, NVG mounting, ALEP etc.) will be checked and verified for proper size/fit prior to first flight at every new assignment and every 3 years unless otherwise directed by AFI 11-202, Vol 1 and AFI 11-2MDS-series, Vol 1. Fit checks for all non-ejection seat aircraft will also include ACBRN equipment. Aircrews performing duties on aircraft without individually fit or sized AFE requirements are exempt from this requirement. **(T-2)**

5.7.10.3. LL07 is a grounding event unless otherwise stated in AFI 11-202 and/or AFI 11-2MDS-series (see Table 5.1). **(T-2)**

5.7.11. ACBRN Fit Check (LL08).h

5.7.11.1. A comprehensive size and fit check of ACBRN equipment.

5.7.11.2. Ejection seat aircrew will complete LL08 once per assignment, not to exceed triennially or IAW AFI 11-202, Vol 1, Aircrew Training, and AFI 11-2MDS-series, Vol 1. For scheduling efficiency, all ejection seat aircrew will conduct LL08 concurrently with LL07 (during the corresponding/closest LL07 cycle). All ejection seat units will document LL07 and LL08 on AF Form 1522 as separate events. **(T-2)**

5.7.11.3. LL08 is not a grounding item unless otherwise stated in AFI 11-202 and/or AFI 11-2MDS-series. However the event must be completed prior to an aircrew performing their one-time ACBRN flight requirement and prior to deploying to a CBRN threat environment.

5.8. Training Aids and Equipment.

5.8.1. Emergency egress training will be accomplished using the appropriate EPT when available, ensuring EPTs mirror operational equipment to the maximum extent possible (e.g. oxygen panel, HMCS connector, AERP). Only when an EPT is not available will an actual ejection seat aircraft be used. Non-ejection seat egress training will be conducted using actual aircraft to the maximum extent possible. **(T-2)**

5.8.2. AFECTIs will inspect training devices and aids prior to use to ensure they are properly configured, safe, and operational for training to include annual inspections of all AFECT devices and aids to ensure they are current and safe for training use. This includes EPT, displays, ACBRN equipment, flight equipment, and Personnel Lowering Devices (PLD). Inspections will be documented appropriately and reported to the AFES/COR. **(T-2)**

5.8.2.1. Units will develop an EPT local inspection checklist using EPT manuals and applicable TOs. It is recommended that unit POCs contact the Detachment 1 Training Support Squadron (TRSS), Training Systems Center, Luke AFB AZ for EPT guidance, maintenance, and support. **(T-2)**

5.8.2.2. Classic associate and active associate AFE functions operating under TFIA organizations will use the following business rules for managing For Training Use Only (FTUO) AFECT flight equipment. **(T-2)**

5.8.2.2.1. The host AFE unit (i.e. the unit that owns the aircraft) will manage, and account for, all AFECT FTUO flight equipment. AFECT FTUO flight equipment will be shared by both the host and the tenant to support AFECT events. **(T-2)**

5.8.2.2.2. EAID reportable AFECT FTUO flight equipment will be accounted for on the host unit CA/CRL R-14. Authorizations for the majority of EAID reportable AFECT equipment is contained in AS450AOOC, AS450EOOC and AS660NKAW. **(T-2)**

5.8.2.2.3. Inspection, maintenance, marking, tracking, etc., of AFECT FTUO flight equipment should be a shared responsibility by the host and tenant AFE sections. **(T-2)**

5.8.3. FTUO flight equipment 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. Due to unavailability of like training assets, specialized GA/ST equipment may be used for training as long as the training does not damage or destroy the integrity of the equipment. Coordinate any deviation from this "hands-on" training model with respective MAJCOM/FOA. **(T-2)**

5.8.3.1. Ensure aircrew use individually fit ACBRN operational equipment (e.g. MBU-19/P) for all ACBRN flights. This operational equipment will be fit, preflighted, and donned prior to flight and will be used with all other aircrew equipment. **(T-2) Note:** All other ACBRN equipment other than that stipulated above may be simulated at the Group CC's discretion. **(T-3)**

5.8.3.1.1. Units will ensure only serviceable CQU-7/P Blower Assembly batteries are used during all flights, to include task qualification training flights. Include necessary quantities in future battery forecasting. **(T-2)**

5.8.3.2. Maintain training assets in sufficient quantities to allow each student hands-on training. FTUO equipment quantities will be driven by the average class attendance numbers not to exceed applicable AS authorizations. **(T-2)**

5.9. AFECT Lesson Plan Development.

5.9.1. Only approved AFMLPs managed by the 436 TS/AFE Dyess AFB, TX will be used to conduct LL04 and LL06. Egress instructors will use the applicable MDS "Dash-1" Flight Manual Emergency Procedures to complete LL02/LL03/LL05. **(T-1)**

5.9.1.1. Lead MDS MAJCOMs will tailor AFMLPs for each MDS, approve these MDS Lesson Plans and submit them to 436 TS/AFE as the central repository for AFECT Lesson Plans. Units will use these MDS Lesson Plans to teach AFECT events (access lesson plans at **https://cs3.eis.af.mil/sites/AC-ED-02-88**). **(T-1)**

5.9.1.1.1. If a particular MDS lesson plan does not include all local requirements, unit AFES/AFE COR will update MDS lesson plan with local requirements and forward to respective Lead MDS MAJCOM for approval. Units may delete information from MAJCOM approved MDS Lesson Plans that does not pertain to their mission/unit. **(T-1)**

5.9.1.1.2. All new equipment/training requirements will be forwarded by the Lead MDS MAJCOM to the 436 TS/AFE for inclusion into AFMLPs. **(T-1)**

5.9.2. Unit Lesson Plan: ULPs are un-personalized lesson plans developed from the approved MDS Lesson Plan used for version control and standardization within an organization or unit. The AFES/AFE COR/AFEO must tailor the MDS Lesson Plan and produce a ULP to meet

their wing's mission needs. The ULP satisfies the minimum training requirements and objectives of the particular event. **(T-1)**

5.9.3. Personal Lesson Plans (PLP). PLPs are developed from the ULP and prepared by each instructor to organize and present information. AFECTIs may (but are not required to) create a PLP by writing personal instructional notes and material on the right-hand side of the ULP. **(T-3)**

5.9.4. All Lead MAJCOM MDS Lesson Plans, ULPs and PLPs used to conduct AFECT will be reviewed annually by the AFES/AFE COR, and documented within the lesson plan. **(T-1)**

5.9.4.1. PowerPoint® slides used to conduct AFECT events, will be developed, approved and maintained in the exact same manner and follow the exact same process as lesson plan requirements listed in this AFI. The first slide of all PowerPoint® presentations will identify the event and also contain the annual validation date. **(T-1)**

5.9.4.2. The ULP/PLP for LL06 will be used to provide tailored instruction to the FD lead trainer to satisfy related aircrew extraction training requirements/flight equipment "fundamentals" knowledge.

5.9.5. HHQs correspondence (e.g., messages, Flight Crew Information Files, etc.) directing the inclusion of information not covered in AFECT AFMLPs lesson plans will be added as required by the 436 TS/AFE or Lead MAJCOM. **(T-2)**

5.9.6. Designated Lead MDS MAJCOM along with the 436 TS/AFE Dyess validate AFMLPs biennially during the World Wide AFE Workshop MAJCOM breakouts. If more frequent reviews are deemed necessary; the requesting Lead MDS MAJCOM will coordinate and fund the 436 TS/AFE to accomplish the review with Lead MDS MAJCOM SME's. The 436 TS/AFE will notify the MAJCOMS of any changes to the AFMLPs, and the AFES/AFE COR/AFEO will update their ULPs upon notification by their MAJCOMs/FOA. **(T-2)**

5.10. AFECT Safety.

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

5.10.1.1. To meet OSHA requirements, the AFES/AFE COR/AFEO, with assistance from the local safety office, will develop and implement Risk Management (RM) programs and techniques specific for each AFECT event. **(T-2)**

5.10.2. An EAP includes comprehensive measures to be taken during events where the chance of injury is increased. AFES/AFE COR should tailor EAP template in AFMLP with assistance from the local safety office to mitigate increased risks associated with certain training events. EAPs must be initially validated/tested prior to first implementation, annually reviewed for currency by AFES/AFE COR and briefed prior to all applicable training events. **(T-2)**

