

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

**AIR FORCE INSTRUCTION 11-2F-15E,
VOLUME 1**



31 MARCH 2011

Flying Operations

F-15E --AIRCREW TRAINING

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: HQ ACC/A3TO

Certified by: HQ USAF/A3O-A
(Col Jeffrey R. McDaniels)

Supersedes: AFI11-2F-15EV1,
9 January 2007

Pages: 85

This volume implements AFD 11-2, *Aircraft Rules and Procedures*; AFD 11-4, *Aviation Service*; and AFI 11-202, Volume 1, *Aircrew Training*. It establishes the minimum Air Force standards for training and qualifying/certifying personnel for performing aircrew duties in the F-15E. This publication applies to the US Air Force Reserve (AFRC). Selected paragraphs of this publication do not apply to all Air Force units. When an exception exists to the requirements of a paragraph, the exception is indicated in a parenthetical within the paragraph, or by using subparagraphs directed at specific units. Major Commands (MAJCOMs), Direct Reporting Units (DRU) and Field Operating Agencies (FOA) are to forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ USAF/A3O-AT, through HQ ACC/A3TO, for approval prior to publication IAW AFD 11-2, paragraph 4.2. Copies of approved and published supplements will be provided by the issuing office to HQ USAF/A3O-AT, HQ ACC/A3TO, and the user MAJCOM/DRU/FOA offices of primary responsibility (OPR). Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA OPR for post publication review. **Note:** The above applies only to those DRUs/FOAs that report directly to HQ USAF. Keep supplements current by complying with AFI 33-360, *Publications and Forms Management*, section 3F. See [paragraph 1.3](#) for guidance on submitting comments and suggesting improvements to this publication. This publication requires the collection and or maintenance of information protected by the Privacy Act of 1974. System of Records Notice F011 AF XO A, Aviation Resource Management system (ARMS) covers required information. The authority for maintenance of ARMS is Title 37 U.S.C. 301a (Incentive Pay), Public Law 92-204, Section 715 (Appropriations Act for 1973), Public Laws 93-570 (Appropriations Act for 1974), 93-294 (Aviation Career Incentive Act of 1974), and Executive Order 9397 as amended by Executive Order 13478, Amendments to Executive

Order 9397 Relating to Federal Agency Use of Social Security Numbers, November 18, 2008. 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 Disposition Schedule (RDS) located in Air Force Records Information Management System (AFRIMS) on the AF Portal: <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>. Contact supporting records managers as required.

SUMMARY OF CHANGES

This publication contains significant changes. Of note, this revision standardizes the use of the terms “certification” and “qualification” IAW AFI 11-202, Volume 2; aligns RAP training with the fiscal year; defines guidance for using MTC hours to meet experiencing levels; restructures Mission Qualification Training programs outlined in Chapter 3; removes requirement for formation landing and its associated currency and replaces it with formation approach currency (Table 4.1 updated); updates Table 4.2 Proration Allowance to reflect fiscal year reporting; adds Joint Helmet Mounted Cueing System (JHMCS) check-out program guidance and associated JHMCS currencies; redefines strafing qualification guidance and hit criteria; restructures FLUG, IPUG, and IWUG Upgrades; deletes Simulator Instructor Upgrade; updates pre-deployment spin-up training requirements; adds NVG Demanding Event definition; and renames EC Event S/A to Surface-to-Air EW Training; updates event definitions for Communication Jamming, Datalink Jamming, Degraded/Denied GPS and EA A/A.

Chapter 1—GENERAL GUIDANCE	5
1.1. Abbreviations, Acronyms, and Terms.	5
1.2. Responsibilities:	5
1.3. Processing Changes.	8
1.4. Training.	8
1.5. Training Concepts and Policies:	10
1.6. Experienced (EXP) Aircrew Requirements.	10
1.7. RAP Policy and Management:	11
1.8. Training Mission Program Development:	12
1.9. Training Records and Reports:	12
1.10. Aircrew Training Assessment:	13
1.11. Aircrew Utilization Policy:	13
1.12. Sortie Allocation and Unit Manpower Guidance:	13
Table 1.1. F-15E Sortie Requirements for Other Than API -1/-2 Aircrew.	14
1.13. Waiver Authority:	15
Chapter 2—INITIAL QUALIFICATION TRAINING	16

2.1.	General.	16
2.2.	Approval and Waiver for Local IQT.	16
2.3.	Prerequisites.	16
2.4.	Ground Training.	16
2.5.	Flight Training:	17
2.6.	IQT for Senior Officers:	17
Chapter 3—MISSION QUALIFICATION TRAINING		18
3.1.	General.	18
3.2.	Ground Training:	18
3.3.	Simulator Training:	19
3.4.	Flight Training.	20
Table 3.1.	LOWAT Categories.	22
3.5.	Initial ACDT.	25
3.6.	Flight Surgeons (FS) and Ground Liaison Officer (GLO) Training:	26
Chapter 4—CONTINUATION TRAINING		27
4.1.	General.	27
4.2.	Ground Training.	28
4.3.	Flight Training.	30
4.4.	Special Categories:	31
4.5.	Multiple Qualification/Currency.	31
4.6.	Currencies, Recurrencies and Requalification.	32
Table 4.1.	F-15E Aircrew Currencies.	34
4.7.	Regression (see Figure 4.	36
4.8.	End of Cycle Requirements.	37
4.9.	Proration of End-of-Cycle Requirements.	38
Table 4.2.	Proration Allowance.	39
4.10.	Regaining CMR/BMC Status:	39
4.11.	Example of the Lookback, Regression, Proration, and Requalification Process: ..	40
Figure 4.1.	Regression Flow Chart.	41
4.12.	G-Awareness CT.	41
Chapter 5—WEAPONS DELIVERY/EMPLOYMENT QUALIFICATION		43
5.1.	General.	43

5.2.	Initial Qualification:	43
5.3.	CT Qualification:	43
5.4.	Weapons Delivery Parameters.	44
5.5.	Full Scale/Live Ordnance.	46
Chapter 6—SPECIALIZED TRAINING		48
6.1.	General Guidance.	48
6.2.	Scope.	48
6.3.	FLUG.	48
6.4.	Instructor Upgrade (Pilot and WSO).	51
6.5.	MC Upgrade.	53
6.6.	EGBU-15/AGM-130.	54
6.7.	Pre-Deployment Spin-Up Training.	56
6.8.	NVG Certification:	56
6.9.	JHMCS Certification.	57
6.10.	Homeland Air Defense Augmentation.	57
6.11.	CSAR.	58
6.12.	Forms Adopted.	59
Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION		61
Attachment 2—GLOSSARY OF MISSION, SORTIE AND EVENT DEFINITIONS		73
Attachment 3—VERIFICATION GUIDE FOR A/G		82
Attachment 4—VERIFICATION GUIDE FOR A/A		84

Chapter 1

GENERAL GUIDANCE

1.1. Abbreviations, Acronyms, and Terms. See [Attachment 1](#).

1.1.1. For the purposes of this instruction, the definition of “certification” and “qualification” is IAW AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*; therefore, a “certification” denotes a commander’s action, whereas qualification denotes a formal Stan/Eval evaluation IAW AFI 11-202V2 and AFI 11-2F-15E, Volume 2, *F-15E-Aircrew Evaluation Criteria*.

1.2. Responsibilities:

1.2.1. HQ ACC/A3 is designated as the responsible agency for this volume IAW AFPD 11-2. HQ ACC/A3 will:

1.2.1.1. Chair semi-annual ACC Realistic Training Review Boards (RTRBs) to review ground and Flight training requirements and programs for Combat Air Forces (CAF) units. RTRB participants will include applicable ACC active and reserve component representatives. MAJCOM/A3s with major weapons systems for which ACC is lead command will be invited to send representatives and inputs.

1.2.1.2. Process all change requests.

1.2.2. All user MAJCOMs will:

1.2.2.1. Determine training requirements to fulfill primary (and secondary, if applicable) Designed Operational Capability (DOC) statement missions as well as meet unit taskings.

1.2.2.2. Submit MAJCOM supplements to HQ USAF/A3O-AT, through HQ ACC/A3TO, for approval during topline coordination of the document. Copies of approved and published supplements will be provided by the issuing office to HQ USAF/A3O-AT, HQ ACC/A3TO, and applicable MAJCOM offices of primary responsibility (OPR).

1.2.2.3. Review subordinate unit supplemental instructions and training programs annually.

1.2.3. Direct reporting units (DRUs) will:

1.2.3.1. Provide standard instructional texts to support operational weapons and tactics training. Forward two copies to each MAJCOM and NAF/A3, and five copies to each CAF wing/group.

1.2.3.2. Review, update, and distribute changes to instructional texts annually.

1.2.3.3. Review subordinate unit training programs annually.

1.2.4. Wings and groups will:

1.2.4.1. Develop programs to ensure training objectives are met. Assist subordinate squadrons in management of training programs, ensure programs meet unit needs, and

provide necessary staff support. ACC wings/groups will also assist AFRC unit training programs as required or requested IAW the applicable unit advisory support program.

1.2.4.2. Attach Aircrew Position Indicator (API) -6/-8 flyers to a flying squadron.

1.2.4.3. Except when otherwise mandated, designate the training level to which each API-6 (AFRC: all flyers) will train. Upon request, provide ACC/A3T (through MAJCOM/A3T or equivalent) with a list of Basic Mission Capable (BMC) and Combat Mission Ready (CMR) manning positions. Review programs and manning position designations annually.

1.2.4.4. Forward supplements of this volume and wing syllabi to MAJCOM/A3T (or equivalent) for coordination during the publication review/rewrite process or after significant changes. Review supplements each training cycle.

1.2.5. Squadron supervision will:

1.2.5.1. Squadron Training function (DOT) is responsible for maintaining AF Form 4348, *USAF Aircrew Certifications*, or a unit certification document for all squadron personnel and personnel attached to the squadron for flying. Certification Document will be a summary of certifications awarded and will be signed by the OG/CC, SQ/CC, or SQ/DO. Letters of Certification may be maintained via PEX.

1.2.5.2. Ensure adequate continuity and supervision of individual training needs, experience, and proficiencies of assigned and attached aircrew.

1.2.5.3. Ensure review of training and evaluation records of newly assigned aircrew and those completing formal training to determine the training required for them to achieve BMC or CMR and to ensure provisions of this volume have been met.

1.2.5.4. Ensure Ready Aircrew Program (RAP) missions are oriented to maintaining basic flight abilities, developing combat skills, or practicing tactical employment simulating conditions anticipated in the unit mission. Provide guidance to ensure only effective RAP missions are logged. See [Attachment 2](#) and RAP Tasking Memorandum (RTM) for RAP mission definitions.

1.2.5.5. Determine missions and events in which individual BMC aircrew will maintain qualification/certification versus familiarization (see [paragraph 1.4.4.2.2](#) for a description of “familiarization”).

1.2.5.6. Determine utilization of BMC aircrew.

1.2.5.7. Determine how many and which aircrew will carry special certifications (e.g. Flight Lead, CSAR, etc.) and qualifications (e.g. Instructor).

1.2.5.8. Direct supervision requirements to accomplish required training unless specifically directed elsewhere in this publication.

1.2.5.9. Determine program for supervisory review of armament recordings.

1.2.5.10. Assist the wing or group in developing the unit training programs.

1.2.5.11. Monitor individual assigned and attached aircrew currencies and requirements.

1.2.5.12. Ensure aircrew participate only in sorties, events, and tasks for which they are qualified/certified and adequately prepared, trained, and current.

1.2.5.13. **Periodic and End-of-Cycle Training Reports.**

1.2.5.13.1. **Periodic Reporting.** Squadrons will submit a periodic training report to MAJCOM/A3TO (AFRC: AFRC/A3TT) by the 15th of every 4th month of the training cycle (if the 15th falls on a weekend, then by the next business day).

1.2.5.13.1.1. Squadrons may submit an out of cycle report at anytime if Higher Headquarters (HHQ) assistance is required to prepare for DOC statement mission or deployment taskings.

1.2.5.13.1.2. Reports will consist of:

1.2.5.13.1.2.1. A SQ/CC's memo summarizing previous report results/issues, current training plan summary and significant shortfalls/limiting factors (LIMFACS) affecting training.

1.2.5.13.1.2.2. A completed squadron training health slide (revised) summarizing critical training issues.

1.2.5.13.1.3. Report guidance and templates can be found at ACC/A3TO's COP, <https://afkm.wpafb.af.mil/ASPs/CoP/OpenCoP.asp?Filter=AC-OP-02-66>.

1.2.5.13.2. **End-of-Cycle Reporting.** Squadrons will submit an End-of-Cycle Training Report NLT the 15th of October.

1.2.5.13.2.1. Report all deviations from the training requirements in this volume or the RTM, after proration at the end of the training cycle.

1.2.5.13.2.2. Squadrons deployed at the end of the training cycle are still required to submit an End-of-Cycle Report within the requirements of **paragraph 1.2.5.12.2** Squadrons will report the number of training months and waived number of deployed months.

1.2.5.13.2.3. End-of-cycle report guidance and templates can be found at A3TO's COP, <https://afkm.wpafb.af.mil/ASPs/CoP/OpenCoP.asp?Filter=AC-OP-02-66>.

1.2.5.13.3. **Shortfall and LIMFAC reporting.** Report only significant shortfalls or LIMFACS that affect 20% or greater of assigned/attached aircrew and all events/sorties waived by the OG/CC.

1.2.5.13.3.1. Shortfalls occur when required mission training tasks are not accomplished due to shortages of equipment, munitions, etc. Example: unable to accomplish actual weapons release due to a shortage of training weapons.

1.2.5.13.3.2. LIMFACS are factors, constraints, restrictions, etc. that degrade training effectiveness. **EXAMPLE:** the squadron's ability to accomplish actual weapons deliveries is limited due to the lack of ranges that allow heavyweight munitions.

1.2.5.13.3.3. Include possible solutions or specific assistance required (if applicable). The MAJCOM will attempt to rectify or minimize noted

shortfalls/LIMFACS while the training cycle is under way.

1.2.6. Individual aircrew will:

1.2.6.1. Hand carry all available training records to assist the gaining unit in assessing certifications and training requirements. Reference AFI 11-202V2 for guidance on individual aircrew responsibilities relating to transporting qualification records [i.e. Flight Evaluation Folders (FEF)].

1.2.6.2. Be responsible for completion of training requirements and currencies within the guidelines of this volume.

1.2.6.3. Ensure they participate only in ground and flight activities for which they are qualified/certified, current, and prepared.

1.3. Processing Changes. Process changes using the AF Form 847, *Recommendation for Change of Publication*, IAW AFI 33-360 and AFI 11-215, *USAF Flight Manuals Program (FMP)*, through local and MAJCOM training channels to ACC/A3TO. ACC/A3TO will forward coordinated recommended changes to USAF/A3O-AT for approval.

1.4. Training. Aircrew training is designed to progress a crewmember from Initial Qualification Training (IQT) (Basic Course or Transition/Re-Qualification Training), then to Mission Qualification Training (MQT), and finally to Continuation Training (CT).

1.4.1. **IQT** provides aircrew the basic training necessary to initially qualify in flight duties without regard to any specific unit's mission. See **Chapter 2**. Upon completion of IQT, aircrew attain Basic Aircraft Qualification (BAQ) status. BAQ is a prerequisite for all follow-on training, including MQT. Except for general officers above the wing level, BAQ is not a long-term status. Waiver authority for any aircrew other than general officers above the wing level to remain BAQ for longer than six months is MAJCOM/A3.

1.4.2. **MQT** provides aircrew the advanced training necessary to qualify in flight duties that directly support a unit's mission. See **Chapter 3**. Aircrew maintain BAQ status until complete with MQT and subsequently designated CMR or BMC. The Formal Training Unit (FTU) Instructor course is equivalent to a unit MQT program.

1.4.3. **CT** consists of two aspects. The first involves training in the basic flight skills necessary to ensure the safe operation of the aircraft. The second consists of specific mission-related training required to accomplish the unit's assigned missions.

1.4.4. **RAP** is the CT program designed to focus training on capabilities needed to accomplish a unit's core tasked missions, fulfill DOC statement mission requirements, and/or provide focus on mission sets as determined by the SQ/CC. Specific RAP instructions are issued by each MAJCOM via a RTM (see **Chapter 4**). Upon completion of IQT and MQT, aircrew will have received training in all the basic missions of the unit (see **Chapter 3** for exceptions). After MQT completion, aircrew will then be assigned to a CMR or BMC manning position within the unit.

1.4.4.1. **CMR.** A status that denotes an aircrew is receiving the minimum training required to be certified, current, and proficient in all of the primary DOC statement mission requirements of their assigned or attached unit.

1.4.4.1.1. All combat unit (CC-coded) active duty API-1 and API-2 positions, and flying SQ/CC and SQ/DO positions are designated CMR positions. OG/CCs may designate other API-6 positions not assigned to the flying squadron as CMR [EXCEPTION: If a unit is over-manned, the SQ/CC may elect to train the front line of their Unit Manning Document (UMD) API-1s and -2s to CMR and designate the overage BMC. In this case, priority should be given to inexperienced aircrew, with at least 50%, if available, designated CMR].

1.4.4.1.2. CMR aircrew maintain currencies that affect CMR status, accomplish all core designated flight training (missions and events), and all mission ground training. As described in the RTM, failure to complete required CMR training (both flying and ground) or maintain currencies could result in regression to Non-CMR (N-CMR) status (see [paragraph 4.7](#)) unless waived by the approval authority for the event in question. While N-CMR, aircrew may perform missions (including exercises and contingencies) and events in which they are certified and current at the discretion of the SQ/CC.

1.4.4.2. **BMC.** A status that denotes an aircrew is receiving the minimum training required to be familiar with all (and may be certified, current, and proficient in some) of the primary DOC statement mission requirements of their assigned or attached unit.

1.4.4.2.1. All active duty wing aircrew positions that are not designated CMR positions, are BMC positions. BMC positions are assigned to aircrew that have a primary job performing wing supervision or staff functions that directly support the flight operation, or are FTU/USAFWS instructors, or operational test (OT) aircrew. Many of these aircrew are required to provide additional sortie generation capability, either in lieu of or in addition to, the personnel assigned to the flying squadrons.

1.4.4.2.2. BMC aircrew must be able to attain proficiency and, if required, certification/qualification in 30 days or less for those missions/events that they maintain familiarization only.

1.4.4.2.3. BMC aircrew accomplish all mission related ground training designated by their attached SQ/CC.

1.4.4.2.4. BMC aircrew may deploy and may participate in any mission for which they are proficient and certified/qualified, without additional training, as determined by the SQ/CC.

1.4.4.2.5. As described in the RTM, failure to complete required BMC training (both flying and ground) results in regression to Non-BMC (N-BMC) status (see [paragraph 4.7](#)). While N-BMC, SQ/CC will determine missions the aircrew may perform and the supervision required.