5.11. AFECT Documentation.

5.11.1. All completed AFECT events will be documented on AF 1522 or equivalent IAW AFI 11-202 Vol 1. Only those event identifiers shown in Table 5.1 of this instruction will be used to identify AFECT events. **(T-2)**

5.11.2. Upon completion of each AFECT event, the AFECTI will ensure the AF 1522 is completely filled out (i.e. ensure all blocks, aircrew signatures, AFECTI signature, and dates

are filled out), and forwarded to Squadron Aviation Resource Management (SARM)/Host Aviation Resource Management (HARM) office for input into ARMS. **(T-2)**

5.11.3. AFE is not responsible for maintaining ARMS, managing and tracking aircrew training or Mission Ready (MR) status for AFECT events in ARMS. **(T-2)**

5.11.3.1. AFE is not responsible for maintaining copies of AF 1522s once received by SARM/HARM office. **(T-3) Exception**: Maintain FTU and Basic Fighter Training student rosters/AF 1522s until graduation. **(T-2)**

5.11.3.2. When instructing visiting aircrew not assigned to the local unit, the AFECTI will forward the completed AF 1522 to the SARM/HARM office, which will then be forwarded to the home unit, IAW guidance in AFI 11-202, Vol 1. **(T-2)**

Table 5.1. AFECT REQUIREMENTS. (T-2).

Note: AFECT courses may be instructed concurrently with other complimentary LL events, as long as all required learning objectives are accomplished.			
Task ID	**Event Description**	**Frequency**	**Notes**
LL01	AFE Familiarization	Initial	1, 3
LL02	Emergency Egress Training, Ejection Seat	Recurring	3, 4, 5
LL03	Emergency Egress Training, Non-Ejection Seat	Recurring	3, 4
LL04	Aircrew CBRN Training	Recurring	4
LL05	Egress Training with ACBRN	Initial	2, 5
LL06	Aircrew Flight Equipment Training	Recurring	4
LL07	Aircrew Fit Check	Recurring	1, 3, 5
LL08	ACBRN Fit Check	Recurring	2, 5
Notes:			
1. Accomplished before first flight at each base of assignment.			
2. Must be accomplished one time in assigned MDS aircraft before first flight using ACBRN.			
3. Grounding items: Unless otherwise stated in AFI 11-202 and/or AFI 11-2MDS-series, the following events are grounding: LL01, LL02, LL03 and LL07.			
4. Training frequencies are identified in AFI 11-202, Vol 1, *Aircrew Training*, and AFI 11-2MDS-series, Vol 1. (for LL06 see paragraph 5.5.4.1. also)			
5. All MDSs will use the applicable Fit Check frequencies IAW all paragraphs of 5.7.10. of this instruction until AFI 11-202 and/or AFI 11-2MDS-series, Vol 1s can be updated, at which time Note 4 will apply.			

Chapter 6

AFE QUALITY CONTROL (QC) PROGRAM

6.1. AFE Shop/Section Quality Control.

6.1.1. The goal of the QC program is to eliminate defects and deviations from established guidance, by providing feedback to AFE technicians, trainers, trainees, supervisors, and CC's. The establishment of an effective QC program is critical to the safety and health of aircrews and passengers. **(T-2)**

6.1.2. A Quality Control Inspection (QCI) is a process of visual examination without disassembly of equipment. QCIs also include spot inspections of internal programs and procedures to ensure the highest level of product quality and work-center efficiency. AFES/AFE COR or Flight Chief and NCOIC AFE QA will determine method of documenting QCIs. QCI documentation will be kept until next repack or inspection. **(T-2)**

6.1.2.1. AFE QI's will be qualified 1P071s, who have been trained and certified via the AFE QA Certification Course located on the HQ USAF/A3TF AFE SharePoint®. QI's will augment the NCOIC AFE QA as needed. **Exception:** Highly experienced and qualified 1P051s may be appointed as QI's when approved by the AFES/AFE COR/AFEO. **(T-2)**

6.1.2.2. QI's will perform a minimum of 10 percent QCIs on each type of equipment inspected daily. **(T-2)**

6.1.2.3. QI's will perform 100 percent QCIs of all survival kits (not to include SRU-16/P minimum survival kit), multi-place life rafts, all variations of inspected/repacked parachute assemblies, new equipment build-ups (e.g. harness, helmet, LPU), and equipment inspected/received from supporting agencies. **(T-2)**

6.1.2.4. QI's will perform 100 percent QCIs of all equipment inspected/repacked by any AFE technician that is not signed off/certified on the task or equipment. **(T-2)**

6.1.2.5. QI's will ensure QCIs are accomplished, and discrepancies corrected, prior to equipment being placed back into service. **(T-2)**

6.1.3. NCOIC AFE QA will identify QCI trends to be included in the monthly training sessions and trends analysis. **(T-2)**

6.1.4. IPIs will only be performed by IPI qualified 1P071/civilian/contractor equivalents. **Exception:** Highly experienced and qualified 1P051s may be appointed to perform IPIs when approved by the AFES/AFE COR/AFEO. **(T-2)**

6.1.4.1. IPIs will be documented on locally developed IPI forms coordinated with AFES/AFE COR/AFEO and NCOIC AFE QA. When an IPI is completed, the form will remain on file until the next repack, repair, or aircraft transfer. **Exception:** ALC locations may use WCDs to satisfy IPI form requirements, as long as the format and content is approved by the AFES. The AFES must be included in annual reviews/modifications of the WCDs. **(T-2)**

6.1.4.2. IPIs will be performed during reassembly of NVDs and repack of parachutes, multi-place life rafts, ejection seat life preservers, escape slides, Hand Held Radios (HHR)

loaded with SPINS and ejection seat survival kits. **Note:** IPIs on other survival kits will be at the direction of the MAJCOM/FOA. **(T-2)**

6.1.4.3. Missing or incomplete IPI documentation will immediately result in equipment being removed from service and re-inspected appropriately. **(T-2)**

6.1.4.4. Multiple local equipment IDs may be added to a single IPI form only when the equipment has the same inspector, IPI qualified 1P071 and inspection date. **(T-2)**

6.1.4.5. Maintain the Two-Person Concept (see definition) when performing all IPIs on flight equipment. The IPI qualified 1P071/civilian/contractor equivalent will perform and document the IPI task/s associated with the equipment on the locally developed IPI form. Only the technicians performing the inspection, repack, and/or repair will annotate equipment inspection records. **Note:** When equipment requires multiple IPIs, efforts should be made to ensure the same IPI qualified technician performs each IPI. **(T-2)**

6.1.4.6. Discrepancy trends identified during the IPI process will be forwarded to the NCOIC AFE QA to be included in the monthly training sessions and trends analysis. **(T-2)**

6.2. 1P0X1 Technician responsibilities within the QC process:

6.2.1. Ensure all QCI discrepancies are corrected prior to the equipment being placed back in service. **Note:** To the maximum extent possible, the original technician will correct all discrepancies. **Exception:** If original technician is not available, another qualified AFE technician will correct it. **(T-2)**

6.2.2. Ensure the QI validates all discrepancies have been properly corrected prior to equipment being placed back in service. **(T-2)**

6.2.3. QCI corrective action remarks will include at a minimum, the TO, JTD module (when applicable), page and paragraph number, date corrected, and initials of person correcting the discrepancy on AF Form 2420, *Quality Control Inspection Summary*, FERMS or equivalent. **(T-2)**

Chapter 7

AIRCREW LASER EYE PROTECTION PROGRAM

7.1. Introduction.

7.1.1. Protecting aircrew from harmful lasers is a complex problem involving science, intelligence and medicine in the context of an operational scenario. There are numerous factors that must be considered as part of developmental requirements such as: compatibility with different aircraft cockpit displays, type mission, headgear, night vision devices, vision correction, device weight, field of view and other human system integration issues. An effective program requires a general understanding of laser threats, inherent system hazards, and a coordinated interaction between medical, laser safety experts (bioenvironmental engineers or health physicists), Intelligence, aircrew and AFE technicians.

7.1.2. Laser Threat. Aggressive foreign laser development, availability of low cost hazardous COTS devices, growing number of our own laser designators, range finders and hand held pointers continues to increase the chance of exposure. In 1995, Vienna Protocol IV to the 1980 Conference of the States Parties to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons was drafted, banning use and transfer of laser weapons whose primary purpose is to permanently blind. Although Protocol IV may be viewed as successful in prohibiting use and transfer of a specific category of anti-personnel weapon, we must prepare for inadvertent exposure and enemies who may not abide by such protocols. For these reasons, the AF approved an ALEP Operational Requirements Document in 1996 to begin formal development and acquisition programs.