1.4.5. **Specialized Training.** Training in any special skills necessary to carry out the unit's assigned mission that is not required by every aircrew. Specialized training consists of upgrade training such as flight lead upgrade (FLUG), instructor pilot/WSO upgrade (IPUG, IWUG), etc., as well as CT to maintain certification, currency, and proficiency in unit tasked special capabilities and missions.

1.4.5.1. Specialized training is normally accomplished after an aircrew is assigned CMR/BMC status and is normally in addition to CMR/BMC requirements except for Mission Commander (MC) and Flight Lead (FL) training. Unless otherwise specified, aircrew in CMR or BMC positions may hold special mission certifications as long as any additional training requirements are accomplished.

1.4.5.2. SQ/CCs will determine and assign aircrew that will train for and maintain special mission certifications.

1.5. Training Concepts and Policies:

1.5.1. Units will design training programs to achieve the highest degree of combat readiness consistent with flight safety and resource availability. Training must balance the need for realism against the expected threat, aircrew capabilities, and safety. This volume provides training guidelines and policies for use with operational procedures specified in applicable flight and operations publications.

1.5.2. ACC Training Support Squadron (ACC TRSS) will develop and validate training programs when tasked by HQ ACC/A3. Other MAJCOMs may submit requests for training program support to HQ ACC/A3. If validated, these requests will be prioritized and tasked to ACC TRSS. Designated test units (CB-coded) may develop syllabi to upgrade Operational Test Aircrew in support of specific test plans. These syllabi will be approved by the OG/CC and submitted to ACC TRSS.

1.5.3. Design training missions to achieve combat capability in squadron tasked roles, maintain proficiency, and enhance mission accomplishment and safety. RAP training missions should emphasize either basic combat skills, or scenarios that reflect procedures and operations based on employment plans, location, current intelligence, and opposition capabilities. Use of procedures and actions applicable to combat scenarios are desired (e.g., appropriate use of code words, authentication procedures, combat tactics, safe recovery procedures, tactical deception, in-flight reports, threat reactions, Intel brief/debrief). Tactical training will include use of inert and live ordnance, threat simulators, countermeasures, and dissimilar aircraft as much as practical.

1.5.4. In-flight Supervision:

1.5.4.1. Unless specifically directed, the SQ/CC determines the level of supervision necessary to accomplish the required training. If the mission objectives include introduction to tasks or instruction to correct previous discrepancies, then an instructor (IP, IW) is required.

1.5.4.2. IPs and flight lead (FL)-qualified SQ supervisors may allow any pilot to lead limited portions of a mission if appropriately briefed. This provision will only be used to allow the pilot to practice events in which the pilot is already certified and current or to help determine if the pilot is ready for FLUG. In either case, the IP or SQ supervisor is responsible for the flight at all times.

1.5.4.3. Flight leads may give their wingman the tactical lead for specific tasks. As the tactical lead, the wingman makes tactical decisions for the flight, but the flight lead retains overall authority and responsibility.

1.6. Experienced (EXP) Aircrew Requirements.

1.6.1. An experienced aircrew has one of the following:

1.6.1.1. 500 hours PAI.

1.6.1.2. 1,000 hours (FP/IP/MP), of which 300 are PAI.

1.6.1.3. 600 fighter hours, of which 200 hours are PAI.

1.6.1.4. Previously fighter experienced and 100 hours PAI.

1.6.2. For pilots, hours are FP/IP/MP and fighter time is defined as FP/IP/MP hours logged in aircraft while assigned an AFSC of 11FX or sister service equivalent (e.g. Navy F-18 pilot). Hours logged during Introduction to Fighter Fundamentals (IFF) (either as a student or an instructor) are considered fighter time.

1.6.3. For WSOs, fighter time is hours logged in aircraft while assigned an AFSC of 12FX. Hours logged during IFF are considered fighter time.

1.6.4. Hours logged in the Mission Training Center (MTC) accomplishing RTM-approved missions will be counted as "hours" when determining experience level. RAP MTC Mission hours will not exceed 20% of the total PAI required to meet the experienced threshold (ex: 100 RAP MTC Mission hours out of 500 hours PAI may be used to meet the experience threshold). See the current RTM for guidance on approved RAP SIM Missions and logging procedures.

1.7. RAP Policy and Management:

1.7.1. The RAP training cycle is each fiscal year and executed IAW the RTM. Each RAP CT status (i.e. BMC/CMR) is defined by a total number of RAP missions, broken down into mission types, plus specific weapons qualifications and associated events as determined by the MAJCOM and unit commanders.

1.7.2. The total number of RAP missions for BMC/CMR is the primary factor for maintaining an individual's CT status. The breakout of mission types is provided as a guideline to be followed as closely as possible but minor variances are authorized (excludes Red Air allocations). Variations in mission types may be used as a basis for regression as directed by the SQ/CC. Certification in a mission is determined by the SQ/CC considering the MAJCOM guidance and the individual's capabilities.

1.7.3. An effective RAP training mission requires accomplishing a tactical mission profile or a building block type mission [e.g. BFM, Basic Surface Attack (BSA), etc.]. Each mission requires successfully completing a majority of the events applicable to that sortie type, as determined by the SQ/CC and [Attachment 2](#).

1.7.3.1. Only one mission will be logged per sortie (day or night) unless separated by Air Refueling (AAR).

1.7.3.2. Each mission on either side of the AAR must stand alone as an effective training mission.

1.7.3.3. A maximum of two missions per sortie will be logged under these rules.

1.7.4. The SQ/CC's first priority should be to train all designated aircrew to CMR.

1.7.5. Progression from BMC to CMR requires:

- 1.7.5.1. A 1-month look back at the CMR mission rate.
 - 1.7.5.2. Certification/qualification in all core missions and weapons events required at CMR.
 - 1.7.5.3. Confirmation that the progressed aircrew can complete the prorated number of mission and event requirements remaining at CMR by the end of the training cycle.
 - 1.7.5.4. Completion of mission-related ground training, to include a current Verification (see [paragraph 3.2.3](#)) or Certification (see [paragraph 3.2.4](#)) as applicable to the assigned unit's DOC statement.
- 1.7.6. Wing CMR and BMC aircrew will fly the required monthly mission rate. If unable, refer to Regression, [paragraph 4.7](#)
- 1.7.7. End of Cycle training requirements are based on the aircrew's experience level (as defined in [paragraph 1.6](#)) on the last day of the current training cycle.

1.8. Training Mission Program Development:

- 1.8.1. RTM BMC/CMR mission and event requirements apply to all BMC and CMR aircrew as well as those carrying special mission certifications (see [Attachment 2](#)). The standard mission requirements listed in the RTM establish the minimum number of missions per training cycle for BMC and CMR levels of training. The current RTM takes precedence over this volume and may contain updated requirements, missions or events not yet incorporated in [Attachment 2](#). The RTM dictates what MTC missions/events may be logged as RAP missions/events and what currencies may be updated. The RTM will dictate what number of RAP MTC missions may be used for lookback. **The RTM applies to all F-15E aircrew.**
- 1.8.2. BAQ requirements are different from BMC or CMR requirements (**see the RTM**).
- 1.8.3. Experiencing and collateral sortie requirements must be considered when developing unit flight hour programs.
- 1.8.3.1. Experiencing sorties are additional training sorties necessary to achieve desired proficiency in optimum time. RAP missions may not provide sufficient hours to help aircrew reach "experienced" status (see [paragraph 1.6](#)) to achieve overall unit experience levels.
 - 1.8.3.2. Collateral sorties are not directly related to combat employment training but are necessary in day to day unit operations. These include but are not limited to functional check flights (FCF), ferry flights, deployments, and air shows. For the annual training cycle, the MAJCOM may allocate in the RTM a block of sorties for these purposes.
- 1.8.4. Unit flying hour programs (FHP) are allocated a number of attrition sorties that compensate for non-effective training sorties. Non-effective sorties are logged when a training sortie (Basic Skills or BMC/CMR mission) is planned and flown, but a majority of valid training for that type of mission is not accomplished due to poor weather, air aborts, etc. In order to accurately allocate the number of attrition sorties, it is essential that non-effective sorties are logged and reported appropriately.

1.9. Training Records and Reports:

- 1.9.1. Units will maintain aircrew records for individual training and evaluations IAW:

- 1.9.1.1. AFI 11-202V1
- 1.9.1.2. AFI 11-202V2
- 1.9.1.3. AFI 11-401, *Aviation Management*.

1.9.2. Track the following information for all aircrew (as applicable):

- 1.9.2.1. Ground training.
- 1.9.2.2. Requirements and accomplishment of individual sorties, mission types, and events cumulatively for the training cycle.
- 1.9.2.3. RAP mission requirements and accomplishment using 1-month and 3-month running totals for lookback commensurate with CT status (BMC/CMR).
- 1.9.2.4. Currencies.
- 1.9.2.5. Weapons employment records in sufficient detail to document all employment attempts and hit/miss percentages.

1.9.3. Units may fill in ARMS with either the date of the last FTU or USAFWS equivalent training accomplished, or the date of SQ/CC certification of MQT completion.

1.10. Aircrew Training Assessment:

1.10.1. Aircrew will use all available training media (e.g. ACMI, URITS, DVR, etc.) on all tactical missions to aid in assessment of training requirements.

1.11. Aircrew Utilization Policy:

1.11.1. Commanders will ensure wing/group tactical aircrew (API-1/-2/-6s) fill authorized positions IAW UMDs and that aircrew status is properly designated. The overall objective is that aircrew perform combat-related duties. Supervisors may assign aircrew to valid, short-term tasks (escort officer, flight evaluation board (FEB)/mishap board member, etc.), but must continually weigh the factors involved, such as level of aircrew tasking, flight proficiency, currency, and experience. For inexperienced aircrew in the first year of their initial operational assignment, supervisors should limit non-flight duties to those related to combat activities.

1.11.2. Duties required by various publications that may be assigned to CAF API-1/-2 aircrew are weapons and tactics officer, scheduler, flight safety officer (FSO), supervisor of flying (SOF), mobility/contingency plans, training (except ARMS documentation), SQ Standardization/Evaluation Liaison Officer (SELO), SQ Flight Equipment Officer (FEO), electronic combat officer, and other duties directly related to flight operations (range control officer [RCO], etc.). In some instances, such as squadron-assigned FSOs, API-1/-2s may be attached to the wing. API-1/-2s will not be attached to wing staffs or man wing staff positions unless total wing aircrew API-1/-2 manning is 100 percent or better. CCs will ensure wing staff aircrew (API-6s) perform duties justified in manpower standards documents and authorized in UMDs.

1.12. Sortie Allocation and Unit Manpower Guidance:

1.12.1. In general, inexperienced API-1/-2 aircrew should receive sortie allocation priority over experienced aircrew. Priorities for sortie allocation are as follows:

1.12.1.1. **FTU and USAFWS.** Formal syllabus training, Instructor Upgrade, Instructor CT, authorized staff personnel not performing Instructor or Flight Examiner (FE) duties.

1.12.1.2. **Operational Units.** CMR API-1/-2, MQT API-1/-2, CMR API-6, MQT API-6, and BMC.

1.12.1.3. **Test and Test Evaluation Squadron (TES).** Requirements directed by MAJCOM, training required to prepare for assigned projects and tasking, BMC training requirements that cannot be accomplished on primary missions.

1.12.2. For wings consisting of both FTU (TF-coded) and CC-coded units, at least one of the following aircrew will maintain FTU instructor status: wing commander (WG/CC), vice wing commander (WG/CV), OG/CC, deputy operations group commander (OG/CD).

1.12.3. API-8 rated personnel flight authorizations, ACC/IGS inspectors in API-6 billets, and Test Unit aircrews will be IAW AFI 11-401 and MAJCOM guidance.

1.12.3.1. API-8 and ACC/IGS crewmembers should fly the BMC mission rate, but they are not required to complete BMC-specific missions/events or meet monthly lookback requirements.

1.12.3.2. Test Unit crewmembers will fly the BMC mission rate as a minimum and should meet monthly BMC lookback.

1.12.3.3. Units should provide assigned API-6/-8 flyers adequate resources to maintain minimum training requirements. However, API-6/-8 flyer support will not come at the expense of the flying squadron's primary mission.

1.12.3.3.1. API-6 flyers will accomplish Basic Skills requirements with allotted BMC sorties.

1.12.3.3.2. API-8 and ACC/IGS flyers will strive to accomplish Basic Skills requirements with allotted BMC sorties.

1.12.3.4. If attached units cannot meet attached flyer requirements, they must request relief IAW AFI 11-401, as supplemented. Units requiring flight hour adjustments for attached API-8 and applicable API-6 flyers must request program changes IAW MAJCOM directives.

1.12.4. There is no maximum sortie requirement for CMR aircrew. **Table 1.1** defines the maximum sortie requirements for other aircrew per training cycle. On occasion, unique operations may require aircrew to fly more than the maximum number of sorties authorized; however, this may impact training of other aircrew.

Table 1.1. F-15E Sortie Requirements for Other Than API -1/-2 Aircrew.

RPI/API Level	CT Status (Min Sortie Requirement)	Unit's Aircraft Code	Organization Level	Maximum Cycle Sortie Allowance (Inexperienced/Experienced)
6	CMR	CC	Any	None
6	BMC	CC	Wing	160/140

6	BMC	TF	Wing	As required by PFT
6	BMC	CB	Wing	As determined by test program requirements
8	BMC	CB	Wing	143/123
8	BMC	CC, TF, or CB	Above Wing	150/130, or as required by PFT
5	BAQ	Any	All	If qualified and current in unit aircraft – 160/140. Otherwise, IAW AFI 11-202V1 as supplemented.
Any	BAQ	Any	Any	BMC Rate

1.13. Waiver Authority:

1.13.1. With MAJCOM/A3 approval, waiver authority for all requirements of the RAP tasking memo is the OG/CC. Additional guidance may be provided in the memo. Unless specifically noted otherwise in the appropriate section, and also with MAJCOM/A3 approval, the OG/CC may adjust individual requirements in **Chapter 4**, **Chapter 5**, and **Chapter 6**, on a case-by-case basis, to accommodate variations in aircrew member experience and performance. For all other provisions of this volume, and IAW AFI 11-202 Vol 1, the waiver authority is MAJCOM/A3.

1.13.1.1. Waiver authority for supplemental guidance will be as specified in the supplement and approved through higher level coordination authority.

1.13.2. Units subordinate to a NAF will forward requests directly to MAJCOM/A3T and provide their NAF/A3/OV with an information copy. Waivers from other than MAJCOM/A3 will include their appropriate MAJCOM/A3T as an information addressee. In all cases, once the waiver process is complete, include ACC/A3T as an information addressee.

1.13.3. Waivers to this volume will be valid until the approving official cancels the waiver in writing, the waiver expires, or this publication (or RTM) is revised to include the waived requirements.

1.13.4. Waivers to this volume extending beyond the end of the annual training cycle must be resubmitted at the start of each subsequent training cycle unless specifically stated in the waiver approval.

Chapter 2

INITIAL QUALIFICATION TRAINING

2.1. General. This chapter outlines IQT requirements for all aircrew.

2.1.1. Formal Training. IQT includes Basic (B), Transition/Re-qualification (TX) and Senior Officer Course (SOC) training that will normally be conducted during formal syllabus courses at FTU squadrons.

2.1.2. Local Training. In exceptional circumstances, when FTU training is not available within a reasonable time period, local IQT may be performed at the unit IAW the provisions of this chapter. Local IQT will be conducted using appropriate formal USAF Transition or Requalification Training Course syllabus tracks, flow programs, and requirements (securing waivers for deviations are described below). When local IQT is authorized, the gaining MAJCOM assumes responsibility for the burden of providing this training.

2.2. Approval and Waiver for Local IQT.

2.2.1. Gaining MAJCOM/A3 is approval authority to conduct local IQT. Info HQ ACC/A3T.

2.2.1.1. Gaining MAJCOM/CC is the approval authority for local IQT for colonel selectees and above to be conducted at the unit to which the officer is assigned. Info HQ ACC/A3T.

2.2.2. Gaining MAJCOM/A3 is waiver authority to change the requirements of the formal course syllabus for local IQT. Coordinate changes through HQ ACC/A3T.

2.2.3. Requests to conduct local IQT will include the following:

2.2.3.1. Justification for the local training in lieu of FTU training.

2.2.3.2. Summary of individual's flight experience, to include last centrifuge training date.

2.2.3.3. Date training will begin and expected completion date.

2.2.3.4. Requested exceptions to formal course syllabus, with rationale.

2.2.4. Successful completion of IQT requires the upgrading aircrew to complete an aircraft Qualification (QUAL--Pilots and WSOs) and Instrument (INSTM--Pilots only) evaluation IAW AFI 11-202V2 and AFI 11-2F-15EV2.

2.3. Prerequisites. Course prerequisites will be IAW the appropriate formal course syllabus and the USAF Education and Training Course Announcements at <https://etca.randolph.af.mil/>.

2.4. Ground Training. Ground training may be tailored to the individual's background and experience or particular local conditions. Current and available reference materials, such as AFTTP 3-3.F-15E, *Mission Employment Tactic*, AFTTP 3-1.F-15E, *Combat Aircraft Fundamentals*, instructor guides, and audiovisual programs, will be used as supporting materials to the maximum extent possible. Simulator missions will be accomplished in a MTC when practical; if these devices are not available a Cockpit Familiarization Trainer (CFT), Cockpit

Procedures Trainer (CPT) or Personal Computer-Based Aviation Training Device (PC-ATD) may be used.

2.5. Flight Training:

2.5.1. Mission sequence and prerequisites will be IAW the appropriate formal course syllabus (unless waived IAW [paragraph 2.2.2](#)).

2.5.2. Training will be completed within the time specified by the syllabus. Failure to complete within the specified time limit requires notification through channels to MAJCOM/A3 with aircrew member's name, rank, reason for delay, planned actions, and estimated completion date.

2.5.3. Aircrew in IQT will fly under the appropriate supervision (in the aircraft or chased) as annotated in the formal course syllabus until completing the QUAL evaluation.

2.5.4. Formal course syllabus mission objectives and tasks are minimum requirements for IQT. However, additional training events, based on student proficiency and background, may be incorporated into the IQT program with authorization of the SQ/CC. Additional training due to student non-progression is available within the constraints of the formal course syllabus and may be added at the discretion of the SQ/CC.

2.6. IQT for Senior Officers:

2.6.1. All SOC training (colonel selectees and above) will be conducted at FTUs unless waived IAW [paragraph 2.2](#)

2.6.2. Senior officers must meet course entry prerequisites and will complete all syllabus requirements unless waived IAW syllabus directives or [paragraph 2.2.2](#) (for local IQT).

2.6.3. If senior officers must be trained at the base to which they are assigned they will be considered in a formal training status for the duration of the course. Their duties will be turned over to appropriate CDs or CVs until training is completed. Waiver authority for this paragraph is MAJCOM/CC (submitted through MAJCOM/A3).

Chapter 3

MISSION QUALIFICATION TRAINING

3.1. General. MQT is a unit-developed training program that upgrades IQT-complete aircrew to BMC or CMR status so as to accomplish the unit DOC statement missions. Guidance in this chapter, which represents the minimum, is provided to assist SQ/CCs in developing their MQT program, which must be approved by the OG/CC prior to use. Squadrons are allowed to further tailor their programs for individual aircrew, based on current qualifications (i.e. Instructor), certifications (e.g. Flight lead, Flight Examiner, etc.), experience, currency, documented performance, and formal training. Applicable portions of MQT may be used to create a recertification program for aircrew that have regressed from CMR to BMC or requalification program for regression to BAQ to specifically address deficiencies that caused regression.

3.1.1. MQT will be completed within 90 calendar days starting from the aircrew's first duty day in the gaining unit. If the aircrew elects to take leave prior to being entered into MQT, the timing will begin after the termination of the leave. Training is complete upon SQ/CC certification of BMC/CMR status (subsequent to the successful completion of the MQT MSN qualification checkride). Notify MAJCOM/A3T (through MAJCOM/A3TO) either if training exceed the 90-day time period or there is a delay beginning MQT (e.g. due to security clearance) that exceeds 30 days.

3.1.2. AAR and initial Aircrew Chemical Defense Training (ACDT) flight training will be completed NLT 90 days from completion of MQT. AAR accomplished in IQT may fulfill MQT requirements. Failure to comply will result in regression to N-CMR/N-BMC until training is complete.

3.1.3. Aircrew in MQT will not fly in FLAG-level exercises or WSEP. The OG/CC will determine MQT participation in other exercises not specifically enumerated in the MQT syllabus.

3.1.4. Night MQT will satisfy any unaccomplished night training requirement(s) from IQT. If night training was accomplished in IQT, the SQ/CC may certify aircrew to BMC/CMR status without night MQT. All night training requires previously demonstrated proficiency and currency in similar day events, unless accomplished with an instructor. Night MQT may be combined with the Night Vision Goggle (NVG) upgrade. If not completed during the normal MQT flow, night MQT will be accomplished NLT 90 days from completion of MQT.

3.1.5. Prior to SQ/CC certification of an aircrew's CMR status the following must be accomplished:

3.1.5.1. LASDT CAT I training (see [paragraph 3.4.4.3](#)).

3.1.5.2. Initial qualification in all weapons delivery or employment events required for CMR. SQ/CC may approve the use of weapons qualifications accomplished in the FTU.

3.2. Ground Training:

3.2.1. Units will develop blocks of instruction covering areas pertinent to the mission as determined by the SQ/CC. Training accomplished during IQT may be credited towards this requirement.

3.2.2. Aircrew transferring into a different MAJCOM require Theater Indoctrination (TI) academics IAW AFI 11-202V1 prior to the first flight in the new MAJCOM AOR. TI academics may be accomplished during MQT academics or as part of the MQT Local Area Orientation (LAO) brief/mission.

3.2.3. **Initial Verification.** Initial Verification of CMR aircrew will be completed within 90 days after completing MQT (recommended, but not required for BMC aircrew). Failure to comply will result in regression to N-CMR until complete. Suggested briefing guides are at [Attachment 3](#) and [4](#). Each aircrew will demonstrate to a formal board a satisfactory knowledge of the squadron's primary DOC statement missions. Board composition will be established by the SQ/CC (OG/CC for wings composed of more than one MDS where aircrew from the different MDSs are Verifying together to a mixed MDS board). Desired composition is SQ/CC or SQ/DO (chairman), weapons, electronic combat, intelligence, and plans representatives.

3.2.4. **Initial Certification.** Aircrew assigned to nuclear-tasked squadrons will Certify IAW AFI 10-419, *Dual Capable Aircraft Nuclear Tasking, Planning and Operational Procedures: F-15E/F-16*. Aircrew who certify are exempt from verification requirements. Units with DOC statement-identified "core" aircrew may elect either to Verify or Certify aircrew not identified as their core members.

3.2.4.1. Aircrew assigned to nuclear-tasked squadrons in, or in support of, USAFE will certify IAW both AFI 10-419 and ACO Directive 75-6, *Special Weapons Training for Strike Aircrew*, and will apply the most restrictive guidelines of the two documents.

3.2.4.2. Initial Certification for all tasked aircrew will be completed within 90 days after completing MQT. With OG/CC approval, aircrew unable to meet this requirement due to unit deployments will, at a minimum, complete an initial Verification IAW paragraph [3.2.3](#). Applicable aircrew will then Certify IAW AFI 10-419 within 45 days of returning from the unit deployment.

3.2.5. Experienced F-15E aircrew (IAW [paragraph 1.6](#)) who accomplished initial Verification or Certification at a previous F-15E assignment may, at SQ/CC discretion, complete either an initial or a continuation Verification to meet the requirements of this section.

3.2.6. Notify MAJCOM/A3T (through MAJCOM/A3TO) if either the Verification or Certification (if applicable) will exceed the time periods specified.

3.3. Simulator Training:

3.3.1. The recommended minimum MQT training profiles that should be accomplish in the MTC are listed in [paragraph 3.3.3](#). Each training device mission will include selected emergency procedures (EP), unusual attitude, and inadvertent weather entry procedures. MTC MQT-1 is a prerequisite for the first MQT flight.

3.3.2. If a MTC is unavailable:

3.3.2.1. PC-ATD may be used for MTC MQT-2 or MQT-3; however, MQT aircrew must have a minimum of two MTC missions prior to MTC MQT-4 for practicing unusual attitude recovery and EPs.

3.3.2.2. A CFT may be used to accomplish appropriate switchology and EP training.

3.3.3. MQT MTC Profiles:

3.3.3.1. **MTC MQT-1--Local Area Orientation/Instruments.** Normal ground operations, standard departure(s), navigation, emergency airfield procedures and approaches, published penetration and approach to primary alternates and home base, emergency divert procedures, and EPs to include departure recognition and recovery procedures for both autoroll and spin recoveries.

3.3.3.2. **MTC MQT-2--A/A Procedures.** Trail departure, FENCE check, radar search techniques, horizontal conversions, vertical/combined conversions, EID procedures, Medium Range Missile (MRM)/Short Range Missile (SRM) employment, Tactical Electronic Warfare System (TEWS) interpretation, Electronic Warfare Warning Set (EWWS) operation, Electronic Countermeasures (ECM)/Electronic Counter Countermeasures (ECCM) operations, Fighter Data Link (FDL) operations, threat detection and defensive reactions, EPs, instrument recovery and approach.

3.3.3.3. **MTC MQT-3--A/G Procedures.** Heavyweight takeoff, Nav-FLIR and Terrain Following (TF) procedures (including fly-up procedures), weapons deliveries, TGT pod operation (LANTIRN or ATP), jettison procedures, Internal Countermeasures Set (ICS) operation, FDL operations, threat recognition and defensive reactions, local range procedures, emergency divert procedures, hung ordnance procedures.

3.3.3.4. **MTC MQT-4--Mission EPE.** This evaluation will be administered by a SEFE IAW AFI 11-202V2, AFI 11-2F-15EV2, MAJCOM supplements, and unit directives.

3.4. Flight Training. At SQ/CC discretion, applicable missions from those listed below will be used to build the local MQT program. MQT programs should use profiles typical of squadron missions. Maximum use of armament recording assets and captive missiles is encouraged on all MQT missions. Non-effective (NE) student non-progression (SNP) "X" sorties are limited to 2 per phase (A/A and A/G) and 4 total for the entire program. Further "X" sorties require SQ/CC written approval in the training records.

3.4.1. **Supervision.** A SQ supervisor (SQ/CC or SQ/DO) or instructor (IP/IW) in the element is required unless specified otherwise. The SQ/CC will determine the proper flight position of the supervisor/instructor unless specified otherwise.

3.4.2. **Breaks-in-Training.** If more than 14 calendar days elapse between sorties, a "P" sortie will be flown before continuing in the program.

3.4.3. **Practice EPs.** All aircrew must conduct practice EPs on at least one MQT sortie. As a minimum, the training will consist of briefing, flight, and debriefing a simulated EP scenario to include airborne communication with the SOF.

3.4.4. **Minimum Sortie Requirements.** The minimum sorties required in a local MQT program include: LAO/Instruments, Air Combat Training (ACBT) certification, Low Altitude Step Down Training (LASDT), A/G Training, and a formal AF Form 8 MSN evaluation (not required if portions of the MQT program are used to recertify aircrew who have regressed from CMR to BMC). Reference the paragraphs below for further details and recommended sortie flows that the SQ/CC may use to develop the unit's MQT program.

3.4.4.1. **LAO/Instrument.** As described in the local MQT flow, this requirement may be combined with ACBT certification (e.g. AHC, BFM, etc.). The LAO/Instrument sortie

flow will be a minimum of two sorties for inexperienced aircrew, one sortie for experienced (EXCEPTION: sortie(s) not required for aircrew assigned to the 4 FW right out of FTU). These sorties will emphasize basic airmanship skills (i.e. instruments, formation) while providing the aircrew familiarity with the local operating area through reinforcement of TI academics.

3.4.4.1.1. **Mission Objectives:** Be familiar with local area requirements and instrument procedures. Specific Mission Tasks: Local area familiarization, emergency airfield(s) overflight/approach(s), instrument penetration/approach (home field), FDL procedures and normal and simulated emergency patterns and landings. (*IP in the aircraft for pilots, IP/SQ sup for WSOs*).

3.4.4.1.2. Individual events may be accomplished anytime during MQT, however all events will be accomplished prior to SQ/CC certification of BMC/CMR status.

3.4.4.1.3. Aircrew will demonstrate proficiency in the following events: trail departure, lost wingman, instrument approach, precision and non-precision (at least one approach will be flown at the unit's primary divert base), radar trail arrival.

3.4.4.2. **ACBT Certification.** A/A training programs will be based on unit tasking and conducted IAW AFI 11-214, *Air Operations Rules and Procedures*, and applicable instructions. The following sorties (in sequence) will be used to become ACBT certified. Units may expand this program to achieve desired proficiency or capability. ACBT programs for aircrew with previous fighter experience may be individually tailored based on experience, currency, and documented performance. FTU graduates meet the requirements of this paragraph with the exception of ACT.

3.4.4.2.1. **MQT-AHC.** May be combined with the LAO/Instrument sortie(s) as described above. Mission Objective: Familiarize aircrew with aircraft maneuvering capabilities and limitations. Specific Mission Tasks: "G" warm-up and exercise (G-ex), pitchback/sliceback maneuvers, nose-high/low-airspeed recoveries, low speed (below 100 KIAS) handling characteristics, high AOA maneuvering, high and low speed rate/radius turns, and acceleration demonstrations.

3.4.4.2.2. **MQT-BFM.** Mission Objective: Demonstrate proficiency in BFM skills. Specific mission tasks: Tactical formation, ranging exercises, A/A weapons employment, offensive, defensive, and high aspect setups.

3.4.4.2.3. **MQT-ACM.** Mission Objective: Demonstrate proficiency in element A/A maneuvering primarily in the visual arena. Specific Mission Tasks: Offensive/defensive setups (to include defensive ACM perch), A/A weapons employment, engaged/defensive/supporting fighter roles and responsibilities.

3.4.4.2.4. **MQT-ACT.** Mission Objective: Demonstrate proficiency in element A/A employment primarily in the BVR arena. Specific Mission Tasks: Tactical formation, A/A weapons employment, defensive threat reactions, reforms, disengagement/egress.

3.4.4.3. **LASDT:**

3.4.4.3.1. To conduct low altitude operations safely, aircrew need to be knowledgeable of aircraft handling and performance characteristics, tactical

formation, intercept, offensive maneuvering, defensive threat reactions, and basic navigation. Operations in the low altitude environment require a well-supervised LASDT program, including initial certification and currency requirements. LASDT completion certifies aircrew to conduct low altitude training (LOWAT) at or below 1,000 feet AGL. LOWAT block/category certification is required prior to performing unsupervised operations in that block/category.

3.4.4.3.2. The LASDT program is built on a multi-phase training process IAW **Table 3.1** There is no time limit to progress beyond Category I and progress will be based upon individual aircrew proficiency and training availability. Progression through the program is based on instructor/SQ supervisor (SQ/CC or DO) assessment of aircrew performance, TR compliance, and judgment. All LASDT sorties will be supervised by an instructor or FL-qualified SQ supervisor (SQ/CC or DO) who is certified and current in LASDT.

Table 3.1. LOWAT Categories.

Category	Altitude Block	Minimum Requirements To Certify
I	1,000-500	LASDT-1, -2, -3
II	500-300	LOWAT Cat I Certified; LASDT-4, -5, -6
III	300-100	LOWAT Cat II Certified; LASDT-7, -8, -9

3.4.4.3.3. Demonstrated proficiency down to 500 feet AGL is required for Category I certification and is normally accomplished during IQT and/or MQT. At SQ/CC discretion, units may accept an aircrew's LOWAT category certifications from other units. LOWAT Category I certification is a minimum requirement for CMR status.

3.4.4.3.4. Entry into LASDT requires SQ/CC approval. The altitude to which an aircrew is certified is determined by the SQ/CC and based on the lowest altitude at which all tasks can be comfortably and proficiently performed. The goal is proficiency down to the minimum altitude necessary to execute the the squadron primary DOC statement missions. Upon successful completion of LASDT training, the SQ/CC will certify the aircrew to the minimum approved altitude of the LASDT category in which the aircrew was trained. With SQ/CC approval, low altitude training conducted at FTU/USAFWS may be used to fulfill LASDT certification requirements.

3.4.4.3.5. LASDT will be scheduled and briefed as a primary portion of the flight; however, other compatible events may be accomplished as long as the objectives of the LASDT training are met. LASDT training will not be accomplished as an alternate mission. Training profiles will be developed to avoid over-tasking the upgrading aircrew, and upgrade sortie continuity should be emphasized.

3.4.4.3.6. TRs will be IAW AFI 11-214 and AFI 11-2F-15E, Volume 3, *F-15E--Operations Procedures*. During LASDT, Knock It Off (KIO)s will include a climb to at least 1,000 feet AGL.

3.4.4.3.7. **Ground Training.** Ground training will be built to support the mission and concept of operations of the individual squadron. Incorporate appropriate

portions of AFTTP 3-1.F-15E, and AFTTP 3-3.F-15E. All ground academics will be completed prior to the flight brief and will include discussion of low altitude AHC, environmental factors, task management, Low Altitude Tactical Navigation (LATN), Low Altitude Tactical Formation (LATF), defensive reactions, low level awareness factors, and low altitude A/A employment.

3.4.4.3.8. **Flight Training:** If LASDT 1 and 2 are not completed during IQT, then all LASDT training must be accomplished during MQT. EXAMPLE: trainee completes LASDT 1 and 2 while in the FTU program; at SQ/CC discretion, only LASDT 3 is required in MQT.

3.4.4.3.8.1. **LASDT-1 (Single Ship, or w/Chase).** Mission Objective: Demonstrate proficiency in single-ship maneuvering between 5,000 and 1,000 feet AGL. Introduce low altitude operations down to a minimum altitude of 500 feet AGL. Specific Mission Tasks: AHC (low altitude handling/flight qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers); G-ex; low level navigation; airspeed control; fuel management; low level turns; ridge crossings; terrain masking/maneuvering techniques for level/rolling/rough terrain; visual lookout; altitude awareness/control; attack maneuvering; practice KIOs; defensive reactions; and single-ship low altitude tactical intercepts.

3.4.4.3.8.2. **LASDT-2 (Single Ship, or w/Chase).** Mission Objectives: Demonstrate proficiency in single-ship maneuvering in the low altitude environment down to a minimum altitude of 500 feet AGL. Specific Mission Tasks: AHC (low altitude handling/flight qualities, vertical awareness exercise, climb/dive/slice maneuvers; nose low recoveries, attitude awareness maneuvers); G-ex; low level navigation; airspeed control; fuel management; low level turns; ridge crossings; terrain masking/maneuvering techniques for level/rolling/rough terrain; visual lookout; altitude awareness/control; attack maneuvering; practice KIOs; defensive reactions; single-ship low altitude tactical intercepts.

3.4.4.3.8.3. **LASDT-3 (Two-Ship).** Mission Objectives: Demonstrate proficiency in 2-ship maneuvering in the low altitude environment down to a minimum altitude of 500 feet AGL. Specific Mission Tasks: AHC (low altitude handling/flight qualities, vertical awareness exercise, climb/dive/slice maneuvers, nose low recoveries, attitude awareness maneuvers); G-ex; low level navigation; fuel management; low level turns; TF; terrain masking/maneuvering techniques for level/rolling/rough terrain; ridge crossings; visual lookout; altitude awareness/control; attack maneuvering; practice KIOs; defensive reactions; weather route abort; 2-ship low altitude tactical intercepts and low altitude weapons employment considerations. *Upon satisfactory completion of this mission, the SQ/CC can certify the aircrew to LOWAT Category I.*

3.4.4.3.8.4. **LASDT-4 (Single Ship, or w/Chase).** Mission Objectives: Introduce low altitude operations down to a minimum altitude of 300 feet AGL. Specific Mission Tasks: See LASDT-1

3.4.4.3.8.5. **LASDT-5 (Single Ship, or w/Chase).** Mission Objectives: Demonstrate proficiency in single-ship maneuvering in the low altitude

environment down to a minimum altitude of 300 feet AGL. Specific Mission Tasks: See LASDT-2.

3.4.4.3.8.6. **LASDT-6 (Two-Ship).** Mission Objectives: Demonstrate proficiency in 2-ship maneuvering in the low altitude environment down to a minimum altitude of 300 feet AGL. Specific Mission Tasks: See LASDT-3. *Upon satisfactory completion of this mission, the SQ/CC can certify the aircrew to LOWAT Category II.*

3.4.4.3.8.7. **LASDT-7 (Single Ship, or w/Chase).** Missions Objectives: Introduce low altitude operations down to a minimum altitude of 100 feet AGL. Specific Mission Tasks: See LASDT-1

3.4.4.3.8.8. **LASDT-8 (Single Ship, or w/Chase).** Mission Objectives: Demonstrate proficiency in single-ship maneuvering in the low altitude environment down to a minimum altitude of 100 feet AGL. Specific Mission Tasks: See LASDT-2

3.4.4.3.8.9. **LASDT-9 (Two-Ship).** Mission Objectives: Demonstrate proficiency in 2-ship maneuvering in the low altitude environment down to a minimum altitude of 100 feet AGL. Specific Mission Tasks: See LASDT-3. *Upon satisfactory completion of this mission, the SQ/CC can certify the aircrew to LOWAT Category III.*

3.4.4.4. **Air-to-Ground.**

3.4.4.4.1. A/G training programs will be based on unit tasking and conducted IAW AFI 11-214, and applicable instructions. Units may expand this program to achieve desired proficiency or capability.