7.1.3. Laser Hazard. LASER is an acronym for Light Amplification by Stimulated Emission of Radiation. Lasers produce a coherent intense beam of light and under certain circumstances; exposure can result in damage to the human eye or skin. The human eye is most vulnerable to injury from lasers in the visible region (400-700nm wavelengths), but are also vulnerable to longer wavelengths of invisible lasers in the near infrared region (700-1100nm) and shorter wavelengths in the ultra-violet region.

7.1.3.1. Lasers may damage human eyes at ranges up to several miles and cause a “dazzling” effect at even greater distances (particularly at night). Dazzling occurs when laser light hitting a windscreen refracts and reflects illuminating the cockpit causing possible flash blindness resulting in the inability of aircrew to perform their mission.

7.1.3.2. Laser light entering an aircraft cockpit presents a potential hazard to aircrew not wearing appropriate Laser eye protection.

7.2. Acquisition Strategy.

7.2.1. HQ Air Combat Command (ACC) is the LC for acquisition of ALEP. ACC/A5AL task MAJCOM AFE functional managers to report command requirements for ALEP devices. Aggregate requirements are established and requisitions are programmed to fill unit demands. The acquisition strategy for ALEP is the evolutionary acquisition approach. In this process, a desired capability is identified and threshold objectives are refined through controlled technological demonstrations and risk management with continuous user feedback.

7.2.2. Each increment of development provides the user an improved capability. Requirements for future increments depend on user feedback, threat assessments and technological maturity. The approving authority for use of all ALEP devices is referenced in AFI 48-139.

7.3. Information/Asset Security.

7.3.1. Information disclosing specific characteristics of ALEP devices is classified IAW provisions of the ALEP Security Classification Guide (AFLCMC/WNUV, 1981 Monahan Way, WPAFB AFB, OH 45433-7217, telephone COM (937) 938-3157 or DSN 798-3157).

7.3.2. Requests for information defining specific characteristics of ALEP devices will be directed to HQ ACC, Flight Operations and Training Branch (ACC/A3TO), Langley AFB Virginia. **(T-2)**

7.4. ALEP Program Responsibilities.

7.4.1. IAW AFI 48-139, the installation CC will designate, in writing, a qualified Bioenvironmental Engineer (AFSC: 43E3X) or equivalent civilian to serve as the Installation Laser Safety Officer (ILSO). If a qualified 43E3X or equivalent civilian is not assigned, a 7-level or higher Bioenvironmental Engineering Technician (AFSC: 4B0X1) may be designated to serve as the ILSO with approval from the Command Bioenvironmental Engineer. If the base wing is located on a non-AF led joint base, overall ILSO responsibilities would fall to the host unit per the host service's guidelines. If the host does not assign an ILSO, the AF Wing CC must designate a Wing LSO to execute ILSO responsibilities for Wing-owned personnel and operations. If the host assigns one, designation of an AF Wing LSO is optional. **(T-2)**

7.4.2. ILSO. AFI 48-139 specifies any facility using Class 3B, Class 4 lasers, or laser systems to designate an ILSO to oversee safety for all operational, maintenance and servicing units. **(T-2)**

7.4.2.1. Is responsible for establishing an installation laser and optical radiation safety program and ensuring all technicians exposed to hand held lasers, or have a requirement to wear ALEP, receive the appropriate level of laser training IAW AFI 48-139. **(T-2)**

7.4.2.2. Will train unit technicians on hazards surrounding an active laser and appropriate safety equipment available for use when working around or handling an active Laser.

7.4.2.3. In an environment where exposure is possible, ILSO duties and responsibilities may be assumed by the AFEO. **(T-2)**

7.4.2.4. Will comply with all ILSO duties and responsibilities assigned IAW AFI 48-139.

7.4.2.5. Consult USAFSAM/OE for further information on ILSO training resources.

7.4.3. AFE personnel. **(T-2)**

7.4.3.1. Will fit, inspect, maintain and train aircrew on proper use of laser protective devices defined in this instruction. Training will be accomplished in conjunction with LL06. **(T-2)**

7.4.4. Aerospace Medicine (AM).

7.4.4.1. Local AM personnel, in concert with Optometrists, Ophthalmologists, Physiologists and/or Bioenvironmental Engineers will ensure aircrew members are familiar with different effects lasers have on the eye. **(T-2)**

7.4.4.2. AM personnel will perform laser eye examinations for aircrew as outlined in AFI 48-139. **(T-2)**

7.4.4.3. Optometrists will ensure refractive ALEP devices meet individual corrective vision specifications and are properly fitted. **(T-2)**

7.4.5. Intelligence.

7.4.5.1. Unit Intelligence personnel will ensure aircrew are briefed on potential laser threat types, locations, and current threat assessment data during mission profile briefings. **(T-2)**

7.4.5.2. Will ensure adequate procedures are in place to capture and promptly disseminate reported incidents of laser exposure involving aircrew. **(T-2)**

7.4.6. **Air Force Safety Center** .

7.4.6.1. As chairs of the AF Laser System Safety Review Board (LSSRB), AFSEC reviews CONOPS, TTPs for operational laser devices and associated use of ALEP, providing guidance as necessary. ALEP use is part of the LSSRB review process ultimately leading to AF Safety certification for lasers, as required by AFI 48-139. **(T-2)**

7.5. Operational Use of ALEP.

7.5.1. ALEP should be worn when there is any risk of a laser exposure. Based on the threat environment, local CC's have discretionary control over ALEP wear policy for their subordinates. When ALEP is worn together with NVDs, aircrews are advised to perform a preflight and sight adjustment wearing both. This preflight/adjustment will ensure any changes to visual acuity are identified before flight. **(T-2)**

7.5.2. Medical Examination. Aircrew or technicians who operate in an environment where they could be exposed to Class 3B or 4 lasers are required to get a prescreening eye examination. This examination will document the condition of the eye before working in the laser environment. A comparative examination will be conducted upon termination of duties. **(T-2)**

7.5.3. Selecting appropriate ALEP. ALEP is designed to protect aircrew from specific laser irradiation transmitted at visible and invisible wavelengths. Incorrect usage or subjecting laser protective devices to conditions outside specific design capabilities will result in a degradation of performance and potential risk of exposure to harmful laser energy. When selecting an ALEP device consider the following criteria:

7.5.4. Laser Threat. Unit intelligence personnel will provide aircrew information on known laser threats in the current theater of operation. Aircrew will pass that information to AFE, who in-turn will select a laser protective device that may be capable of countering the threat. **(T-2)**

7.5.4.1. Types of ALEP. AFE technicians should provide aircrew information on the protective characteristics of ALEP available for use. Specific wavelength protection offered by each device is classified and available upon request from ACC/A3TO, DSN

574-3063. Further information about ALEP is available at the Eye Protection Task Force SIPRNET site.

7.5.4.2. Side Protection. Some ALEP devices are available with and without side protection. ALEP with side protection is required when employing hand held laser pointers in the aircraft to prevent exposure to reflective energy. Side protection should also be employed when wearing NVDs. Although NVDs provide a level of laser eye protection from exposures along the axis of the eye, without the proper side protection given by the approved ALEP, there is a chance of incurring an off-axis exposure.

7.5.5. Suspected Laser Exposure. Aircrew who suspect exposure to laser radiation from either friendly or hostile sources will report to the AM flight or nearest emergency room where an appropriate medical provider immediately upon landing can examine the individual. The AM flight will manage and coordinate the event with the MAJCOM, USAFSAM, 77th AESG/YA and the Tri-Service Laser Injury Hotline as directed by AFI 48-139. More information about historical incidents and exposure reporting procedures is available on the SIPRNET at: **http:\www.naic.wrightpatterson.af.smil.mil/DEW/LE/index.html**.

7.5.5.1. If exposure comes from a friendly source, the mishap will also be reported through appropriate safety channels, and if required, documented in the Air Force Safety Automation System. Consult AFI 91-204 for further guidance.