3.4.4.4.2. **MQT-BSA.** Mission Objectives: Demonstrate proficiency in medium/low altitude conventional weapons employment (preferably on a controlled range) and TF operations. Specific mission tasks: Medium/low weapons attack planning, A/G weapons employment, TF operations. Note: If student did not complete weapons qualifications in IQT, attempt to complete during MQT - BSA prior to MQT – AI.

3.4.4.4.3. **MQT-AI.** Mission Objectives: Demonstrate proficiency in AI scenario-driven tactical weapons employment. Specific Mission Tasks: Intel scenario, mission planning, opposed ingress, threat detection and reactions, First Run Attack (FRA), weapons employment, egress.

3.4.4.4.4. **MQT-DT/CAS.** Mission Objectives: Demonstrate proficiency in CAS/DT scenario-driven tactical weapons employment. Specific Mission Tasks: Find, Fix, Track, Target, Engage, and Assess (F2T2EA) targets with/without Joint Tactical Air Controller (JTAC) support (actual JTAC controls are highly desired).

3.4.4.4.5. **MQT- Night Employment.** Mission Objectives: Demonstrate proficiency in unit-specific missions at night. Note: Sq/CC should focus this ride on unit skills most needed to be proficient at night. A specific type sortie is not directed and multiple skill sets may be incorporated.

3.4.4.5. **Mission Evaluation (If Required).** This sortie will be flown IAW AFI 11-202V2 and AFI 11-2F-15EV2. The MSN evaluation is not required if the SQ/CC accepts the aircrew's current mission evaluation checkride.

3.4.5. **Low/Medium Level Strike.** If applicable, this sortie should be conducted prior to, but not more than 30 days after initial Certification IAW [paragraph 3.2.4](#) This mission is not required prior to the MQT checkride. Mission Objectives: Practice nuclear procedures and nuclear deliveries on tactical targets or a controlled range. Specific Mission Tasks: Route/threat planning, message receipt/taxi/launch procedures, enroute procedures, and tactical weapons delivery (Note: Two Person Control (TPC) and BARON procedures should be discussed, but may be simulated for this mission).

3.5. Initial ACDT. (N/A for CB/TF-coded) Designed to ensure aircrew proficiency in the overall use of the Aircrew Chemical Defense Ensemble (ACDE) and to familiarize aircrew with combat capabilities while wearing ACDE. Aircrew must complete Initial ACDT NLT 90 days after MQT completion. Initial ACDT affects CMR/BMC, but is non-grounding. Initial ACDT is to be accomplished prior to the first ACDE flight. Aircrew will be ACDE certified upon the completion of initial ACDT. Aircrew who accomplished initial ACDT in previous tours in a fighter type MDS are not required to reaccomplish the ACDE flight.

3.5.1. **Ground Training.** ACDT (LL04) initial and CT refresher thereafter. Egress Training with ACDE (LL05) IAW AFI 11-301, Volume 1, *Aircrew Flight Equipment (AFE) Program*, and Emergency Parachute Training with ACDE IAW AFI 16-1301, *Survival, Evasion, Resistance, and Escape (SERE) Program*, will be accomplished once in a career (per MDS).

3.5.2. **ACDE MTC.** A MTC mission in full ACDE (anti-exposure suit liner may be substituted), harness, and G-suit. Within the mission profile, practice doffing simulated contaminated equipment. An ACDE MTC mission may use existing MTC mission profiles and count toward MTC RAP training cycle requirements. If an MTC is not available, squadrons will use their best available simulator or actual aircraft cockpit. The initial ACDE MTC should be conducted as close as possible to the day before (but not more than 30 days prior) to the ACDE flight.

3.5.3. **ACDE Flight.** The ACDE flight will be accomplished once in a career. Flight profiles must consider limitations of operating while wearing ACDE. Full donning and doffing procedures/sequence will be practiced in conjunction with the ACDE flight but the only portion of the ACDE worn in-flight will be mask, filter pack, and gloves.

3.5.3.1. ACDE Flight Restrictions:

3.5.3.1.1. Aircrew will be fully certified and current in an event prior to accomplishing that event on an ACDE sortie.

3.5.3.1.2. Minimum altitude is 500 feet AGL, except patterns/approaches and landing.

3.5.3.1.3. No ACBT or night sorties. AAR requires an IP/IWSO in the flight.

3.5.3.1.4. Weather minimums are 1,500 feet ceiling and 3 miles (4.8 km) visibility.

3.5.3.1.5. Formations are limited to a two-ship. Only one aircrew per aircraft and no more than one pilot in the element can wear the ACDE while flying. Pilots in ACDE

gear need an experienced aircrew in the Rear Cockpit (RCP). Pilots wearing ACDE gear will not fly in dissimilar formations. Minimum formation spacing is route unless fingertip is required for safe mission accomplishment (i.e., WX penetration)

3.5.3.2. Operations supervision should not allow the ACDE flight when, in their judgment, temperature/dew point conditions are not favorable to safe operations.

3.6. Flight Surgeons (FS) and Ground Liaison Officer (GLO) Training:

3.6.1. **Ground Training.** FSs and GLOs who have not previously flown the F-15E will accomplish the following before the initial flight brief: aircraft general review; hanging harness/egress training (as applicable), Aircrew Flight Equipment (AFE) training; Anti-G Straining Maneuver (AGSM) training, and an instrument/EP simulator (if available) with an instructor (1 hour minimum). FSs will also ensure completion of AFI 11-202V2 qualification requirements as verified by the squadron Stan/Eval function and recorded in ARMs.

3.6.2. **Flight Training.** The first flight will be with an IP and may be flown in conjunction with other training sorties. The brief and sortie will emphasize crew coordination, communications and equipment, instrument interpretation, and the aircraft's performance envelope.

Chapter 4

CONTINUATION TRAINING

4.1. General. This chapter outlines ground and flight training requirements for CMR, BMC, and BAQ aircrew. Aircrew must complete IQT to fly in BAQ status, MQT or FTU Instructor upgrade to fly in BMC status, or MQT to fly in CMR status.

4.1.1. CMR and BMC Requirements:

4.1.1.1. Successful completion of a MSN and QUAL evaluation IAW AFI 11-202V2 and AFI 11-2F-15EV2.

4.1.1.2. Be certified as CMR/BMC (as applicable) by the SQ/CC.

4.1.1.3. Fly the CMR/BMC-required RAP missions (see [paragraph 4.7.1](#)) and events, weapons qualifications, and accomplish ground training (see [paragraph 4.2](#)) IAW the RTM. EXCEPTION: BMC lookback IAW [paragraph 4.7.1](#) is N/A for API-8 aircrew and ACC/IGS (see [paragraph 1.12.3.1](#)).

4.1.1.4. Maintain currencies IAW [paragraph 4.6](#) CMR/BMC requirements (as applicable).

4.1.1.5. LOWAT Category I certification.

4.1.1.6. Formal Verification (see [paragraph 3.2.3](#)) or Certification (see [paragraph 3.2.4](#)) IAW unit tasking.

4.1.1.7. Nuclear Surety Training (tasked units).

4.1.2. BAQ Requirements:

4.1.2.1. QUAL evaluation IAW AFI 11-202V2 and AFI 11-2F-15EV2.

4.1.2.2. Maintain currencies IAW [paragraph 4.6](#) BAQ requirements.

4.1.2.3. BAQ aircrew will fly a supervised sortie with a squadron supervisor or any instructor at least once every 60 calendar days. In addition, if a BAQ aircrew does not fly for 21 days (inexperienced) or 30 days (experienced), the next sortie must be flown with a squadron supervisor or any instructor.

4.1.2.4. BAQ aircrew that remain in BAQ status for more than 6 months will be grounded (except General Officers), unless currently enrolled in a program to achieve CMR/BMC. Waiver authority for this paragraph is MAJCOM/A3 (forward through MAJCOM/A3T).

4.1.3. Requirements for Special Certifications/Qualifications:

4.1.3.1. Training IAW [Chapter 6](#) and guiding syllabi.

4.1.3.2. Special Qualification evaluation IAW AFI 11-202V2, AFI 11-2F-15EV2, and guiding syllabi or Special Certification flight IAW guiding syllabi and unit standards.

4.1.3.3. Sortie and mission requirements IAW the RTM and this AFI as applicable.

4.1.3.4. See **paragraph 4.8.3** for circumstances requiring loss of special certification/qualification.

4.1.4. TF-Coded/CB-Coded Unit Requirements:

4.1.4.1. API -1/-2/-6 aircrew assigned or attached to TF or CB coded units will fly at the BMC rate and accomplish the BMC Basic Skills requirements as shown and noted in the RTM. Formal training syllabus-directed missions and approved test plan missions apply to lookback for TF and CB coded units respectively. Any CMR/BMC RAP mission listed in the RTM also counts toward lookback requirements.

4.1.4.1.1. As long as AFI 11-202V2 and AFI 11-2F-15EV2 periodic instructor evaluation requirements are met, instructors failing to accomplish Basic Skills requirements will not lose instructor qualification, but will require additional training as determined by the SQ/CC prior to performing instructor duties in the delinquent event.

4.1.4.1.2. Aircrew assigned or attached to CB-coded units and the 475 Weapons Evaluation Group (WEG) do not need to maintain instructor qualification.

4.1.4.2. **Ground Training.** As directed by the unit or SQ/CC.

4.1.4.2.1. MTC requirements do not apply to USAFAWC and USAFWTC aircrew, with the following exception: Each crewmember must accomplish one graded (IAW this AFI) or evaluated (IAW AFI 11-202V2 and AFI 11-2F-15EV2) EP simulator per year. This training must be accomplished in a fully functional MTC, Unit Training Device (UTD) or Full Mission Trainer (FMT). Part task training devices and cockpit mock-ups are not acceptable. Waivers to this requirement will require ACC/A3 approval.

4.1.4.3. **Flight Training.** Unit or SQ/CC will direct additional sorties if programmed syllabus or test missions do not provide sufficient aircrew proficiency training.

4.1.4.4. **Weapons Events.** Aircrew qualified in A/G or Multi-Role aircraft will maintain appropriate weapons delivery currencies. Instructors must be initially qualified in the weapons events they plan to instruct.

4.1.4.5. MSN and INSTR (INIT and RQ) Evaluations will be conducted as applicable, IAW AFI 11-202V2 and AFI 11-2F-15EV2.

4.1.4.6. Night flight and AAR requirements are waived for USAFAWC and USAFWTC aircrew unless required for syllabus requirements or to meet program objectives.

4.1.4.7. 83 FWS aircrew will maintain ACBT currency and may fly in the RCP of aircraft participating in WSEP at the discretion of 83 FWS/CC.

4.1.4.8. **Visits/Deployments.** Only qualified USAFWS instructors will be sent on weapons school visits/deployments. During visits, USAFWS instructors may perform FL and instructor duties during tactical missions. When flying with students during deployments to FTUs, USAFWS IPs will occupy the Front Cockpit (FCP).

4.2. Ground Training. Ground training will be accomplished IAW the Aircrew Ground Training Requirements listed in the RTM (NOTE: The RTM will not include ancillary training requirements). Where conflicts exist between the RTM and the reference guidance, the reference

guidance takes precedence. Waiver authority is IAW the reference guidance. Ground training accomplished during IQT/MQT may be credited toward CT requirements for the training cycle in which it was accomplished.

4.2.1. **MTC:** The minimum training requirements in the RTM will be accomplished in the best available simulator. The MAJCOM (through the RTM) or the SQ/CC will determine the required supervision for CT MTC missions. Units will develop scenarios that cover RAP-event MTC missions based on unit tasking and general systems knowledge requirements. Emphasis should be placed on skill-set training not readily available during daily flight activities. Units will review scenarios each training cycle. Aircrew may receive credit for training accomplished in non-MTC devices or HHQ-directed simulator test support, etc., if approved by the SQ/CC. Units must track all aircrew device training used to satisfy Basic Skills and RAP mission requirements.

4.2.1.1. During EP missions, training in the following areas will be accomplished each training cycle: unusual attitude recoveries, spatial disorientation, inadvertent weather entry, controlled flight departure recognition and recovery procedures, controlled and uncontrolled ejection parameters, aircraft subsystem failure checklist procedures, and precision instrument procedures during aircraft emergencies. Aircrew may use EP MTC missions to satisfy Situational Emergency Procedures Training (SEPT) currency requirements.

4.2.1.2. During RAP-event missions, training in the following areas will be accomplished each training cycle: DOC-statement relevant simulated combat employment; threat recognition, reactions and counter tactics; aircraft subsystem failure checklist procedures (i.e. degraded ops); controlled flight departure recognition and recovery procedures; controlled and uncontrolled ejection parameters.

4.2.1.3. ACDE MTC. See [paragraph 3.5.2](#) Initial ACDE MTC training will count toward fulfilling CT requirements.

4.2.2. **SEPT.**

4.2.2.1. This training is not an evaluation, but a review of abnormal/emergency procedures and aircraft systems operations/limitations during realistic scenarios. SEPTs should be accomplished in the best available simulator to the maximum extent possible; however, tabletop training is acceptable. Tabletop SEPT will be accomplished one-on-one or in small flight-sized groups as long as all members participate fully and share equal time responding to emergency situations. One aircrew should present a situation and another discusses actions necessary to cope with the malfunction and carry it to a logical conclusion. Any MAJCOM, OG, and SQ special interest items (SIIs) related to aircraft employment should be emphasized. Incorporate the following elements into squadron SEPT programs:

4.2.2.1.1. SQ/CC/DO involvement in the selection of a monthly SEPT topic.

4.2.2.1.2. Develop SEPT scenarios using actual mishaps/incidents (when applicable) as baseline cases.

4.2.2.1.3. Discuss at least one EP for each major subsystem (Hydraulics, Electrical, Fuel, Flight Controls, Engines) in each session. The EPs should also span all phases of flight.

4.2.2.1.4. Accomplish a minimum of three supervised SEPTs each training cycle with an instructor or SQ supervisor (SQ/CC, SQ/DO, SQ/ADO, Flt/CC). Include minimum fuel and emergency divert training.

4.2.2.2. Aircrew will accomplish one SEPT every month. SEPT currency will expire at the end of the month if accomplished before the 20th or at the end of the following month if accomplished on or after the 21st (expiration is a grounding item until SEPT accomplished).

4.2.2.3. Completion of an EP MTC profile satisfies the monthly SEPT requirement (to include any EPE either in the MTC or on the IOS administering the EPE).

4.2.2.4. Formal course student SEPTs may satisfy the monthly requirement for the instructor who administers this training.

4.2.3. **Weapons and Tactics Academic Training.** Units will establish a weapons and tactics academic training program to satisfy MQT requirements. FLUG and Instructor upgrade flows will include weapons and tactics academic training commensurate with the level of upgrade being accomplished. SQ/CCs will provide guidance to unit weapons shops on an annual CT weapons and tactics academics program that will ensure all aircrew are informed/reminded of new/current F-15E weapons, systems, and mission-specific TTPs.

4.2.4. **CT Verification** updates aircrew on their squadron's wartime mission. Each CMR aircrew will participate in a squadron CT Verification as a briefer, board member, or seminar participant. BMC aircrew should participate in a CT Verification to facilitate future upgrade to CMR status, at the discretion of the SQ/CC. Aircrew who participate in a unit deployment to a tasked AOR may receive credit for CT Verification.

4.2.5. **CT Certification.** Aircrews assigned to nuclear-tasked squadrons will Certify IAW AFI 10-419 and ACE Directive 75-6 (whichever is most restrictive). Aircrews who Certify are exempt from Verification requirements.

4.2.6. **Cockpit/Crew Resource Management (CRM).** Aircrew will participate in CT CRM training at the frequency stated in the RTM (reference AFI 11-290, *Cockpit/Crew Resource Management Training Program*). Training builds upon the basic cockpit management skills taught in undergraduate pilot/WSO training and FTUs. Briefs and debriefs will include the core curriculum of CRM training IAW AFI 11-290 and the appropriate MAJCOM Supplements. The instructor CRM course may be used to satisfy the periodic requirement. Training will be tracked in ARMS. Failure to attend CRM training results in grounding (waiverable by OG/CC, but for a period not to exceed six months).

4.2.7. **NVG Refresher Academics.** Refresher training as a minimum will consist of common NVG hazards, F-15E-specific hazards and limitations, performing preflight adjustment procedures, and focusing on an eye chart or use of the Hoffman 20/20 tester.

4.3. Flight Training. All aircrew except API-8 and ACC/IGS inspectors will accomplish the requirements as shown on the F-15E Basic Skills Training Cycle Requirements table, published in the current RTM. Failure to accomplish these requirements will not affect BAQ, BMC, or

CMR status but may require additional training as determined by the SQ/CC. API-8 flyers and ACC/IGS inspectors will strive to accomplish the requirements as shown on this table.

4.4. Special Categories:

4.4.1. FS, GLO:

4.4.1.1. A fully qualified FS (IAW AFI 11-202V2) may fly any tactical mission. GLOs will fly with an experienced pilot. Initial checkouts will be IAW [para 3.6](#)

4.4.1.2. FS flight rates and requirements will be IAW AFI 11-202V1 and AFI 11-202V2.

4.4.2. MAJCOM/NAF API -8 Aircrew and ACC/IGS Flight Inspectors:

4.4.2.1. Mission Directed Training (MDT) for HHQ personnel (other than that conducted in support of a formal inspection) requires coordination with the supporting unit. MAJCOM/A3T and NAF/A3 are reviewing authorities for assigned personnel. They will:

4.4.2.1.1. Coordinate with the supporting agency to ensure appropriate ARMS data is maintained and provided IAW AFI 11-401.

4.4.2.1.2. Review assigned aircrew accomplishments and currencies prior to authorizing aircrew to participate in MDT.

4.4.2.1.3. Provide each aircrew with written documentation specifying the mission types and events the aircrew is authorized to fly.

4.4.2.2. HHQ personnel maintaining BMC flight status are exempt from non-grounding academic ground training, NAAR, CW training, and special training programs within authorized mission areas. Specific currencies will be provided to the host squadron and HHQ supervisors will determine aircrew qualifications to participate in squadron scenarios for MDT.

4.4.2.3. HHQ aircrew will:

4.4.2.3.1. Review accomplishments and currencies for accuracy.

4.4.2.3.2. Submit qualification and authorization documentation to the supporting SQ/CC, SQ/DO or authorized representative prior to flights with that squadron.

4.4.2.3.3. Evaluate the demands of each mission, and in coordination with squadron supervision, determine that their ability and proficiency will not be exceeded.

4.4.2.4. Instructor-qualified aircrew may perform instructor duties with the concurrence of the OG/CC.

4.5. Multiple Qualification/Currency.

4.5.1. See AFI 11-202V1 and AFI 11-202V2 for guidance on authorization to obtain multiple qualification.

4.5.1.1. Submit multiple qualification requests through command channels and MAJCOM/A3T to MAJCOM/A3. All requests must contain full justification. Approval for multiple qualification requests must be provided to the appropriate host aviation resource management (HARM) office; flights are not authorized until aircraft assignment is updated in ARMS.

4.5.1.2. Individually authorized multiple qualifications are valid as long as the individual is assigned to the specific position and aircraft requested, or rescinded by MAJCOM/A3.

4.5.2. Multiple qualification is not appropriate for senior wing supervisors of units with different types of aircraft. WG/CCs will qualify in only one of their wing's aircraft. Either the WG/CV or OG/CC should qualify in another of the wing's aircraft (not the same aircraft selected by the WG/CC).

4.5.3. Multiple Requirements. Aircrew will satisfy at least 50 percent of the sortie requirements in their primary aircraft. If CMR, they will meet all RAP mission and event requirements of the primary aircraft. In addition, aircrew will fly an equitable distribution of emergency patterns, instrument sorties, penetrations, non-precision approaches, and precision approaches in each MDS to fulfill their Basic Skills requirements.

4.5.4. Multiple Currencies. Aircrew will fly at least once each 45 days in each aircraft. They will comply with all other currency requirements for each aircraft.

4.5.5. As required by the applicable AFI 11-2MDS, Volume 1 and Volume 2, multiple qualified aircrew must complete conversion training IAW an approved syllabus.

4.6. Currencies, Recurrencies and Requalification.

4.6.1. **Currency.** **Table 4.1** defines currency requirements for BAQ/BMC/CMR aircrew. If an aircrew loses a particular currency, thereby requiring recurrency, that mission or event may not be performed except for the purpose of regaining currency as noted.

4.6.1.1. Non-current events must be satisfied before the aircrew is considered certified/qualified (as applicable) to perform those events unsupervised. Loss of currencies annotated as affecting CMR status will require regression to N-CMR (see **paragraph 4.7**). Loss of currencies identified as not affecting CMR do not require regression, although they may result in grounding until training is completed (e.g. Aircrew Flight Equipment).

4.6.1.2. Unless otherwise specified, recurrency supervision may fly either in the opposite cockpit or in a flight position that offers effective control of the mission.

4.6.2. **AOS Currency Requirements.** Units will comply with AFI 11-207, *Combat Aircraft Delivery*, for additional currencies required for flight delivery of aircraft coordinated through ACC AOS.

4.6.3. **Landing Recurrency (pilot), Sortie Recurrency (WSO).** Loss of landing or sortie currency requires the following action as applicable (timing starts from the last landing in either cockpit (pilot), last sortie (WSO)):

4.6.3.1. **31-90 days (46-90 Days for Experienced):** Regain landing or sortie currency IAW **Table 4.1**.

4.6.3.2. **91-135 days:** Above item, plus instructor supervised MTC (may be either a qualified IP/IW or MTC contract instructor) with the following emphasis items: AFTTP 3-1.F-15E tactics, normal/instrument procedures, and EPs. *Note:* The level of tactical training will be commensurate with the certifications/qualifications of the aircrew.

4.6.3.3. **136-210 (225 for Experienced) days:** All above items, plus closed and open book Stan/Eval examinations (IAW AFI 11-202V2, **Chapter 6**) and EPE (Mission EPE

for CMR aircrew, Instrument or Mission EPE for BMC aircrew). The open/closed book exams and EPE will be documented on the AF Form 8 as SPOT evaluations IAW with AFI 11-202V2.

4.6.3.4. **211 (Inexperienced) / 226 (Experienced) or more days:** IQT (see [paragraph 1.4.1](#) and [Chapter 2](#)), LASDT re-certification (see [paragraph 3.4.6](#)), and weapons event requalification (see [paragraph 5.2](#)).

4.6.4. **Loss of Instructor Status and Requalification/Recurrency.**

4.6.4.1. In addition to the reasons listed in AFI 11-202V2 for losing Instructor qualification (e.g. failing a periodic evaluation), aircrew may lose instructor status for the following:

4.6.4.1.1. Loss of instructor currency for greater than 180 days.

4.6.4.1.2. They become noncurrent in a mission or event which causes removal from CMR/BMC status and the SQ/CC deems that loss of currency is of sufficient importance to require complete decertification (but not a complete loss of qualification).

4.6.4.1.2.1. As long as the affected aircrew still retains instructor qualification IAW AFI 11-202V2, recertification will be at the SQ/CC's discretion.

4.6.4.1.2.2. If the SQ/CC does not elect to decertify the individual or if the individual becomes noncurrent in missions or events which do not require removal from CMR/BMC status, instructor status may be retained, but the instructor will not instruct that mission or event until the required currency is regained.

4.6.4.2. Aircrew losing Instructor currency must accomplish the following:

4.6.4.2.1. **61-180 Days.** Instructor recurrency flight with another instructor in the same element. Sortie will be with an actual student to the max extent possible. Sortie may not be combined with a demanding mission recurrency sortie.

4.6.4.2.2. **Over 180 Days.** Instructor evaluation IAW AFI 11-202V2 and AFI 11-2F-15EV2. Document evaluation on the AF Form 8 as a SPOT IAW AFI 11-202V2, Chapter 7.

4.6.5. **ACBT Recurrency.** Aircrew losing currency in ACBT must accomplish the following events:

4.6.5.1. **61-90 Days (91-120 Experienced).** BFM.

4.6.5.2. **91-180 Days (121-180 Experienced).** AHC and BFM (NOTE: Events may be combined into one sortie; however, AHC must be completed before BFM.).

4.6.5.3. **Over 180 Days.** Accomplish a tailored program as directed by the SQ/CC and documented in gradebook/training records.

4.6.6. **NVG Demanding Mission Recurrency.** Aircrew losing NVG demanding mission currency must accomplish the following events prior to unrestricted night operations. These items will be considered the only "NVG non-demanding" skill-sets/missions (i.e. daytime "non-demanding" skillsets/missions will not be used):

4.6.6.1. 2-ship basic and tactical formation work, light drills and unit-specific mission elements.

4.6.6.2. Minimum of one of the following night profiles or missions:

4.6.6.2.1. Intercept IAW NVG-2 profile not to exceed 1v1, above 5,000 feet AGL or MSA whichever is higher.

4.6.6.2.2. BSA above 5,000 feet AGL or MSA whichever is higher (unless on TFR)

4.6.6.2.3. Unopposed SAT above 5,000 feet AGL or MSA whichever is higher IAW NVG-4 profile (unless on TF).

4.6.7. **JHMCS Recurrency:** Pilots losing currency in JHMCS must accomplish the following:

4.6.7.1. **121-180 Days (181-240 Experienced).** Fly any JHMCS sortie with [Table 4.1](#)-directed supervision.

4.6.7.2. **Over 180 Days (240 Experienced).** Re-accomplish JHMCS recertification IAW [Chapter 6](#).

Table 4.1. F-15E Aircrew Currencies.

Event	To Update, Fly:	INEXP	EXP	Affects CMR	To Regain Currency:	NOTES
Demanding Mission	Sortie	21	30	No	Non-Demanding Sortie	1
Sortie (WSO)	Sortie	30	45	No	Sortie (see 4.6.3.)	2
Landing (Appropriate Cockpit) (+)	Day or Night Landing	30	45	No	Day Landing (see 4.6.3.)	2, 3,
Night Landing (+)	Day or Night Landing	21	30	No	Day Landing	
ACBT	Event	60	90	Yes	IAW 4.6.5.	5, 9, 14
ACT (2 v 2 min)	Event	60	90	No	Event (Day)	5, 9, 14, 17
Weapon Delivery (actual or simulated)	Event	60	90	Yes	Event	4, 9, 11
Range	Event	120	180	No	Event	4, 11, 15
Night (NT) TFR	TF Event (Day or NT)	45	60	No	Academic review, Day TF Event	7, 8, 11
LOW A/A	LOW A/A Event	60	90	No	LOW A/A Event	5, 9, 12
LOW ALT	LOW ALT Event	60	90	No	LOW ALT Event	5, 9, 12
AAR (+)	Day or Night AAR	180	180	Yes	Day or Night AAR	5
Formation T/O (+)	Event	90	120	No	Event	3, 10

Formation Approach (+)	Event	90	120	No	Event	3, 10
Precision Approach (+)	Event	30	45	No	Event	6
Instructor	Event	N/A	60	No	Event	2, 13
NVG	NVG Event	120	180	No	Academic review and events listed IAW 4.6.6.	5, 8, 16
NVG Demanding Mission	NVG Event	90	120	No	Events IAW 4.6.6. prior to any demanding	
JHMCS (+)	Sortie w/ JHMCS (May be acc in a JHMCS-capable MTC)	120	180	No	IAW 4.6.7. May be acc in JHMCS-capable MTC	18
(+) Items do not apply to WSOs.						

Table 4.1 NOTES: If not specified, supervisory requirements are IAW **paragraph 4.6.1.2. See Attachment 2** for specific mission, sortie and event definitions.

1. BAQ aircrew will fly supervised (IP/IWSO/SQ supervisor) when a non-demanding sortie is required.
2. Loss of currency for greater than six months results in unqualified status IAW AFI 11-202V2
3. Recurrency supervision level is IP in aircraft or chase, certified, current, and proficient in event. To regain RCP IP landing currency, FCP must be occupied by a BMC/CMR pilot current and qualified in landing.
4. Recurrency supervision for pilots is an Instructor certified, current, and proficient in event (in the element). Recurrency supervision for WSOs is an experienced pilot (in the aircraft) certified, current, and proficient in the event.
5. Recurrency supervision for pilots is an Instructor/FL Squadron Supervisor (in the element), certified, current, and proficient in event (AAR requires an IP or FL Sq Supervisor). Recurrency supervision for WSOs is an experienced pilot (in aircraft), certified, current, and proficient in the event.
6. If day VFR, the supervision level is a pilot, certified, current, and proficient in the event; all other times require an IP IAW AFI 11-202, Volume 3, General Flight Rules.
7. Recurrency supervision is a current, experienced crewmate in the same aircraft.
8. An instructor-taught academic review is required prior to recurrency flight.
9. Performance or instruction (from either cockpit) will update currency. For formal course instructors: CT and exercise participation require currency as listed; formal syllabus training missions require 180 days currency.
10. Flight leads may update currency from either lead or wing position. Recurrency will be accomplished from wing position. Wingmen will only update currency from wing position.
11. FTU instructors may fly the recurrency event IAW student syllabus guidelines.
12. Currency is required to perform the event at or below 1,000 feet AGL in the aircrew's LOWAT category (Category I, II, III). Loss of currency requires regression to the next higher category that the event is current. Operations in a lower block category will update the higher block categories. Recurrency requires satisfactory performance in the following events: vertical awareness training, hard turns, tactical formation, and offensive/defensive maneuvering.
13. See paragraph 4.6.4. IP RCP landing currency is 45 days. WIC student sorties count as instructor sorties for currency.
15. Updated by an actual weapons release on a class A/B/C range.
16. No NVG demanding events (para A2.1.22.) are allowed during NVG recurrency sortie.
17. ACT (2v2 min) currency is required for ACT engagements greater than 2v2. ACT 2v2 event satisfies this currency. Opposed A/G missions that constitute ACT (2v2 min) update this currency.
18. Supervision will be JHMCS current and certified IP or SQ Supervisor (SQ/CC or SQ/DO) in the element.

4.7. Regression (see [Figure 4 1](#)):

4.7.1. BMC/CMR Regression for Failure to Meet Lookback. Only RAP training missions and Contingency Operations sorties may be used for lookback. Only one RAP Basic Skills mission (AHC, Inst) may be applied toward lookback per month. If an aircrew does not meet lookback requirements throughout the training cycle, SQ/CC can: regress the aircrew to N-CMR/N-BMC, as applicable; remove the aircrew from a BMC/CMR manning position; or initiate action to remove the aircrew from active flight status.

4.7.1.1. Failure to meet 1-month lookback requires a review of the aircrew's 3-month sortie history. If the 3-month lookback has been met, aircrew may, at SQ/CC discretion, remain in CMR/BMC status. Failure to meet the 3-month lookback will result in regression to N-CMR/N-BMC, as applicable, or the aircrew may be placed in probation status for 1 month at the SQ/CC's discretion. If probation is chosen, the only way to remove an aircrew from probation and preserve the current status is to reestablish a 1-month lookback at the end of the probation period.

4.7.1.2. Lookback computations begin following completion of MQT. The aircrew must maintain 1-month lookback until 3-month lookback is established. SQ/CCs may apply probation rules as described in [paragraph 4.7.1.1](#) if a new CMR/BMC aircrew fails to meet 1-month lookback while establishing 3-month lookback. In addition, 1-month lookback will start the first full month of CMR/BMC status.

4.7.2. Regression for Failed Evaluations. In addition to the requirements of AFI 11-202V2 and AFI 11-2F-15EV2, aircrew who fail a periodic evaluation will regress to N-CMR/N-BMC as applicable. Aircrew will remain N-CMR/N-BMC until accomplishing AFI 11-202V2 requalification requirements and are re-certified by the SQ/CC.

4.7.3. Regression for Weapons Qualification. Failure to maintain RAP tasked weapons qualification at the end of the training cycle will require:

4.7.3.1. **For events tasked as QUAL at CMR/BMC.** Regression to N-CMR/N-BMC, as applicable. To regain CMR/BMC, the aircrew must re-achieve qualification IAW initial-qualification standards in the deficient weapons event (See [paragraph 5.2](#)). Events accomplished for this requalification may count toward the cumulative CT event qualification required at the end of the next training cycle.

4.7.3.2. **For events tasked as FAM at CMR/BMC.** Regression to N-CMR/N-BMC, as applicable. To regain CMR/BMC, the aircrew must accomplish at least three of the weapons deliveries under the supervision of a squadron supervisor or instructor. Events accomplished may count toward the cumulative CT event qualification required at the end of the next training cycle.

4.8. End of Cycle Requirements. Aircrew who fail to complete mission or event requirements by the end of training cycle may require additional training depending on the type and magnitude of the deficiency. Refer to [paragraph 4.9](#) for proration guidance. In all cases, report training shortfalls IAW RTM instructions.

4.8.1. Aircrew who fail to meet annual RAP Basic Skills event or minimum total sortie requirements may continue CT at CMR/BMC as determined by lookback. The SQ/CC will determine if additional training is required.

4.8.2. Failure to meet specific BMC and CMR mission type requirements will result in one of the following:

4.8.2.1. Regression to N-CMR/N-BMC if the SQ/CC determines the mission type deficiency is significant. To regain CMR/BMC, the aircrew will complete all deficient mission types. These missions may also be counted toward the total requirements for the new training cycle.

4.8.2.2. Continuation at BMC/CMR if total RAP missions and lookback are maintained and the mission type deficiencies are deemed insignificant by the SQ/CC. The SQ/CC will determine if any additional training is required to address shortfall.

4.8.3. Failure to accomplish missions/events required for Special Capabilities or Certifications/Qualifications will result in loss of that certification/qualification. The SQ/CC will determine re-certification requirements. Requalification requirements are IAW AFI 11-202V2 and AFI 11-2F-15EV2.

4.9. Proration of End-of-Cycle Requirements. At the end of the training cycle the SQ/CC may prorate any training requirements precluded by the following events: Initial arrival date in squadron, Duties Not Involving Flight (DNIF), emergency leave, Consecutive Overseas Tour (COT) leave, non-flying TDYs or exercises, or combat/contingency operations. Ordinary annual leave will not be considered as non-availability. Extended bad weather or other environmental factors that prevent the unit from flying for more than 15 consecutive days may be considered as non-availability. The following guidelines apply:

4.9.1. Proration will not be used to mask training or planning deficiencies.

4.9.2. Proration is based on cumulative days of non-availability for flight in the training cycle. Use [Table 4.2](#) to determine the number of months to be prorated based on each period of cumulative non-flying calendar days.

4.9.3. If IQT or MQT is reaccomplished, an aircrew's training cycle will start over at a prorated share following completion of IQT/MQT.

4.9.4. No requirement may be prorated below one. Prorated numbers resulting in fractions of less than 0.5 will be rounded to the next lower whole number (one or greater).

4.9.5. Newly assigned or converted aircrew and aircrew achieving CMR/BMC after the 15th of the month are considered to be in CT on the first day of the following month for proration purposes. A prorated share of RAP missions must be completed in CT.

4.9.6. Night and AAR requirements accomplished during MQT may be credited toward prorated CT requirements if accomplished during the cycle in which the aircrew was declared CMR/BMC, unless specified otherwise by MAJCOM in the RTM.

4.9.7. An aircrew's last month on station prior to PCSing may be prorated provided 1 month's proration is not exceeded. Individuals PCSing may be considered CMR for reporting purposes during a period of 60 days from date of last flight, or until loss of CMR currency, port call date, or sign in at new duty station, whichever occurs first.

4.9.8. CMR aircrew who attend USAFWS in TDY-and-return status may be reported throughout the TDY as CMR. Upon return, those aircrew will accomplish a prorated share of mission and event requirements.

4.9.9. Contingency Operations. The following proration procedures are intended to provide flexibility in accomplishing the unit's CT program.

4.9.9.1. Normally, all sorties flown during contingency operations will be logged as contingency operations sorties. These sorties do not count toward annual RAP requirements (except AAR) but will be used for lookback purposes. All events may be used to update currencies. Upon relief from contingency operations, units will prorate

RAP missions and events for the period of time each individual was tasked. Additionally, proration is authorized for spin-up and reconstitution where home station flights are reduced by MAJCOM.

4.9.9.2. As the training quality of missions flown at contingency locations may vary considerably, OG/CCs are authorized to allow sorties that provided valid training to be logged as RAP missions. Events accomplished on these sorties count toward RAP event requirements, and these missions and events may not be prorated.

4.9.9.3. Upon release from contingency operations, proration is computed by calculating the missions to be prorated for the entire deployment, and then subtracting the number of valid RAP missions as authorized by the OG/CC. The result is the allowable mission proration. Negative numbers equate to zero. Events will be prorated at SQ/CC discretion based on the events accomplished during valid RAP missions.

4.9.10. **Example:** Capt Jones was granted 17 days of emergency leave in January and attended SOS in residence from March through April for 56 consecutive calendar days. His SQ/CC authorized a total of two months proration from his training cycle (two months for the 73 cumulative days of non-availability for flight).

Table 4.2. Proration Allowance.