7.5.6. Initial Response. When encountering laser illumination, aircrew should not stare at the laser source, but transition to aircraft instruments and turn away from the threat. Aircrews should recognize the laser might be associated with a weapon posing a greater threat and initiate appropriate evasive action. If a laser threat exists in vicinity of an airfield of intended arrival or departure, ALEP devices should be donned prior to descent from cruise altitude, or prior to takeoff. Doffing of ALEP devices after departing a defined laser threat area or after landing is left to discretion of the AC. The following procedures should be implemented immediately following suspected laser exposure.

7.5.6.1. Look away from laser source; do not remove night vision goggles.

7.5.6.2. Transition to aircraft instruments.

7.5.6.3. In a multi-seat aircraft, if exposed pilot is flying the aircraft, transfer control to unaffected pilot.

7.5.6.4. Assess visual functionality. If visual disturbance persists for more than 60 seconds, declare in-flight emergency and return to base as soon as practical.

7.5.6.5. Notify Command and Control of suspected laser incident.

7.5.6.6. Avoid rubbing eyes as corneal scratches can result.

7.5.6.7. If vision returns to normal and there is no pain within 3-5 minutes, AC will consider the value of continuing the mission against potential loss of an aircrew member who may have sustained eye damage. The AC will determine whether to terminate the mission.

7.5.6.8. Upon return to base, accomplish intelligence debrief and report suspected laser exposure incidents IAW procedures at: **http:\www.naic.wrightpatterson.af.smil.mil/DEW/LE/index.html**.

7.5.6.9. Also contact the Tri-Service Laser Injury Hotline at 800-473-3549 or **https://hpws.afrl.af.mil/dhp/OE/ESOHSC/pages/index.cfm?id=336**. For more information see the Laser Safety Website **https://hpws.afrl.af.mil/dhp/OE/ESOHSC/pages/index.cfm?id=717**

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 11-301, Volume 1, *Aircrew Flight Equipment (AFE) Program*, 25 Feb 2009, Change 1

AFPD 11-3, *Aircrew Flight Equipment*, 24 Sep 2013

AFI 33-360, *Publications and Forms Management*, 01 Dec 2015

AFMAN 33-363, *Management of Records*, 1 Mar 2008

AFI 11-301, Volume 2, *Maintenance and Configuration Requirements for Aircrew Flight Equipment (AFE),* 20 Dec 2013

AFI 11-301, Volume 3, *Aircrew Flight Equipment (AFE) Combat Operations,* 01 Feb 2016

AFI 91-204, *Safety Investigations and Reports*, 12 Feb 2014

AFI 90-201, *The Air Force Inspection System,* 21 Apr 2015

AFI 36-2807, *Headquarters United States Air Force Deputy Chief of Staff, Operations, Plans and Requirements Annual Awards Program*, 07 Aug 2014

2ZCA12255, Rev AH, *Pilot Flight Equipment (PFE) Configuration Document,* 14 Mar 2016

AFPD 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*. 8 Mar 2007

AFI 11-301, Volume 5, *Aircrew Flight Equipment (AFE) Career Field Development*, 9 Jul 2015

AFI 11-403, *Aerospace Physiological Training Program*, 30 Nov 2012

AFI 48-139, *Laser and Optical Radiation Protection Program,* 30 Sep 2014

AFI 63-101_20-101, *Integrated Life Cycle Management,* 07 Mar 2013

AFI 10-403, *Deployment Planning and Execution*, 20 Sep 2012

AFI 25-101, *War Reserve Materiel (WRM) Program Guidance and Procedures*, 14 Jan 2015

AFI 10-401, *Air Force Operations Planning and Execution*, 07 Dec 2006

AFI 25-201, *Support Agreements Procedures, 18 Oct 2013*

CFETP 1P0X1, *AFSC 1P0X1, Aircrew Flight Equipment Career Field Education and Training Plan*, 01 Oct 2015

AFI 32-1024, *Standard Facility Requirements*, 14 Jul 2011

AFMAN 32-1084, *Facility Requirements*, 20 Apr 2012

AFRCH 32-1001, *Standard Facility Requirements,* 25 Jan 2012, Certified Current 9 Mar 2016

ANGH 32-1084, *Facility Requirements*

AFI 36-2101, *Classifying Military Personnel (Officers and Enlisted)*, 25 Jun 2013

AFI 11-202, Volume 3, *General Flight Rules*, 07 Nov 2014

AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*, 18 Jul 2011

AFI 11-2MDS-Series, Volume 1, *Aircrew Training*, (see applicable MDS volume 1)

AFI 36-2201, *Air Force Training Program*, 15 Sep 2010

AFI 21-201, *Munitions Management*, 03 Jun 2015

AFI 11-410, *Personnel Parachute Operations*, 04 Aug 2008

AFI 13-217, *Drop Zone and Landing Zone Operations,* 10 May 2007

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 21 May 2015

AFI 24-302, *Vehicle Management*, 26 Jun 2012

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

AFI 48-145, *Occupational and Environmental Health Program*, 22 Jul 2014

AFMAN 91-223, *Aviation Safety Investigations and Reports*, 16 May 2013

AFI 91-202, *The US Air Force Mishap Prevention Program*, 24 Jun 2015

AFI 90-802, *Risk Management*, 11 Feb 2013

AFI 23-101, *Air Force Materiel Management*, 8 Aug 2013

AFMAN 23-122, *Materiel Management Procedures*, 8 Aug 2013

AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*, 26 Jan 2012

AFI 31-101, *Integrated Defense (FOUO),* 08 Oct 2009

DOD 5 100.76-M *Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives* 28 Feb 2014

AFMAN 91-201, *Explosives Safety Standards*, 12 Jan 2011

AFI 91-203, *Air Force Consolidated Occupational Safety Instruction,* 15 Jun 2012

AFI 48-101, *Aerospace Medical Enterprise*, 8 Dec 2014

AFI 31-117, *Arming and Use of Force by Air Force Personnel,* 17 Mar 2015

AFI 36-2226, *Combat Arms Program*, 24 Feb 2009

AFMAN 31-229, *USAF Weapons Handling Manual*, 12 May 2004

AFJ 13-210(I) *Joint Airdrop Inspection Records, Malfunction/Incident Investigations, and Activity Reporting*, 23 Jun 2009

AFI 16-1301, *Survival, Evasion, Resistance, and Escape (SERE) Program*, 06 Sep 2006

AFI 11-401, *Aviation Management*, 10 Dec 2010

AFI 32-2001, *Fire Emergency Services (FES) Program,* 27 Feb 2014

AFI 11-202, Volume 1, *Aircrew Training*, 22 Nov 2010

ANSI Z 136.1-2014, *American National Standard for Safe Use of Lasers*

Mil Hdbk 828B, *Range Laser Safety*, 9 Mar 2011

AFRL-SA-WP-SR-2012-0005, *United States Air Force School of Aerospace Medicine Laser Injury Guidebook*, Apr 2012

Adopted Forms

AFTO Form 46, *Prepositioned Aircrew Flight Equipment*

AF Form 847, *Recommendation for Change of Publication*

AF Form 679, *Air Force Publication Compliance Item Waiver Request Approval*

AF IMT 1000, *Idea Application*

AFTO 22, *Technical Manual (TM) Recommendation and Reply*

AF Form 457, *USAF Hazard Report*

AF Form 797, *Job Qualification Standard (JQS) Continuation Sheet*

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

AF 1297, *Temporary Issue Receipt*

AF IMT 55, *Employee Safety and Health Record*

AETC Form 281, *Instructor Evaluation Checklist*

AF 1522, *ARMS Additional Training Accomplishment Report*

AF Form 2420, *Quality Control Inspection Summary*

Allowance Standards

AS 016, *Special Purpose Clothing and Personal Equipment*, (see applicable series)

AS 450, *Aircrew Flight Equipment, Guardian Angel (GA), and Special Tactics (SPT)*

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

AS 538, *Security Police Equipment, Organizational Small Arms Equipment, Military Dogs, Associated Equipment and Civil Disturbance Equipment*

AFI 90-821, *Hazardous Communications (HAZCOM) Program*, 27 Jan 2014

AFH 33-337, *The Tongue and Quill*, 27 May 2015

AFI 10-201, *Status of Resources and Training System*, 19 Apr 2013

AFI 10-402, Volume 1, *Mobilization Planning* 01 May 2012

AFI 10-601, *Operational Capability Requirements Development*, 06 Nov 2013

AFI 10-701, *Operations Security (OPSEC)*, 08 Jun 2011

AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*, 24 Jan 2007

AFI 11-2AE, Volume 3, *Aeromedical Evacuation (AE) Operations Procedures*, 15 Aug 2014

AFI 11-215, *USAF Flight Manuals Program (FMP)*, 22 Dec 2008

AFI 11-402, *Aviation and Parachutist Service, Aeronautical Ratings and Aviation Badges*, 13 Dec 2010

AFI 11-421, *Flying Operations, Aviation Resource Management,* 10 Apr 2014

AFI 13-208, *Personnel Recovery Coordination Cell Operating Procedures*, 04 Aug 15

AFI 23-111, *Management of Government Property in Possession of the Air Force*, 29 Oct 2013

AFI 32-7086, *Hazardous Materials Management*, 04 Feb 2015

AFI 33-322, *Records Management Program*, 04 Jun 2012

AFI 33-324, *Air Force Information Collections & Reports Management Program,* 06 Mar 2013

AFI 33-364, *Records Disposition--Procedures and Responsibilities*, 22 Dec 2006

AFI 36-2406, *Officer and Enlisted Evaluation Systems*, 02 Jan 2013

AFI 36-2618, *The Enlisted Force Structure*, 27 Feb 2009

AFI 36-2803, *The Air Force Military Awards and Decorations Program*, 18 Dec 2013

AFI 38-101, *Air Force Organization*, 16 Mar 2011

AFI 38-201, *Management of Manpower Requirements*, and Authorizations 30 Jan 2014

AFI 38-204, *Programming USAF Manpower*, 21 Apr 2015

AFI 48-116, *Food Safety Program*, 19 Aug 2014

AFI 48-123, *Medical Examinations and Standards*, 05 Nov 2013

AFI 48-137, *Respiratory Protection Program*, 15 Jul 2015

AFI 65-601, Volume 1, *Budget Guidance and Procedures*, 16 Aug 2012

AFI 91-205, *Non-nuclear Munitions Safety Board*, 12 Apr 2012

AFTTP 3-4, *Airman's Manual*, 19 May 2015

AFMAN 10-2503, *Operations in a Chemical Biological, Radiological, Nuclear, and High-Yield Explosive (CBRNE) Environment,* 07 Jul 2011

AFMAN 10-2605, *Education, Training and Exercise Competencies for Counter-Chemical, Biological, Radiological and Nuclear Operations*, 24 Apr 2015

AFI 24-301, *Vehicle Operations*, 05 May 2016

AFPAM 10-219, Volume 6, *Planning and Design of Expeditionary Airbases*, 01 Feb 2006

AFPAM 36-2241, *Professional Development Guide*, 01 Oct 2013

AFPD 16-8, *Arming of Aircrew, Mobility, and Oversea Personnel*, 18 May 1993

AFECD, *Air Force Enlisted Classification Directory*, (Part 1),

AFR 64-4, Volume 1, *Survival Training* (projected to be AFMAN 36-2216), 15 Jul 1985

DODD 5000.01, *The Defense Acquisition System*, 12 May 2003

JP 3-50, *Personnel Recovery*, 20 Dec 2011

AFOSH STANDARDS 48-20, *Occupational and Hearing Conservation Noise Program*, 10 May 2013

Technical Orders

00-5-1, *AF Technical Order System,* 01 Oct 2014

00-5-3, *Air Force Technical Order Life Cycle Management,* 01 Apr 2015

00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policy and Procedures*, 15 Oct 2015

00-20-9, *Forecasting Replacement Requirements for Selected Calendar and Hourly Time-Change Items,* 15 Jan 2014

00-25-06-2-1, *Intermediate Maintenance, 412A Aircrew Flight Equipment Work Unit Code Manual*, 30 Jun 1998

00-35D-54, *USAF Materiel Deficiency Reporting and Investigating System,* 09 Sep 2015

12S10-2AVS9-2, *Maintenance Manual, Intermediate with Illustrated Parts Breakdown, Image Intensifier Set, Night Vision, Type AN/AVS-9 (V),* 11 Jun 2008

14-1-1, *U.S. Air Force Aircrew Flight Equipment Clothing and Equipment*.

14D3-11-1, *Operation, Inspection, Maintenance, and Packing Instructions for Emergency Personnel Recovery Parachute (Chest, Back, Seat Style, and Torso Harness),* 21 Oct 2015

14P3-1-112, *Maint Instr - Nomex Flt Gr Coveralls, Types CWU-27P and CWU-28P and Gloves, Type GSFRP-2, Jacket, Flyers Summer Type CWU-36P, Jacket, Flyers Winter Type CWU-45P, Hood, Winter, Flyers (CWU-17P Jacket), Trousers, Flyers, Extreme Cold Weather, CWU-18P*, 15 Feb 2015

15X-1-1, Technical manual, *Maintenance Instructions, Oxygen Equipment*, 01 Apr 2015

Abbreviations and Acronyms

AAC— Air Armament Center

AC— Aircraft Commander

ACBRN - Aircrew—Chemical, Biological, Radiological, Nuclear

ACC— Air Combat Command

ACCA— Aircrew Contamination Control Area

ACPINS— Automated Computer Program Identification Number System

AEF— Air and Space Expeditionary Forces

AERP— Aircrew Eye/Respiratory Protection

AETC— Air Education and Training Command

AETF— Air and Space Expeditionary Task Force

AEW— Air Expeditionary Wing

AF— Air Force

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

AFCEC— Air Force Civil Engineer Center

AFCFM— Air Force Career Field Manager

AFE— Aircrew Flight Equipment

AFECT— Aircrew Flight Equipment Continuation Training

AFECTI— Aircrew Flight Equipment Continuation Training Instructor

AFEEC— Aircrew Flight Equipment Executive Committee

AFEFC— Aircrew Flight Equipment Flight Chief

AFELT— Aircrew Flight Equipment Lead Trainer

AFEMS— Air Force Equipment Management System

AFEO— Aircrew Flight Equipment Officer (Rated)

AFEPMC— Aircrew Flight Equipment Program Managers Course

AFEQAP— Aircrew Flight Equipment Quality Assurance Program

AFES— Aircrew Flight Equipment Superintendent

AFETT— Aircrew Flight Equipment Technician Training

AFFTC— Air Force Flight Test Center

AF—IT - Air Force Input Tool

AFH— Air Force Handbook

AFI— Air Force Instruction

AFJI— Air Force Joint Instruction

AFLCMC/HSD—Air Force Life Cycle Management Center/ Human Systems Division

AFMAN— Air Force Manual

AFMC— Air Force Materiel Command

AFMLP— Air Force master Lesson Plan

AFOSH— Air Force Occupational, Safety, and Health

AFPAM— Air Force Pamphlet

AFPD— Air Force Policy Directive

AFR— Air Force Reserve

AFRC— Air Force Reserve Command

AFRIMS— Air Force Records Information Management System

AFS— Air Force Specialty

AFSC— Air Force Specialty Code

AFSC— Air Force Safety Center

AG— Arming Group (A or B)

AIT— Automated Information Technology

ALC— Air Logistics Complex

ALEP— Aircrew Laser Eye Protection

ALIS— Autonomic Logistics Information System

AM— Aerospace Medicine

AMC— Air Mobility Command

ANG— Air National Guard

AP— Aircrew Performance

APEC— Aircrew Performance Executive Council

APP— Aircrew Performance Program

APS— Aircrew Performance Systems

APSP— Aircrew Performance Strategic Plan

APWG— Aircrew Performance Working Group

AQL— Acceptable Quality Levels

AR— Action Request

ARC— Air Reserve Component (AFRC and ANG)

ARCNet— Attached Resource Computer Network

ARE— Attack Readiness Exercise

ARMS— Aviation Resource Management System

AS— Allowance Standard

ASA— Aircrew Small Arms

BOI— Basis of Issue

C— Celsius

CA/CRL— Custodian Authorization Custody Receipt Listing

CAF— Combat Air Forces

CAFSC— Control Air Force Specialty Code

CAM— Centralized Asset Management

C—CBRN - Counter- Chemical, Biological, Radiological, and Nuclear

CBRN— Chemical, Biological, Radiological, and Nuclear

CCP— Command Control Points

CCIP— Wing Commander's Inspection Program

CDC— Career Development Course

CDD— Capabilities Development Document

CFETP— Career Field Education and Training Plan

COR— Contracting Officer Representative

COTS - Commercial-Off-The—Shelf

COTS/NDI - Commercial-Off-The-Shelf/Non—Developmental Item

CPFH— Cost Per Flying Hour

CPG— Career Progression Group

CRO— Combat Rescue Officer

CSAG— Consolidated Sustainment Activity Group (CSAG)