CUMULATIVE DAYS OF NONFLYING	MONTHS OF PRORATION ALLOWED
0 - 15	0
16 - 45	1
46 - 75	2
76 - 105	3
106 - 135	4
136 - 165	5
166 - 195	6
196 - 225	7
226 - 255	8
256 - 285	9
286 - 315	10
316 - 345	11
Over 345	12

4.10. Regaining CMR/BMC Status:

4.10.1. If CMR/BMC status is lost due to failure to meet the end of cycle weapons qualifications or event requirements, re-certification/re-qualification is IAW [paragraph 4.7](#)

4.10.2. If CMR/BMC status is lost due to failure to meet lookback IAW [paragraph 4.7](#), the following applies (timing starts from the date the aircrew came off CMR/BMC status):

4.10.2.1. **Up to 90 Days.** Complete a SQ/CC approved re-certification program (documented in the gradebook/training records) to return the aircrew to CMR/BMC standards. Upon completion of the re-certification program, the CMR/BMC aircrew must also meet the subsequent 1-month lookback requirement prior to reclaiming CMR/BMC status. The missions and events accomplished during the re-certification program may be credited towards their total/type mission and event requirements for the training cycle as well as for their monthly mission requirement. In addition, all RAP event currencies must be regained. The SQ/CC will approve any other additional training prior to re-certification to CMR.

4.10.2.2. **91-180 Days.** Same as above, plus open/closed book qualification examinations (IAW AFI 11-202V2, Chap 6, and AFI 11-2F-15EV2). Open/closed book exams will be documented on the AF Form 8 as SPOT IAW AFI 11-202V2 Chapter 7.

4.10.2.3. **181 Days and Beyond.** Reaccomplish a SQ/CC-directed MQT program to include a formal MSN evaluation IAW AFI 11-202V2 and AFI 11-2F-15EV2.

4.11. Example of the Lookback, Regression, Proration, and Requalification Process:

4.11.1. Capt Smith is an experienced CMR aircrew with a 1 and 3 month lookback requirement of 8 and 24 RAP missions respectively. On Feb 3, he flew an ACBT mission prior to departing for a non-flying TDY staff tour for two months. He reported back for flight duty on 6 Apr. What is his status throughout his TDY and on his return?

4.11.1.1. The SQ/CC wanted to list Capt Smith as accountable CMR aircrew for reporting purposes throughout the TDY. Therefore, on 1 Mar, his Flt/CC performed the mandatory 1 month lookback (Feb) on Capt Smith. He only flew 1 RAP mission, failing the 1 month lookback. The Flt/CC then performed a 3 month lookback (Dec, Jan, Feb). This showed that he flew only 20 missions for this period. Had he flown four more missions, his SQ/CC could continue Capt Smith at CMR. However, with 20 missions, Capt Smith did not meet the 3 month lookback for a CMR aircrew. The SQ/CC could regress Capt Smith to Non-CMR, but instead elected to put him on probation, still carrying him as CMR.

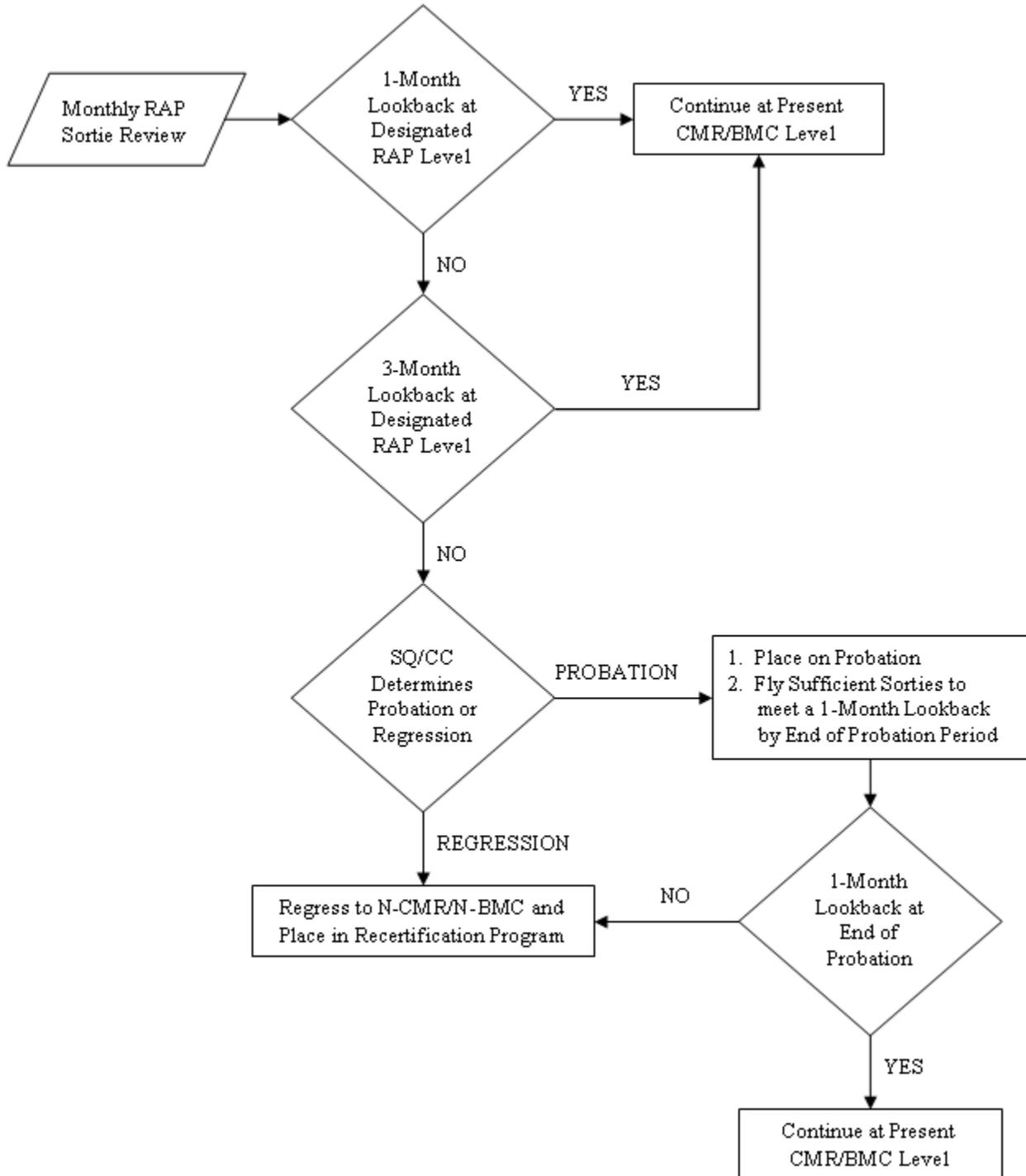
4.11.1.2. The SQ/CC decided to carry Capt Smith on 1 month probation. On 1 Apr, Capt Smith's 1 month lookback (Mar) was 0 missions. The SQ/CC must now regress Capt Smith to Non-CMR. When Capt Smith returns, the SQ/CC will have to place him in a re-certification program. Upon completing this program, Capt Smith will need to re-establish his 1-month lookback by 1 May. Failing to do so would force him to be reported Non-CMR one more month until the next lookback process on 1 June.

4.11.1.3. If he had returned on 22 Mar, and had last landed the jet 48 days ago, he could fly a non-demanding sortie to regain demanding sortie and landing currency. For CMR purposes, Capt Smith would need to fly 8 RAP missions to recapture his 1-month lookback and get off probation. Although Capt Smith was still CMR in Mar, the SQ/CC flew him with an IP on his first few sorties in order to regain his landing, AAR, LOWAT, and Formation T/O and Landing currencies.

4.11.1.4. At the end of the training cycle on 30 Sep, the SQ/CC prorated two months off of Capt Smith's total requirements. In spite of this proration, Capt Smith was deficient in one RAP mission category. The SQ/CC could regress Capt Smith to Non-CMR if the

deficiency was deemed significant. After accomplishing the tailored recertification program (the deficient missions), the SQ/CC would re-certify Capt Smith to CMR. This training also counts for the new training cycle.

Figure 4.1. Regression Flow Chart.



4.12. G-Awareness CT. Units will develop a CT program that provides feedback to aircrew and imprints a proper AGSM so that it becomes an integral part of pulling Gs.

4.12.1. The basis of this program is to give each FL, SQ supervisor, instructor, FS, and, if available, aerospace physiologist the skills needed to evaluate a flight member's DVR to ensure a proper AGSM is being performed. This program also makes assessment of the AGSM a normal debrief item after every flight. The assessment should be done as a normal part of tape review while debriefing other tactical portions of the mission.

4.12.2. Use the following minimum guidance to implement the unit's program:

4.12.2.1. Ground training/academics will focus on technique and assessment and will include a discussion of the limitations imposed on aircraft/aircrew performance as a result of an ineffective AGSM. Emphasis will also be placed on briefing, debriefing, and assessing the proper AGSM during flight debriefs.

4.12.2.2. Units will include "AGSM effectiveness" on MQT and "AGSM assessment" on FLUG and IPUG/IWUG grade sheets. These areas will be evaluated on upgrade sorties where a G-ex is required.

4.12.2.3. FLs will emphasize G-awareness during appropriate portions of the flight brief.

4.12.2.4. G-awareness exercises will be performed IAW AFI 11-214 and AFTTP 3-3.F-15E, filmed in HUD only (for DVR equipped aircraft, ensure the actual HUD, not HUD repeater, is selected as one of the recording channels) and in hot mic (ensure RCP extraneous volumes are turned down so as not to bleed over on the recording).

4.12.2.5. The tactical portion of all basic skill-set missions (BFM, BSA, ACM, etc.) will be flown in hot mic to enable assessment of the AGSM. Intercom volumes will be set at a level which is comfortable for the aircrew but still allow assessment of AGSM technique in the debrief. For demanding missions, it is highly desired for aircrew to fly in hot mic. The purpose of this is to identify breakdowns in the AGSM that commonly occur during high task portions of a mission.

4.12.3. Aircrew identified as having poor AGSM technique or low G-tolerance will be identified to the Flt/CC or appropriate SQ supervisor. SQ supervision will determine what action is required to improve the aircrew's G-tolerance. The SQ/CC will determine if Commander-Directed Acceleration Training is required IAW AFI 11-404, *Centrifuge Training for High-G Aircrew*.

4.12.4. The involvement of the aerospace medical team is important to the success of this program.

4.12.5. Units will develop a program to ensure an A/A mission tape for each aircrew is reviewed each training cycle by the squadron FS, Aerospace Physiologist, or SQ/CC-designated squadron supervisor (SQ/DO, SQ/ADO, Flt CC).

Chapter 5

WEAPONS DELIVERY/EMPLOYMENT QUALIFICATION

5.1. General. This chapter outlines requirements for attaining initial qualification and maintaining CT qualification in the delivery of A/G weapons and the employment of A/A weapons. Refer to "Glossary of Events" at [Attachment 2](#) for further guidance on weapons events.

5.2. Initial Qualification:

5.2.1. Aircrew must accomplish initial qualification in any weapons event requiring qual at CMR/BMC. Initial qualification achieved in IQT or MQT satisfies requirements for CT initial qualification, but not for CT event requirements. Initial qualification will carry over for consecutive tours in the F-15E.

5.2.2. Initial qualification in a weapons event is satisfied when the aircrew has achieved a minimum of 3 hits (IAW AFTTP 3-1) out of 6 consecutive record deliveries (see [paragraph A2.2.2.2](#)).

5.2.3. **Strafe** deliveries may be accomplished from basic (e.g. academic range pattern) or tactical (e.g. CAS-wheel) deliveries. Prior to initial qualification in strafe, there is no limit to the number of hot passes.

5.2.4. **A/A Missile.** Qualification is achieved by meeting the qualification criteria for weapons employment IAW 11-2F-15EV2. Qualification in one missile category is assumed for other missile categories in such cases where only one type of missile was employed.

5.2.5. **A/A Gun.** Qualification is achieved by meeting the qualification criteria for weapons employment IAW 11-2F-15EV2 and verified through tape assessment of an A/A gun engagement. Additionally, qualification may be achieved by an individual (i.e., element or team hit is not applicable for initial qualification) hit during a live fire pass on a Deployable Aerial Reflective Target/Aerial Gunnery Target System (DART/AGTS) target.

5.3. CT Qualification:

5.3.1. These criteria establish the minimum standards for an aircrew to maintain qualification in the appropriate RAP-tasked weapons delivery events and do not necessarily determine evaluation criteria established by other instructions or agencies (e.g., inspection/evaluation teams). These qualifications are valid throughout the subsequent training period.

5.3.2. CT weapons deliveries will be tactical deliveries or intercepts simulating realistic employment of Unit Committed Munitions List (UCML) munitions, considering such factors as fuzing, safe separation, recovery using applicable safe escape maneuver, egress, etc. CT A/G weapons event requirements will be accomplished on scoreable ranges to the maximum extent practical.

5.3.3. Aircrew will maintain weapons qualification IAW the following guidance (applies to each training period).

5.3.3.1. Complete the RTM-directed minimum number of weapons events.

5.3.3.2. On at least 50% of each type weapons event, achieve hot-pass hit criteria IAW this volume or dry-pass hit criteria IAW “kill” criteria in AFTTP 3-1 Shot/Kill. **Exception:** A/A missile employment (see paragraph 5.3.6.).

5.3.4. Failure to qualify in one event does not invalidate qualification in others. SQ/CCs may declare an aircrew unqualified in an event(s) and invalidate all previous record deliveries for that event at any time during a training cycle without affecting other weapons event qualifications. If qualification is required at BMC/CMR, failure to qualify will result in regression to N-BMC/N-CMR (see [paragraph 4.7](#)) until weapons re-qualification is accomplished.

5.3.5. At the end of the training cycle, each aircrew's weapons delivery scores will be reviewed to assess the aircrew's weapons qualification. If qualified, the aircrew's weapons qualification is valid through the following training period.

5.3.6. A/A weapons employment will be assessed for validity IAW AFTTP 3-1 Shot/Kill criteria and the results in each tasked weapon will be recorded for the current training period. Qual requires 75 percent valid shots for A/A missiles at pickle. FAM requires ten events, with no hit percentage specified.

5.3.7. **Gun Employment.**

5.3.7.1. **Strafe.** Maximum of four passes for record if planned delivery parameters remain the same. Multiple strafe for the same type event is authorized if cockpit rounds count is declared between events and the appropriate total number of rounds are available from the limiter. Aircrew will be charged actual rounds fired or rounds declared per event, whichever is greater, for each event.

5.3.7.2. **DART.** DART qualification criteria (other than initial) using combat/tactical patterns, is one hit on DART as sole shooter; or at least one hit during sequential attack tactics when both shooters have fired on DART and tape reviews verify that sufficient tracking was accomplished during actual time of fire to warrant crediting a hit to each element member.

5.3.7.3. **AGTS/Improved AGTS (IAGTS).** 5 sensor scored hits are required.

5.4. Weapons Delivery Parameters. The following event parameters and requirements form the basic framework for aircrew weapons delivery training and all deliveries will conform to limits established for each specific event.

5.4.1. **Gunnery Events.** Pattern descriptions, procedures, training rules, and foul criteria are contained in AFTTP 3-3.F-15E, *Combat Fundamentals*, AFI 11-2F-15E, Volume 3, *F-15E Operations Procedures*, and AFI 11-214.

5.4.1.1. **Low Angle Strafe (LAS).** Dive angle of 15 degrees or less. Foul line is 2,000 feet. Minimum recovery altitude (MRA) is 75 feet AGL. AFI 11-214 and AFI 11-2F15-EV3 restrictions for night deliveries apply. Aircraft rounds limiter will normally be set to provide at least 100 scoreable rounds per sortie.

5.4.1.2. **High Angle Strafe (HAS).** Dive angle greater than 15 degrees. MRA is above aircrew LOWAT category minimums (day) / IAW AFI 11-214 and AFI 11-2F-15EV3 (night). Aircraft rounds limiter will normally be set to provide at least 100 scoreable rounds per sortie.

5.4.1.3. **Hit Criteria.** Dry-pass hit criteria, regardless of event type, is IAW kill criteria in AFTTP 3-1 Shot/Kill. Hot-pass hit criteria is IAW the following guidance (an “actual observed hit” is defined as either an acoustic-score count, RCO assessed “hit”, or tape-assessed hit during debrief). Criteria applies to all strafe events.

5.4.1.3.1. Actual observed hits on the intended target.

5.4.1.3.2. Debriefed-assessed parameters would achieve kill criteria IAW AFTTP 3-1 Shot/Kill.

5.4.1.3.3. Minimum percentage of bullets (**Day:** 50 percent, **Night:** 25 percent) impact within 75 feet of target validated either through acoustic-score count or flight lead/instructor assessment during flight or debrief.

5.4.2. **Unguided Ordnance Events:**

5.4.2.1. **Loft Event.** Loft event is a low altitude climbing delivery maximizing standoff range or weapons effects. Hit criteria: 345 feet (105m).

5.4.2.2. **Level Events:**

5.4.2.2.1. **Visual Level Delivery (VLD).** A CDIP delivery with less than five degrees of climb or dive at weapons release (non-maneuvering) with visual target acquisition and designation. Hit criteria: 130 feet (40m).

5.4.2.2.2. **Systems Level Delivery (SLD).** An AUTO delivery at less than 10,000 feet HAT, with less than five degrees of climb or dive at weapons release (non-maneuvering) with a system (i.e. TGP, Radar, Nav) target acquisition and designation. Hit criteria: 195 feet (60m). Note: a level delivery greater than 10,000 feet HAT is considered a High Altitude Release Bomb (HARB), see [paragraph 5.4.2.3.5](#)

5.4.2.3. **Dive and Toss Events:**

5.4.2.3.1. **Low Angle High Drag (LAHD).** CDIP delivery. Dive angle is less than 30 degrees. MRA is safe separation/escape/fuze arm for ordnance being simulated/delivered, or as required to recover above 100 feet AGL (300 feet on a Class B/C range or over water), or one-half the computed altitude loss from bomb release to recovery, whichever is higher. Hit criteria: 80 feet (25m).

5.4.2.3.2. **Low Angle Low Drag (LALD).** CDIP delivery. Dive angle is less than 30 degrees. MRA is safe separation/escape/fuze arm for ordnance being simulated/delivered or as required to recover above 1,000 feet AGL, whichever is higher. Hit criteria: 100 feet (30m).

5.4.2.3.3. **Dive Bomb (DB).** CDIP delivery. Dive angle is 30 degrees or greater. MRA is safe separation/escape/fuze arm for ordnance being simulated/ delivered, or as required to recover above 1,500 feet AGL, whichever is higher. Hit criteria: 85 feet (26m).

5.4.2.3.4. **High Altitude Dive Bomb (HADB).** CDIP delivery. Dive angle is 30 degrees or greater. Minimum recovery altitude is 4,500 feet AGL. Hit criteria: 125 feet (38m).

5.4.2.3.5. **HARB.** CDIP or AUTO delivery. Level or diving (up to 30 degrees). MRA is 10,000 feet AGL. Hit criteria: 255 feet (78m).