CTK— Composite Tool Kit

DOC— Designed Operational Capabilities

DoD— Department of Defense

DPAS— Defense Property Accountability System

DR— Deficiency Report

DRRS— Defense Readiness Reporting System

DRU— Direct Reporting Unit

DSN— Defense Switched Network

DSV— Detected Safety Violation

EAE— Equipment Accountability Element

EAID - Equipment Authorized In—Use Details

EDT— Enlisted Development Team

EEIC— Element of Expense/Investment Code

EN— Engineering/Project Engineering

EPT— Egress Procedures Trainer

ESDS— Electronic Software Download System

ETIMS— Enhanced Technical Information Management System

F— Fahrenheit

FAD— Force Activity Designators

FAM— Functional Area Manager

FAM— Forecast and Allocation Module

FD— Fire Department

FERMS— Flight Equipment Records Management System

FM— Functional Manager

FOA— Field Operating Agency

FOD— Foreign Object Damage

FTU— Formal Training Unit (Flying)

FTUO— For Training Use Only

GA— Guardian Angel

GACP— Global Ammunition Control Point

GSD— General Support Division

HAF— Headquarters Air Force

HARM— Host Aviation Resource Management

HCV— High Contrast Visors

HHQ— Higher Headquarters

HHR— Hand Held Radios

HMCS— Helmet Mounted Cueing System

HQ— Headquarters

HRI— Human Readable Information

HSD— Human Systems Division

IAW— In Accordance With

ICD— Initial Capabilities Document

ID— Identification

IP— Internet Protocol

IPI - In—Process Inspection

IPT— Integrated Process Team

ISSA - Inter-Service/Intra—Service Support Agreements

ITP— Individual Training Plan

JACKS— Joint Acquisition Chemical Biological Radiological Nuclear Knowledge System

JCIDS— Joint Capabilities Integration Development System

JDRS— Joint Deficiency Report System

JTD— Joint Technical Data

LC— Lead Command

LOGDET— Logistics Detail

LOGFOR— Logistics Force Module

LSEI— Life Sciences Equipment Investigation

MAF— Mobility Air Forces

MAJCOM— Major Command

MASO— Munitions Accountable Systems Officer

MCL— Master Configuration List

MDS— Mission Design Series

MEFPAK— Manpower and Equipment Force Packaging

MET— Mission Essential Task

MFM— MAJCOM Functional Manager

MICT— Management Internal Control Toolset

MISCAP— Mission Capability

MOA— Memorandums of Agreement

MOU— Memorandum of Understanding

MPH— Military Public Health

MSD— Materiel Support Division

MR— Mission Ready

MRA— MEFPAK Responsible Agency

MRI— Machine Readable Information

MTI— Mission Termination Inspection

MTL— Master Task Listing

MTP— Master Training Plan

N/A— Not Applicable

NAF— Numbered Air Force

NCO— Noncommissioned Officer

NCOIC - Noncommissioned Officer In—Charge

NDI - Non—Developmental Items

NGB— National Guard Bureau

NIPRNET— Non-classified Internet Protocol Router Network

NSN— National Stock Number

NVD— Night Vision Device

NVG— Night Vision Goggle

OG— Operations Group

O&M— Operations & Maintenance

OI— 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

PCS— Permanent Change of Station

PD— Position Description

PE— Personnel Evaluations

PFE— Pilot Flight Equipment

PGM— Product Group Manager

PIM— Product Improvement Manager

POC— Point of Contact

PQDR— Product Quality Deficiency Report

PWIP— Product Improvement Working Group

QA— Quality Assurance

QC— Quality Control052768

QCI— Quality Control Inspection

QI— Quality Inspector

R&D— Research & Development

RDT&E— Research, Development, Test and Evaluation

RegAF— Regular Air Force

ROBD— Reduced Oxygen Breathing Device

SA - Self—Assessment

SAC - Self—Assessment Communicator

SARM— Squadron Aviation Resource Management

SAV— Staff Assistance Visits

SDS— Safety Data Sheet

SCR— Special Certification Roster

SCWG— Survival Component Working Group

SERP— Sustainment Engineering Requirements Plans

SIPRNET— Secret Internet Protocol Router Network

SME— Subject Matter Expert

SPINS— Special Instructions

SPO— Systems Program Office

SPRAM— Special Purpose Recoverable Authorized Maintenance

SSM— System Sustainment Manager

STO— Special Tactics Officer

STS— Special Tactics Squadron

TBA— Training Business Area

TCTO— Time Compliance Technical Order

TDV— Technical Data Violation

TDY— Temporary Duty

TE— Task Evaluation

TFIA— Total Force Integration Association

TM— Technical Manual

TMDE— Test, Measurement, and Diagnostic Equipment

TO— Technical Order

TODA— Technical Order Distribution Account

TODO— Technical Order Distribution Office

TPFDD - Time—Phased Force Deployment Data

TRB— Training Review Board

UCR— Unsatisfactory Condition Reports

UEI— Unit Effectiveness Inspections

UGPL— Undergraduate Program Guidance Letter

UID— Unique Identification

UMD— Unit Manpower Document

UTC— Unit Type Code

UTM— Unit Training Manager

WCD— Work Control Document

WIT— Wing Inspection Team

WSTC— Weapon System Team Chief

WUC— Work Unit Code

Terms

Acceptable Quality Levels (AQL)— An AQL denotes the maximum allowable number of minor findings that a process or product may be charged for the task to be rated "Pass".

Aircrew— The total complement of rated (pilots, navigators, combat systems officers, air battle managers, and flight surgeons), career enlisted aviators (1AXXX and 1UXXX AFSC), and nonrated aircrew (K-, Q-, or X-prefixed AFSC) personnel responsible for the safe ground and flight operation of the aircraft and onboard systems, or for airborne duties essential to accomplishment of the aircraft's mission. Includes members in initial formal training for immediate assignment to an authorized operational flying position.

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

Aeromedical Evacuation (AE)— Movement of patients under medical supervision between medical treatment facilities (MTF) by fixed-wing aircraft by qualified AECMs.

Aeromedical Evacuation Crew Members (AECM)— Qualified Flight Nurses (FN), AE Technicians (AET), and unqualified student trainees under the direct supervision of a qualified instructor or FN, performing AE duties.

Aircrew Eye/Respiratory Protection (AERP)— AERP is designed to protect the crewmember head, neck, face, eyes, and respiratory tract in a CBRN environment. This equipment is designed to provide protection may impose operational or physiological burdens, degrading mission capability, or combat effectiveness.

Flight Equipment— Flight equipment encompasses all equipment that was formerly known as aircrew life support equipment, and is part of the 412A life support system.

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

Contracting Officer Representative (COR)—The AFE COR is synonymous with AFEO or AFES when directly responsible for the oversight of AFE sections. This term is not to be misrepresented by applying it to any other CORs aligned outside the scope of AFE section management (e.g. Mission Support Group functions, or other contract managed workcenters).

D—Bag - Full complement of ACBRN equipment BOI. Includes the contents of the D-1 bag, plus any remaining BOI items.

D-1 Bag— One complete ACBRN equipment carried by aircrew when deploying to chemical threat environment.

Detected Safety Violation (DSV)— A DSV is an unsafe act by an individual. The inspector must stop the unsafe act immediately. Do not document a separate DSV on an individual undergoing a

PE since the unsafe act automatically results in a "Fail" rating on the PE. Use the word "Safety" when a safety violation is committed during a PE.

In—Process Inspection (IPI) - An additional inspection or verification step at a critical point in the installation, assembly, or reassembly of a system, subsystem or component. These inspections are either TO, MAJCOM, or locally directed and are accomplished by qualified technicians designated by the unit CC via appointment letter, or as determined by applicable MAJCOM/FOA. The term IPI is the same as Critical Point Inspection and/or Rigger Check as found in various different service manuals and will be the only term used on all inspection sheets.

Laser— An acronym for Light Amplification by Stimulated Emission of Radiation. Any device that can be made to produce or amplify electromagnetic radiation in the x-ray, UV, visible, and infrared or other portions of the spectrum by the process of controlled stimulated emission of photons.

Laser Safety Officer (LSO)— An individual designated in writing whom is responsible for implementing a laser safety program and enforcing control of laser hazards within their area of responsibility.

Locally Designed Tool— A tool designed, manufactured or modified without approved guidance from an official source (e.g. TO, TCTO, COTS manual).

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.

Major Discrepancy/Finding— A major discrepancy is defined as a condition that would endanger personnel, jeopardize equipment or system reliability, impact safety of flight or warrant discontinuing the process or equipment inspection. Any major discrepancy will result in an automatic inspection failure. All discrepancies will be documented for trends.

Minor Discrepancy/Finding— A minor discrepancy is defined as an unsatisfactory condition that requires repair or correction, but does not endanger personnel, impact safety of flight, jeopardize equipment reliability or warrant discontinuing a process or equipment operation. A minor discrepancy is one that will not affect the operation of the equipment but prevents the equipment from being 100 percent compliant with current directives. All discrepancies will be documented for trends.

Newly Assigned— A technician /NCOIC new to the unit by way of PCS, new hire or changing MDS, etc.

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 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 CC's in response to requirements established by the Chairman of the Joint Chiefs of Staff and by CC's of subordinate

commands in response to requirements tasked by the establishing unified CC. 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 either in 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 functional manager (MFM) to handle LOGDET management responsibilities for an UTC. Pilot units are listed in the header record of each UTC and LOGDET.

Personnel Evaluation (PE)— A PE is an over-the-shoulder (direct or indirect) evaluation of a maintenance action or inspection by an individual or team as part of the Quality Assurance Program or SA program. Use PEs to evaluate job proficiency, degree of training and compliance with TOs. A PE may consist of a full or partial evaluation of the maintenance action or inspection being performed.

Primary Aircraft Inventory (PAI) (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.

Specialty Training Standard (STS)— An AF publication that describes an AFS in terms of tasks and knowledge an Airman in that specialty may be expected to perform or to know on the job. Also identifies the training provided to achieve a 3, 5, or 7 skill level within an enlisted AFS. It further serves as a contract between AETC and the functional user to show which of the overall training requirements for an AFSC are taught in formal schools and correspondence courses.

Task Evaluation (TE)— A TE is an over-the-shoulder direct evaluation of a maintenance action or inspection, from start to finish, by an individual or team who is in upgrade or qualification training and NOT currently task qualified on the task(s). TEs are also utilized during initial upgrade training to ensure the AFE technician is at the CFETP defined “GO” level, and can be task qualified in their TBA ITP record.

Technical Data Violation (TDV)— A TDV is an observation of any person performing maintenance without the proper technical data available, available but not in use or not following the correct sequence of steps (if directed). The technician must have knowledge of all general directives associated with the job prior to performing the task. However, those directives applicable to the task being performed must be present at the job site. Do not document a separate TDV on an individual undergoing a PE, since failure to use technical data automatically results in a "Fail" rating.

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

Two—Person Concept - Is designed and used throughout all IPIs to ensure both the 1P0X1 flight equipment inspector, and the IPI qualified 1P071, are both present and in constant view of each other during the IPI step. Enforce the Two-Person Concept until the IPI step is complete, at which point the individual flight equipment inspector continues with the inspection without the IPI qualified 1P071 present.

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.

Unsatisfactory Condition Reports (UCR)— A UCR is an unsafe or unsatisfactory condition, other than a DSV, chargeable to the work center supervisor. UCRs will be documented even when it is not possible to determine who created the condition.

Attachment 2

AF STANDARD AFE AUTOMATED INFORMATION TECHNOLOGY (AIT) BARCODE MARKING

A2.1. Contractors and suppliers for all AFE systems to include subcomponents shall use bar code nameplates, labels, or direct part markings IAW DoD MIL-STD-130 Change 1, DoD Unique Identification (UID) Guide, and this document. Use of an advanced part marking technology like bar codes and 2D symbols is essential to the AFE community being able to facilitate automated "removal and replace" features of automated programming and product support/maintenance. Exceptions to use of machine-readable nameplates will be considered, on a case-by-case basis, in accordance with practical or good business sense (e.g., part too small for nameplate, part immersed in fuel tank, etc.). AFE will consider other advanced part marking technology should they become commercially practicable, driven by DoD requirements, and or advantageous to the government in the future.

A2.2. Marking Requirements .

A2.2.1. Human Readable Information (HRI) and Machine Readable Information (MRI) are required for current AIT systems to provide the necessary advances in efficiency. Defense Federal Acquisition Regulation Supplement (DFARS) and the DoD have mandated the use of Data Matrix ECC 200 as the standard format for UID MRI markings. Overarching guidance for the construct and application of Data Matrix markings is contained in MIL-STD-130 and DoD UID Guide located at **www.acq.osd.mil/dpap/sitemap.html**. Specific examples are given here for manufactures and suppliers for implementation.

A2.2.2. AFE has three different situations that require or can require different markings and they are:

A2.2.1.1. a. UID Serialized Lot Batch; Items controlled with serial numbers and lot numbers

A2.2.1.2. b. UID Serialized Data Stream; Items controlled with serial numbers only

A2.2.1.3. c. Non UID/Non Serialized Lot Batch; Items that do not meet the UID requirement and are not controlled with serial numbers.

A2.2.1.4. See figures A2.1. – A2.6 for specific examples of the labels and data streams.

A2.3. HRI Marking Requirements . The following HRI data is required (as a minimum):

A2.3.1. - Manufacturer's Commercial and Government Entity (CAGE) code, 5 alpha/numeric characters

A2.3.2. - Item Lot Number

A2.3.2.1. **Note** : The Lot Number **MUST** be unique within the manufacturer's CAGE (Lot Numbers cannot be repeated on other part numbers)

A2.3.3. - Item Serial Number

A2.3.3.1. **Note** : AFE contracts typically require 5 digit serial numbers (minimum), sequentially assigned, not to be repeated until serial number 99,999 has been reached

A2.3.4. - Item manufacturer's Part Number

A2.3.4.1. **Note** : The weapon system Specification Number does not meet this requirement

A2.3.5. - Contract Number (CNCT#), 13 alpha/numeric characters.

A2.3.6. - Date of Manufacture; Year and Day of manufacture in Julian Date format.

A2.3.6.1. **Note** : Markings and/or attachments shall not refer to item installation requirements/procedures or shelf/service lives.

A2.4. MRI Data Construct .

A2.4.1. Data Matrix ECC200 markings shall be developed based on UID Data Construct #2 using Data Identifiers (DIs) in accordance with MIL-STD-130 and the DoD UID Guide (see Figure A2.2). To facilitate durability throughout the scanning life cycle, the largest symbol size, including quiet zone, shall be fitted within the available marking real estate. The symbol's internal module (cell) sizes shall be no smaller than 0.0075 inch (0.19 mm) and no larger than 0.025 inch (0.64 mm). Marks shall contain **only** the following data elements:

A2.4.1.1. **Note** : The parentheses surrounding the Data Identifier are NOT encoded in the 2D symbol.

A2.4.2. - (17V) Manufacturer's CAGE code, 5 alpha/numeric characters.

A2.4.3. - (1T) Item production Lot Number, IAW HRI requirement, Maximum 20 alpha/numeric, including special characters (- or /).

A2.4.3.1. **Note** : The lot number **MUST** be unique within the manufacturer's CAGE (Lot Numbers cannot be repeated on other part numbers)

A2.4.4. - (S) Item Serial Number, IAW HRI requirement, Maximum 20 alpha/numeric including special characters (- or /).

A2.4.5. - (1P) Manufacturer's Item Part Number, Maximum 20 alpha/numeric including special characters (- or /).

A2.4.5.1. **Note** : The weapon system Specification Number does not meet this requirement.

A2.4.6. - (8K) Contract Number (Cont No), Maximum 13 alpha/numeric characters.

A2.4.6.1. **Note** : For this data element, the dashes are not transmitted in the data stream.

A2.4.7. - (4D) Date of Manufacture (DOM) in Julian Date format, five numeric characters:

A2.5. Example: 06151 = 31 May 2006

A2.5.1. The first two positions are the last two digits of the year; the last three positions are the Julian Date (001 through 366)

Figure A2.1. Sample UID Serialized Lot Batch Data Plate/Label.