5.4.2.3.6. **Low Altitude Toss (LAT).** AUTO delivery. Executed from a pop-up or roll-in with less than a 10,000 feet AGL base/apex. Minimum designation range will be computed to ensure safe escape/separation/fuze arm for ordnance simulated/delivered. MRA is the aircrew's LOWAT certification or range/target area restrictions, whichever is higher. If this delivery is used for a Laser Guided Bomb (LGB) event, use [paragraph 5.4.3.2](#) Hit criteria is: 175 feet (53m).

5.4.3. Precision Guided Munitions (PGM) Events:

5.4.3.1. **Enhanced Guided Bomb Unit (EGBU)-15/Air-to-Ground Missile (AGM)-130.** A level or climbing delivery, initiated from a direct or indirect attack, designed to deliver the weapon within parameters to allow target acquisition and data link steering.

5.4.3.1.1. Hit criteria for an actual EGBU-15/AGM-130 delivery is 33 feet (10m).

5.4.3.1.2. Hit criteria for simulated release is target locked on at data-link termination (with manual steering and target in FOV at data-link termination). Note: An aircrew delivering (but not guiding) a EGBU-15/AGM-130 does not receive credit for a EGBU-15/AGM-130 delivery. Tape review of the guiding aircraft will be used to evaluate delivery accuracy (target within FOV prior to guidance commands).

5.4.3.2. **LGB Event.** An event in which the combat/training laser is employed to guide simulated/actual LGB ordnance during a given delivery. Minimum recovery is safe escape/fuze arm/guide time required for the ordnance being simulated/delivered. Hit criteria: IAW AFTTP 3-1 A/G Shot/Kill Criteria.

5.4.3.2.1. In case of a buddy guide delivery, only the releasing aircraft (or mule) will also receive credit for the particular delivery event (e.g. HARB if released above 10k feet). The guiding aircraft (guider) only receives credit for an LGB Event.

5.4.3.3. **Inertially Aided Munition (IAM).** An event in which an aircraft system is used to determine release parameters for INS/GPS aided/guided munitions [e.g. Joint Direct Attack Munition (JDAM), Wind Corrected Munitions Dispenser (WCMD), Small Diameter Bomb (SDB), etc.]. Simulated or actual delivery of ordnance is required. MRA is safe escape for the ordnance being simulated/delivered. Hit criteria: IAW AFTTP 3-1 A/G Shot/Kill Criteria.

5.4.3.3.1. In the event that a member of a formation finds and designates the target to aid in IAM employment for another member of the formation (i.e. using FDL to transfer designations), the formation member that designated the target may take credit only for an IAM event, but the formation member that delivered the weapon may take credit for both a delivery event (e.g. HARB) and an IAM event.

5.4.3.3.2. If an IAM also has the capability to be terminally guided by laser energy (e.g. GBU-54), aircrew may take credit for both an LGB event and an IAM event if the laser was used to affect terminal guidance of the weapon.

5.5. Full Scale/Live Ordnance. Full Scale Weapons Delivery (FSWD) and live ordnance training is essential to establish and maintain aircrew combat capability. As a goal, commanders will attempt to give each aircrew the opportunity to deliver and employ as many types of

weapons inventoried on the unit's UCML as possible. As a minimum, all CMR and BMC aircrew will follow FSWD and live ordnance guidance published in the current RTM.

Chapter 6

SPECIALIZED TRAINING

6.1. General Guidance. This chapter outlines duties and responsibilities for units to upgrade, certify/qualify, and maintain proficiency/currency for special capabilities, and certifications/qualifications. These capabilities and certifications/qualifications are in addition to core missions for the unit and do not apply to every aircrew member assigned or attached to the unit. NE-SNP "X" sorties are limited to 2 per phase and 4 overall; continued progress in an upgrade beyond these limits requires written approval of the SQ/CC.

6.2. Scope. Special capabilities and certifications/qualifications covered in this chapter include:

- 6.2.1. Flight Lead Upgrade (FLUG) (certification).
- 6.2.2. Instructor Pilot Upgrade (IPUG) (qualification and certification).
- 6.2.3. Instructor WSO Upgrade (IWUG) (qualification and certification).
- 6.2.4. Mission Commander (MC) Upgrade (certification).
- 6.2.5. EGBU-15/AGM-130 Upgrade (certification).
- 6.2.6. Pre-Deployment Spin-up Training
- 6.2.7. NVG (certification)
- 6.2.8. Joint Helmet Mounted Cueing System (JHMCS) (certification)
- 6.2.9. Air Defense Augmentation (certification)
- 6.2.10. Combat Search and Rescue (CSAR) (certification)

6.3. FLUG. SQ/CCs will select only highly qualified, motivated, and responsible pilots for this program. Initial entry may be as a 2-ship/element FL until experience and proficiency warrant further progression, in which case, responsibilities for employment will not exceed two aircraft until certified as a 4-ship FL. The SQ/CC will determine when a 2-ship FL may train toward leading multi-ship (3 or greater) formations.

6.3.1. Entry Flight Hour Requirements. The following minimum flight hours are required prior to entering FLUG training:

- 6.3.1.1. 300 hours PAI, or
- 6.3.1.2. 200 hours PAI with 400 hours IP/MP/FP in an 11Fxx/11K3C/11K3D AFSC, or
- 6.3.1.3. 50 hours PAI, if previously certified 11Fxx AFSC flight lead.

6.3.2. Ground Training. Ground training will consist of locally developed instruction in the following areas:

- 6.3.2.1. **FL Responsibilities.** FL/wingman relationship, training objectives.
- 6.3.2.2. **Mission Preparation.** Mission objectives, wingman requirements and responsibilities, currencies, capabilities, delegation of mission planning duties, and brief preparation.

6.3.2.3. **Conduct of Flight Briefs and Debriefs.** Objectives, use of briefing guides and audiovisual aids, flight member involvement, briefing techniques, debrief and questioning techniques, DVR/URITS review responsibilities and procedures.

6.3.2.4. **Conduct of Missions.** Control of flight, flight discipline, emergency procedures (to include emergency divers), training rules, administration techniques and responsibilities to SQ/CC.

6.3.2.5. **AGSM Techniques.** Brief, debrief, and DVR assessment

6.3.2.6. **IFEs and Emergency Divers.**

6.3.3. **Flight Training.** Flight training will be conducted IAW a training program approved by the SQ/CC. The following is a recommended baseline program that may be modified by SQ/CCs as necessary to meet unit or upgradee specific needs. Sorties may be flown in any order provided day training precedes respective night training. The minimum FLUG upgrade flow is a 4-Ship FL Certification ride. Tape review, mission reconstruction and assessment, to include a review of AGSM, will be accomplished on every sortie. All FLUG training will be under the supervision of an IP, FL-certified squadron supervisor (SQ/CC or SQ/DO) or WSO SQ/DO, WSO SQ/CC or WSO USAFWS graduate accompanied by a certified FL.

6.3.3.1. **Required Events.** Two formation takeoffs and formation approaches, a trail arrival, and an AAR (leading, day or night).

6.3.3.2. **Night Missions.** The OG/CC will establish the minimum number of night missions required to be considered a fully certified FL. All A/G missions may be completed in the day or night, to include certification. See also [paragraph 6.9](#) for guidance on NVG FL requirements.

6.3.3.3. **FLUG BFM.** Mission Objectives: Practice leading and controlling BFM. Mission Tasks: Brief (emphasis on pursuit curves, weapons employment zones (WEZs), high AOA maneuvers, departure/loss of control prevention/recovery, and GLOC awareness), formation takeoff (lead), tactical formation, O/DBFM from visual perch setups, weapons employment, recovery, formation approach (lead), debrief.

6.3.3.4. **FLUG ACM.** Mission Objectives: Practice lead and control of a 2v1 (minimum) ACM mission. Mission Tasks: Brief (emphasis on engaged/support fighter responsibilities, attack options/coordination, radio procedures, and engaged maneuver techniques), radar/visual lookout, element maneuvers against a single adversary, role establishment, mutual support, radio discipline, weapons employment, separations, recovery, debrief.

6.3.3.5. **FLUG 2-ship (D)ACT.** Mission Objectives: Practice lead and control of a 2v2 (minimum) or element lead (#3) of a 4vX ACT mission in a DCA scenario. Mission Tasks: Brief, BVR set-ups for point and/or area defense scenarios, radar and visual lookout, tactical intercepts, engaged maneuvers as an element, radio discipline, mutual support, weapons employment, separations, recovery, debrief.

6.3.3.6. **FLUG 2-ship BSA.** Mission Objectives: Practice lead and control of a 2-ship conventional weapons delivery mission (actual or simulated) to a controlled range. Mission Tasks: Brief (emphasis on low altitude awareness, conventional range procedures and training rules, weapons delivery pattern procedures/parameters, delivery

modes, recovery maneuvers), low level navigation, controlled range procedures, weapons deliveries (climb/dive/level), strafe, hot gun and hung ordnance recovery, debrief.

6.3.3.7. **FLUG 2-ship BSAN.** Mission Objectives: Practice lead and control of a 2-ship night weapons delivery mission to a controlled range. Mission Tasks: Brief (emphasis on low level TF/NVG operations, night range procedures, and night weapons deliveries), trail departure, TF and NVG procedures, low level navigation (if possible), controlled range procedures, weapons deliveries (level/climb/dive), formation recovery and instrument approach, debrief.

6.3.3.8. **FLUG 2-ship SAT (Preplanned).** Mission Objectives: Practice lead and control of an element on a tactics mission with preplanned objectives to a tactical range or working area in a medium/high threat scenario. Mission Tasks: Brief, tactical departure, tactical opposed ingress (2vX), medium/high threat target area tactics, tactical egress, ECM and comm jam procedures, tactical recovery, debrief.

6.3.3.9. **FLUG 2-ship DT/CAS.** Mission Objectives: Practice lead and control of an element on a tactics mission to a tactical range or working area for dynamic targeting. Mission Tasks: Brief (emphasis on CAS formations, deliveries, JTAC/FAC(A) procedures IAW JPUB procedures), tactical departure, tactical ingress, low/medium threat target area tactics, CAS IAW JPUB procedures, TST, tactical egress, ECM and comm jam procedures, tactical recovery, debrief. *Upon successful completion of 2-FLUG DT/CAS, as determined by the SQ/CC or designated representative, the upgradee will be certified to lead two-ship formations as #1 or #3.*

6.3.3.10. **FLUG 4-ship BSA.** Mission Objectives: Practice lead and control of a 4-ship conventional weapons delivery mission to a controlled range. Mission Tasks: Brief, low level tactical formation and navigation, controlled range procedures, weapons deliveries, rejoin, BD check, hot gun/hung ordnance recovery, debrief.

6.3.3.11. **FLUG 4-ship (D)ACT.** Mission Objectives: Practice lead and control of a 4vX (D)ACT mission in a DCA scenario. Mission Tasks: Brief, tactical formation, BVR set-ups for point and area defense scenario, element/flight control and employment tactics, fuel awareness, radio discipline, weapons employment, rejoin, 4-ship recovery (conditions permitting), debrief.

6.3.3.12. **FLUG 4-ship SAT.** Mission Objectives: Practice lead and control of a 4-ship surface attack tactics mission with preplanned objectives. Mission Tasks: Brief, tactical departure, tactical opposed ingress (4vX), medium/high threat target area tactics, tactical egress, tactical recovery, debrief.

6.3.3.13. **FLUG 4-ship Certification.** Mission Objectives: Certification by SQ/CC (or designated representative) of multi-ship (3-ship or greater) FL abilities in a tactical mission scenario based on unit tasking. Mission Tasks: Brief, mission accomplishment, flight management and control, mission reconstruction, assessment and critique.

6.3.4. **FL Certification.** Following successful completion of FLUG 2-ship/FLUG 4-ship Certification, the SQ/CC will personally interview all new flight leads and review flight lead responsibilities, scope of duties, authority, and philosophy. Failure to complete scheduled training events (i.e., TF, AAR, etc.) need not delay certification. The SQ/CC will certify new

FL's status, including any restrictions, in appropriate written format (letter, gradesheets, ARMS, etc.).

6.4. Instructor Upgrade (Pilot and WSO). This program establishes the recommended guidelines for those aircrew identified by the SQ/CC to upgrade to instructor. OG/CCs may waive selected missions based on previous experience. FTU instructors will complete a formal syllabus course as defined in AFCAT 36-2223. Upgrade sortie priority of supervision is USAFWS graduates, instructor SQ/CCs or SQ/DOs, then any instructor. See also [paragraph 6.9](#) for guidance on NVG instructor requirements.

6.4.1. Entry Flight Hour Requirements. Pilots selected for IPUG must be 4-ship FLs in addition to the following minimum hour requirements.

6.4.1.1. 300 hours PAI with 1,000 total hours as a qualified aircrew (i.e. non UP/UW) or

6.4.1.2. 200 hours PAI with 750 total qualified aircrew hours in a 11/12Fxx AFSC, or

6.4.1.3. 500 hours PAI.

6.4.1.4. Aircrew selected for the FTU Instructor Upgrade Training Course, F15EIN, must be current in the F-15E and meet the entry flight hour requirements outline above. Pilots must have a minimum of three months operational experience as a fully certified F-15E 4-ship FL. Waivers are IAW F15EIN course syllabus.

6.4.2. Ground Training. Following are minimum requirements.

6.4.2.1. **Principles of Instruction.** Learning objectives, instructor responsibilities, IP and upgrade aircrew relationship, training facilities, and publications.

6.4.2.2. **Techniques of Flight Instruction.** Training objectives and environment, maneuver demonstration, performance and review, recognition and analysis of common aircrew errors.

6.4.2.3. **Conduct of Flight/Phase Briefs.** Training objectives, order of presentation, use of briefing guides and audiovisual aids, debrief techniques.

6.4.2.4. **AGSM Techniques.** Brief, debrief, and AVTR assessment. Review the approved instructional video covering AGSM technique.

6.4.2.5. **Student Evaluations.** Grade systems, preparation and use of gradesheets.

6.4.2.6. **CRM:** Techniques for increasing airmanship, methods to improve mission effectiveness, task/risk management and prioritization, feedback and crosscheck loops.

6.4.3. Simulator Training. A minimum of one MTC mission will be accomplished in the RCP (UIPs)/FCP (UIWs) to familiarize the upgrading instructor with switchology and avionics in the opposite cockpit from their primary crew position.

6.4.4. Flight Training. Training will be conducted IAW mission outlines listed below in any order as configuration and scheduling permit. Specific differences for UIPs and UIWs are annotated as such. OG/CC may waive selected missions based on previous experience. AAR may be completed on any mission. Failure to complete specific training events (i.e., TF, AAR, etc.) need not delay accomplishment of the formal instructor evaluation; however, individuals will not be certified to instruct in unaccomplished tasks until complete. All debriefs will emphasize tape review, accurate mission reconstruction and error analysis.

6.4.4.1. **General Guidance.** UIPs must fly in the RCP with an IP in the FCP on the following sorties: IPUG Day Transition, Night Transition, BSA, and BSAN. At SQ/CC discretion, UIWs are not required to complete both BFM and ACM, one or the other will be flown.

6.4.4.2. **Day Transition (IPUG).** Mission Objectives: Introduce UIP to RCP instruction, aircraft handling, instrument approaches, and patterns and landings (normal/no-flap/Simulated Single Engine (SSE)). Mission Tasks: Brief, RCP takeoff, departure, selected aerobatics, confidence maneuvers, AHC maneuvers, instrument recovery/approach, normal/no-flap/SSE touch-and-go landings, closed patterns, full stop landing, debrief.

6.4.4.3. **Night Transition (IPUG).** Mission Objectives: Brief and instruct night transition, AAR, and intercept procedures. Mission Tasks: Brief, RCP takeoff, trail departure, join-up, tanker rendezvous, NAAR, basic formation, intercepts (straight through/stern conversions/no-locks), night formation approach (lead), debrief.

6.4.4.4. **BFM (IPUG/IWUG).** Mission Objectives: Brief and instruct Offensive and Defensive BFM. Mission Tasks: Brief, formation takeoff (lead), weapons system check, tactical formation, offensive and defensive BFM from visual perch set-ups, weapons employment, formation approach and landing, debrief.

6.4.4.5. **(D)ACM (IPUG/IWUG).** Mission Objectives: Brief and instruct ACM from visual or radar set-ups. Mission Tasks: Brief (emphasis on positive flight control, radar and visual lookout, radio discipline, engaged and support fighter responsibilities, training rules), departure, weapons system checks, tactical formation, offensive and counter-offensive engagements, descriptive/directive commentary, initial moves, element maneuvers, weapons employment, mutual support, role assignment, rejoin, recovery, debrief.

6.4.4.6. **(D)ACT (IPUG/IWUG).** Mission Objectives: Brief and instruct a 2v2 (minimum) ACT mission. Mission Tasks: Brief, formation takeoff (lead), departure, weapons system check, tactical formation, GCI/AWACS procedures (if available), CAP procedures, commit criteria, visual and radar lookout, search and sort responsibilities, tactical intercepts, radio discipline, engaged maneuver tactics, weapons employment, mutual support, separations, rejoin, formation recovery and landing, debrief.

6.4.4.7. **BSA (IPUG/IWUG).** Mission Objectives: Brief and instruct a BSA mission (Pilots-from the RCP) on a controlled range. Mission Tasks: Brief, weapons system check, LASDT exercises, tactical formation, low level navigation, controlled range procedures, weapons deliveries (basic and tactical patterns), simulated hung ordnance recovery, debrief.

6.4.4.8. **BSAN (IPUG/IWUG).** Mission Objectives: Brief and instruct a night BSA mission (Pilots-from the RCP) on a controlled range. Mission Tasks: Brief, weapons system check, TFR operations including TF confidence check and fly-up procedures, NVG operations, night low level navigation, controlled range procedures, weapons deliveries (level/climb/dive), formation recovery/approach, debrief.

6.4.4.9. **DT/CAS (Low/Med Threat) (IPUG/IWUG).** Mission Objectives: Brief and instruct a SAT mission in a low/medium threat scenario. Mission Tasks: Brief, tactical

formation, low level navigation, ingress, target area tactics, weapons deliveries (to include CAS and TST), egress, recovery, debrief.

6.4.4.10. **SAT (High Threat) (IPUG/IWUG).** Mission Objectives: Brief and instruct a SAT mission in a high threat scenario. Mission Tasks: Brief, weapon system check, tactical formation, low level navigation, EC procedures, high threat target area ingress, threat reactions, target area tactics, weapons deliveries, egress, recovery, debrief.

6.4.4.11. **Flight Evaluation (IPUG/IWUG).** IAW AFI 11-202V2, AFI 11-2F-15EV2 and unit requirements. Document on the AF Form 8 IAW AFI 11-202V2, Chapter 7.