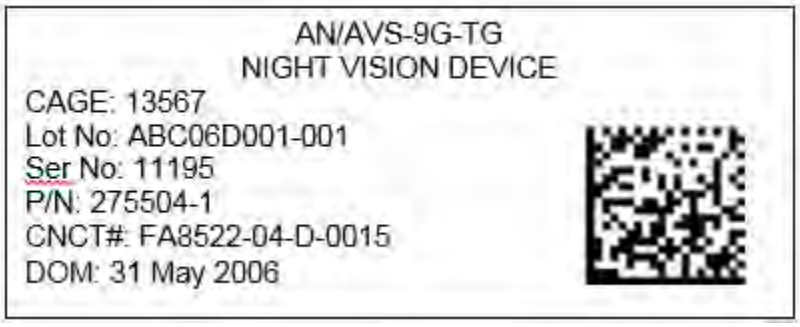


Figure A2.2. Sample UID SERIALIZED LOT BATCH Data Stream.

[)> RS 06 GS 17V 12345 GS 1T ABC06D123-001 GS S 12345678 GS 1P 123456789-ABCDEFGH GS 8K FA8522-04-D-0015 GS 4D 06130 RS EOT

Figure A2.3. Sample UID Serialized Data Plate/Label.

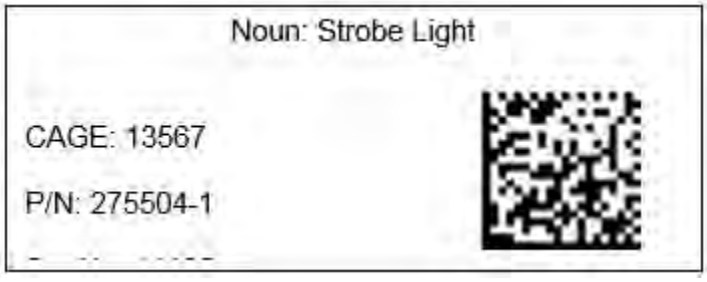


Figure A2.4. Sample UID Serialized Data Stream.

[)> RS 06 GS 17V 12345 GS 1P 123456789-ABCDEFGH GS S 12345678 GS 8K FA8522-04- D-0015 GS 4D 06130 RS EOT

Figure A2.5. Sample Non UID/Non Serialized Lot Batch Data Plate/Label.

Figure A2.6. Sample Non UID/Non Serialized Lot Batch Data Stream.

[)> RS 06 GS 17V 12345 GS 1T ABC06D123-001 GS 1P 123456789-ABCDEFGH GS 8K FA8522-04- D-0015 GS 4D 06130 RS EOT

Attachment 3

MEASURING AND DISPLAYING COMPLIANCE WITH POLICY

A3.1. Technician Training status may be determined by percentage complete with upgrade or proficiency training. As a minimum, when reporting manning data, it shall be reported by skill level. Source for measurement is TBA or other HQ USAF/A3TF approved technician training documentation system.

Figure A3.1. Sample of AFE Upgrade Training Level Metric.

NAME	SKILL LEVEL	1P TASK PROGRESSION			REMARKS
		# Complete	# Required	% Complete	
Amn One	3 LEVEL	94	219	43%	Enrolled in CDCs 2 Dec 09, Completed Volume 2
Amn Two	3 LEVEL	208	219	95%	CDC Test Complete and Pass
Amn Three	3 LEVEL	207	219	95%	CDC Test Complete and P; Upgrade on hold for 12 Month TIS
Amn Four	3 LEVEL	214	219	98%	CDC Test Complete and P; Upgrade on hold for 12 Month TIS
Amn Five	3 LEVEL	210	219	96%	CDC Test Complete and P; Upgrade on hold for 12 Month TIS
SHOP TOTALS				86%	

Figure A3.2. Sample Metric of Availability of AFE Personnel.

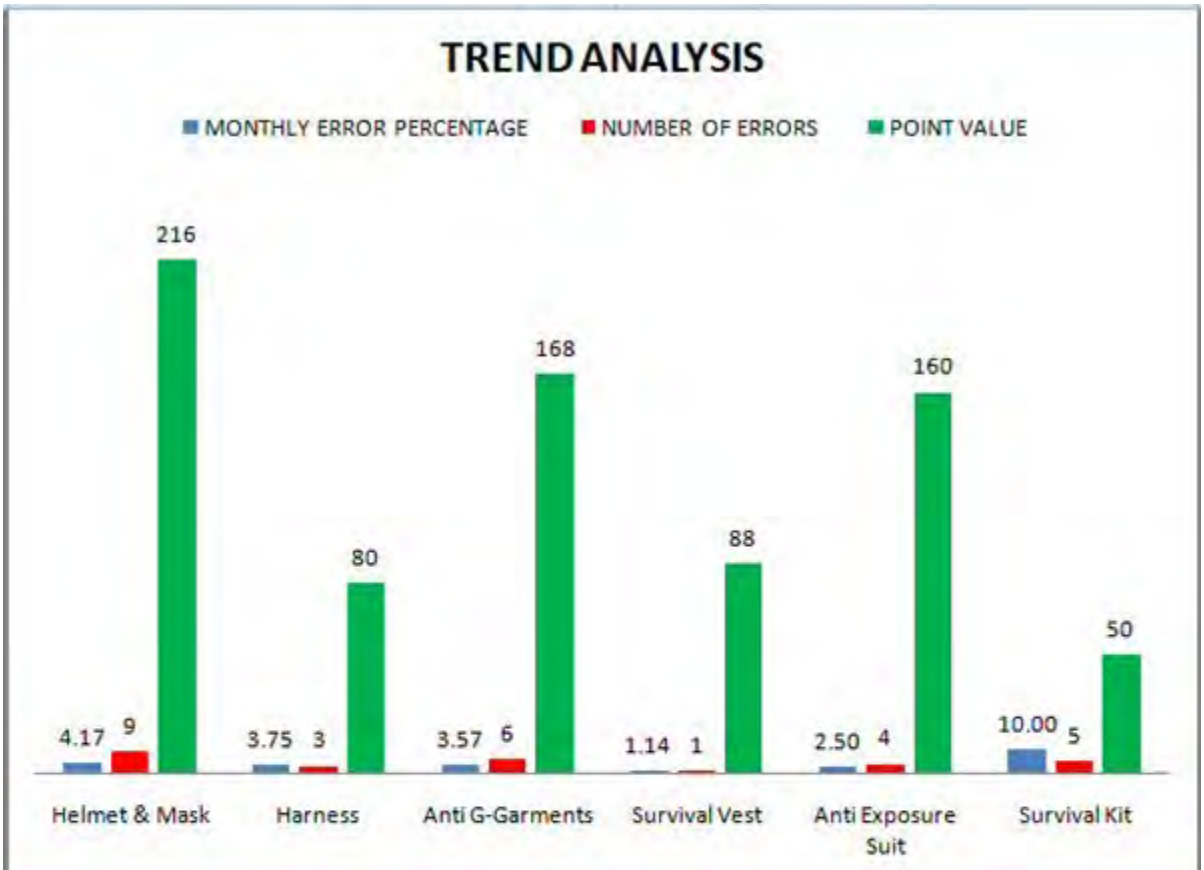
MANNING	3-Levels	5-Levels	7-Levels
Authorized	6	16	4
Assigned	5	14	6
% Assigned	83%	88%	150%

A3.2. Quality Assurance may include data from a single source or multiple sources. The program is intended to quickly identify and eradicate negative trends within AFE and outside agencies that provide equipment and services for AFE. The following is a sample of the types of formulas that may be used to calculate and identify trends:

A3.2.1. QA Data Points * Number of Items QCId = QA Point Value

A3.2.2. **(Number of QA Errors / QA Point Value)** * 100 = Error percent

Figure A3.3. Sample Metric of a Quality Assurance Inspection.



EQUIPMENT TYPE	ITEM VALUE	NUMBER OF QCI's	NUMBER OF ERRORS	POINT VALUE	MONTHLY ERROR PERCENTAGE
Helmet & Mask	54	4	9	216	4.17
Harness	20	4	3	80	3.75
Anti G-Garments	21	8	6	168	3.57
Survival Vest	22	4	1	88	1.14
Anti Exposure Suit	20	8	4	160	2.50
Survival Kit	25	2	5	50	10.00
TOTAL	162	30	28	4860	0.5761