6.4.4.12. **Strike instructor certification (for nuclear-tasked units).** Upon successful completion of a Certification (see paragraph 3.2.4.) either during or after the instructor upgrade, pilots and WSOs will be certified to instruct strike missions.

6.5. MC Upgrade. This program establishes the minimum guidelines for upgrade to MC.

6.5.1. **MC Responsibilities.** The MC is responsible for the plan, coordination, brief, execution, and debrief of large force packages (including joint/composite forces). MCs, once certified, are authorized to lead large force missions. MCs may delegate authority and responsibility for a portion of the mission to a deputy MC. For example, an F-15E MC tasked with an A/G role may delegate OCA MC duties to an OCA flight lead who is MC certified.

6.5.2. **MC Prerequisites.** SQ/CCs will consider ability, judgment, technical expertise, skill, and experience when selecting crewmembers for mission commander upgrade. Minimum qualifications are 4-ship FL or IWSO.

6.5.3. **Ground Training.** Upgrading MCs must satisfactorily complete the following unit developed blocks of instruction prior to certification:

6.5.3.1. **Mission Planning Considerations.** Range space and availability, ATC restrictions/considerations/flight plans, AAR operations, inter-unit coordination, A/A and A/G force integration, Integrated Air Defense System (IADS) penetration and avoidance, on-range control agency coordination, GCI coordination.

6.5.3.2. Review appropriate AFTTP 3-1 volumes for specific MC checklists and considerations.

6.5.4. **Flight Training.** As a minimum, the upgrading MC will observe a certified MC during the planning, brief, flight, and debrief of at least one large force mission. Prior to certification, the MC upgradee will then plan, brief, fly, and debrief a minimum of one mission under the supervision of an IP, IWSO, or squadron supervisor (SQ/CC, SQ/DO, SQ/ADO, Flt/CC) who is MC certified. This program establishes the minimum guidelines for upgrade to MC.

6.5.4.1. Unit tasks should drive force composition, adversaries, and minimum flight size. However, to count as a MC sortie, the upgrading MC must be acting as the MC for a large force mission responsible for two or more types of aircraft with four or more total aircraft or more than four F-15E aircraft versus a minimum of two pre-planned adversaries.

6.5.4.2. The supervising MC will determine overall upgrade mission effectiveness in case of fallout.

6.5.5. **Certification.** Following satisfactory completion of the above requirements, the SQ/CC will certify a new MC by placing a letter of certification in the training folder and indicating certification on letter of X's.

6.6. EGBU-15/AGM-130. Units tasked by MAJCOM to perform the EGBU-15/AGM-130 mission will provide, as a minimum, the training program outlined below. As the weapons are very similar the upgrade training may be done simultaneously.

6.6.1. **Ground Training.** Ground training to accomplish initial certification in this system will include the following material:

6.6.1.1. Principles of EO/IR systems.

6.6.1.2. EO/IR mission planning to include sun angle, shadows, weather, terrain, target size, FOV, etc.

6.6.1.3. **Weapons academics.** Guidance and control, capabilities and limitations to include flight, warhead and weaponeering, and release envelope, system power-up procedures and restrictions, target contrast and lock-on for selected contrast, weapon and data link preflight, switchology, and cockpit displays, crew coordination, tracking, and lock-on techniques, and sensor integration and slewing.

6.6.1.4. **Bomb Profiles.** Video time restrictions when using the captive trainer, aircraft limitations with the captive trainer, training airspace limitations, profile and switchology differences from actual EGBU-15/AGM-130 employment, and flying low, medium, and high altitude bomb training profiles.

6.6.2. **Simulator Training.** The simulator training program is designed to expose the upgrading WSO and pilot to the hardware and procedures involved with operation of the EGBU-15 and AGM-130. This should be done in the MTC, if available. As a minimum, all WSO upgradees will accomplish the appropriate MTC prior to the first flight. Pilots will practice day and night AGM/EGBU profiles in the MTC prior to the first flight. The EGBU-15 and AGM-130 Systems Orientation/Employment MTC missions may be combined.

6.6.2.1. **MTC EGBU-15 Systems Orientation/Employment.** Designed to familiarize the upgradee with switchology, system power-up, PACS procedures, system data link checks, and high and low altitude employment. Upgradee should experience video break-up problems (if available), reduced target visibility, and limited ceilings.

6.6.2.2. **MTC AGM-130 Employment.** Designed for upgradee to develop proficiency with advanced search and tracking techniques required for AGM-130 medium and low altitude employment. Upgradee should experience video break-up problems (if available), reduced target visibility, and limited ceilings.

6.6.3. **Mission Conduct:**

6.6.3.1. All ground training will be accomplished prior to the first sortie.

6.6.3.2. Only one weapon system (AGM-130 or EGBU-15) will be taught on the first two upgrade sorties; afterwards, sorties may combine the two.

6.6.3.3. Aircrew may be proficiency advanced at the discretion of the SQ/CC or DO. Minimum requirement for certification is AGM/EGBU-4.

6.6.3.4. If more than 2 weeks lapse between upgrade sorties, the previous sortie will be reaccomplished. An MTC sortie may be used in lieu of flight for reaccomplishment.

6.6.3.5. If the upgrading pilot is not a FL, the instructor will brief and lead all sorties. On AGM/EGBU-4, the upgrading aircrew will brief all aspects of the system-specific portions of the sortie, and the bomb profile; the instructor will brief ground ops, enroute, and RTB procedures.

6.6.4. **Flight Training.** Up to 50% of the following sorties may be flown in the MTC, however, AGM or EGBU-4 will be live fly.

6.6.4.1. **AGM or EGBU-1, Introduction to Attacks.** Mission Objectives: Using independent DL and captive weapon equipped aircraft, the pilot and WSO will perform high and low altitude indirect and direct attacks. Specific Tasks: DL pod and bomb preflight, ground and airborne checks, boresight, low level navigation, EO/IR search, target acquisition, gate slew, DL pod operation, switchology, simulated launch procedures, crew coordination.

6.6.4.2. **AGM or EGBU-2, Introduction to 2-Ship Tactics.** Mission Objectives: Complete system familiarization and introduce low altitude PSA attacks (IP to launch will be flown in line-abreast formation). Specific Tasks: Hangfire procedures. Introduce min-comm tactics, stabilized climb attacks, and single-ship tactics. Bomb aircraft should fly a route position of the pod aircraft from IP to launch to best simulate an actual weapon launch.

6.6.4.3. **AGM or EGBU-3, Combat Tactics I.** Mission Objectives: Same as AGM/EGBU-2 with the introduction of Low Altitude Pop Indirect Attacks (LAPIA), and stand-off tactics. Specific Tasks: Same as AGM/EGBU-2, fly one IP to launch with a PSA maneuver. Complete one LAPIA on a first look target. A stand-off delivery will be performed if practical. Upgradee will perform mission planning to include line-of-sight and stand-off problems. It is desired but not required that pilots fly AGM/EGBU-3. As a minimum, pilots will participate in the mission planning, brief, and debrief for the sortie.

6.6.4.4. **AGM or EGBU-4, Combat Tactics II.** Mission Objectives: Demonstrate proficiency in combat tactics. Specific Tasks: Mission planning, preflight, ground, airborne, and postflight checks, EO/IR search, target acquisition and lock-on, navigation, platform and gate slew, DL Pod operation, PSA maneuvers, min-comm tactics, and crew coordination. At the completion of this mission the upgrading aircrew will be capable of AGM-130 or EGBU-15 mission performance.

6.6.5. **EGBU-15/AGM-130 Instructor Upgrade.** Only the most qualified EGBU-15/AGM-130 aircrew will upgrade to instructor. They will review all ground training and simulator requirements, paying particular attention to the opposite cockpit switchology (upgrading WSOs should fly at least one MTC in the FCP and upgrading pilots at least one MTC in the RCP). Flight training profiles will follow these guidelines:

6.6.5.1. **EGBU-1, Systems/Tactics Instruction.** Mission Objectives: Perform and instruct EGBU-15 tactics. Specific Tasks: Demonstrate ability to instruct mission planning, preflight, ground and airborne checks, opposite cockpit switchology, EO/IR search, target acquisition and lock-on, navigation, platform and gate slew, DL Pod operation, PSA maneuvers, level and stabilized climb deliveries, egress maneuver, crew

coordination, captive weapon profiles, solving line-of-sight and other standoff problems, and min-comm tactics. Tasks: Same as EGBU-4. If stand-off tactics are not performed they should be discussed in detail in the debrief.

6.6.5.2. AGMI-2, Combat Tactics Instruction. Mission Objectives: Demonstrate proficiency in systems instruction and tactics for the AGM-130. Emphasis will be on instruction of mission planning and briefs, ground and airborne system checks, crew coordination and pacing, in-flight control of navigation, formation, and tasks, search techniques and target acquisition, lock-on and terminal guidance, abnormal procedures, and low and medium altitude indirect attacks. Upgradee must demonstrate proficiency in mission reconstruction during the debrief.

6.6.6. EGBU-15/AGM-130 CT:

6.6.6.1. Academics. EGBU-15/AGM-130 refresher academics are required every 6 months for all EGBU-15 qualified aircrew.

6.6.6.2. Simulator Training. If a MTC certified for EGBU-15/AGM-130 training is available, EGBU-15/AGM-130 aircrew will devote at least 1.5 hours of MTC time during each training cycle to gain proficiency in target acquisition, tracking, and operation in a restricted ceiling and visibility environment. Both high and low altitude attack profiles will be accomplished. If a certified MTC is not available, the contractor simulator should be used, if practical.

6.6.6.3. CT Flights. Profiles are at the discretion of the SQ/CC. The delivery of actual or inert weapons provides the only real validation of the unit training programs and systems reliability. Units should attempt to expend their allocation of EGBU-15/AGM-130 ordnance each training cycle. A squadron designated EGBU-15/AGM-130 officer will set up a squadron training program to ensure training flights are as realistic as possible within the constraints of MAJCOM and airspace restrictions.

6.7. Pre-Deployment Spin-Up Training. Spin-up training will be IAW AFCENT Aviation Unit Prep Message (AUPM) as posted on the 561 JTS SIPR Website (<http://www.nellis.af.smil.mil/units/561jts/ae/uscentaf.aspx>) and modified as needed by the SQ/CC to meet supported COCOM and associated air component requirements. The 561st JTS has supplemental information available on the 561 JTS AOR Spin-up SIPR Website (<http://www.nellis.af.smil.mil/units/561jts/ae/>) that aids the SQ/CC to focus on missionized specific tasks and training. OG/CCs will ensure participating aircrew are ready to deploy and are able to conduct all missions in support of expected tasks

6.8. NVG Certification: Upon successful completion of IQT IAW formal FTU course syllabi (B-Course, TX1/2/3, and SOC), F-15E aircrew will be NVG certified. The purpose of this section is to provide guidance on the certification of NVG FLs and instructors.

6.8.1. NVG FL. Certified NVG pilots who upgrade to FL need one supervised (IP/IWSO or FL-certified SQ/CC or SQ/DO) flight as a FL on an NVG sortie before performing unsupervised NVG FL duties. The supervised flight may be conducted at anytime during or after the FLUG syllabus.

6.8.2. NVG Instructor. A NVG Instructor must accomplish the following before being certified to perform instructor duties while using NVGs:

6.8.2.1. Fly a total of 10 sorties with NVGs (this includes all sorties flown with NVGs from initial certification onward).

6.8.2.2. Fly one supervised (IP/IWSO) instructional night sortie under NVGs before performing unsupervised night instructor duties while under NVGs.

6.8.3. IAW AFI 11-401, NVG time as logged on the AF Form 781 may only be logged while actually using goggles.

6.9. JHMCS Certification. The purpose of this program is to certify aircrew in JHMCS operation, employment, and instruction. The program outlined below is the minimum required for certification and may be modified by SQ/CC based on unit needs, previous experience, and documented performance.

6.9.1. General Instructions.

6.9.1.1. CMR/BMC pilots may conduct JHMCS certification separately or as part of any upgrade.

6.9.1.2. JHMCS-Instructor can be flown in conjunction with unit IPUG/IWUG program.

6.9.2. Ground Training. Academics will be accomplished locally or during MTC orientation (if available), but will be accomplished within 60 days prior to the first sortie. If more than 60 days elapse between academics and the first sortie, aircrew will re-accomplish academics.

6.9.3. Flying Training. Basic JHMCS certification is two sorties. Instructors must complete JHMCS certification (IPs: both academics and flights, IWs: academics only) before instructing either on JHMCS certification sorties or sorties where the student pilot is using the JHMCS.

6.9.3.1. **JHMCS-A/A. Skill-set Objectives:** Introduce/practice A/A employment using JHMCS. **Specific Mission Tasks:** Practice JHMCS ground procedures, HMD alignment, HOTAS, display orientation/interpretation, radar/missile cueing, and High Off Boresight (HOBS) WEZ recognition/weapons employment with emphasis on crew coordination

6.9.3.2. **JHMCS-A/G. Skill-set Objectives:** Introduce/practice A/G employment using JHMCS. **Specific Mission Tasks:** low-level navigation, threat reactions, 2-ship low and med altitude weapons employment, weapons employment in the CAS environment, HMD ground symbology interpretation, and TGP/Radar cueing all with an emphasis on crew coordination.

6.10. Homeland Air Defense Augmentation. This program applies to all aircrew tasked to augment AF North (1 AF) in the Homeland Air Defense role for Peacetime Alert, NORAD CONPLAN implementation or similar CONUS air defense emergency. The ground training requirements of this section are for planning purposes and may be modified to meet unique unit requirements.

6.10.1. **MQT/Certification.** The following training requirements will be incorporated into the MQT and Air Defense certification programs of units identified for this mission in the unit DOC statement. Units tasked with Homeland Air Defense based on an AEF tasking will use the outline below as minimum criteria to certify aircrew (training not to precede actual tasking by greater than 6 months):

6.10.1.1. **Academics.** AF North and ACC mission/organization, authentication procedures, applicable plans, facilities locations, call signs, ADA corridor procedures, safe passage procedures, alert procedures, ROE (NORAD Regulation 55-6), AFI 11-214 procedures, and applicable sections of AFTTP 3-1.

6.10.1.2. **MTC Training.** Two MTC missions dedicated to an Air Defense scenario including a SOCC scramble, handover, voice authentication, CAP procedures, controller-directed VID profiles, low altitude intercepts below 1,000 feet AGL, ECCM intercepts, and weapons employment.

6.10.2. **CT.** Air Defense augmentees will accomplish the following annual training requirements:

6.10.2.1. Academic and MTC training covering appropriate areas as listed above.

6.10.2.2. Aircrew will maintain LOWAT currency IAW **Table 4.1**

6.10.3. **Air Defense Training Resources.** Necessary materials for the training listed in paragraph **6.10.1.1**, NORAD/CONR/Sector guidance, and Air Defense mission “Smart Packs” are available on the 1AF/A3V ASA One-Stop Shop SIPR web site.

6.10.4. **Low/Slow Speed VID Procedures:**

6.10.4.1. The purpose of this training is to assist units tasked to support OPERATION NOBLE EAGLE (ONE) or any Homeland Defense mission.

6.10.4.2. The intent is to prepare aircrew for intercepting low/slow flying aircraft (rotary and fixed wing).

6.10.4.3. Unit-developed academics should be conducted during weapons and tactics training with emphasis on ONE/Homeland Defense ROE and the specific TTPs and LIMFACs of operating the F-15E in the low/slow-speed environment.

6.10.4.4. Flight training should, to the maximum extent possible, include helicopter and light aircraft operations and considerations. Creation of a realistic environment to allow full use of F-15E EID/ VID capabilities is essential to the conduct of low/slow-speed operations. SQ/CCs will determine the depth of ground and flight training necessary prior to participating in exercises and contingency operations.

6.11. CSAR. CSAR is a special capability used to support the recovery of downed aircrew in a combat environment. This support includes on scene command (OSC), electronic and visual search, threat suppression, helicopter escort and protection, and communications relay. Once CSAR certified, certification is retained with aircraft MSN qualification (i.e. with a current MSN check IAW AFI 11-202V2 and AFI 11-2F-15EV2). The program below outlines the minimum requirements to upgrade aircrew for CSAR operations. CSAR certification training will be accomplished under the supervision of a certified CSAR instructor (see next paragraph). Search and Rescue (SAR) is the peacetime subset that uses some of the skills of CSAR.

6.11.1. Upon completion of CSAR-1 and CSAR-2, aircrew may fly as a CSAR wingman (formation position 2 or 4). Subsequent completion of CSAR-3 and CSAR-4 allows aircrew to lead CSAR missions from position 1 or 3 (pilots must also be FL certified). For instructors to be certified to instruct CSAR missions, they will teach a CSAR-3 or CSAR-4

under the supervision of a certified CSAR IP/IWSO (may be accomplished in conjunction with IPUG/IWUG).

6.11.2. CSAR certification and refresher training will be included as part of the Pre-Deployment Spin-up Training (see [paragraph 6.7](#)) for units tasked for CSAR during contingency operation deployments.

6.11.3. **Academics.** See AFTTP 3-1.F-15E., Chapter 8, and JPub 3-50, *Joint Doctrine for Personnel Recovery* with the following highlights.

6.11.3.1. **General CSAR Procedures.** Command and control, typical CSAR ordnance, tactics and techniques.

6.11.3.2. **Search Patterns and Procedures.** Electronic and visual.

6.11.3.3. **Helicopter Escort.** Rendezvous, rescue escort, and hover cover.

6.11.3.4. **Air Strike Control (ASC) Procedures.** Target identification, ordnance selection, pre-strike preparation, target marking, strike control procedures, and bomb damage assessment (BDA).

6.11.4. **Flight Training.** SQ/CCs may modify mission profiles as necessary to tailor initial and refresher training to unit and theater requirements. On-ground personnel acting as simulated survivor(s) are required on CSAR-1 and either CSAR-3, or CSAR-4. Helicopter support is required on CSAR-3, CSAR-4, and on either CSAR-1 or CSAR-2.

6.11.4.1. **CSAR-1 (Two to Four Aircraft, Survivor Required, Helicopter Required on CSAR-1 or CSAR-2).** Mission Objective: Introduce search techniques and helicopter escort. Specific Mission Tasks: instructor introduces search procedures and helicopter escort. Ground personnel will demo ground marking techniques.

6.11.4.2. **CSAR-2 (Two to Four Aircraft, Survivor Optional, Helicopter Required on CSAR-1 or CSAR-2).** Mission Objectives: Introduce coordination procedures and ASC. Review search techniques and helicopter escort if assets are available. Specific Mission Tasks: instructor demonstrates OSC procedures using Number 2 as the communication focal point. Conduct search and suppression phases of a classic CSAR. Practice helicopter escort.

6.11.4.3. **CSAR-3 (Two to Four Aircraft, Survivor Required on CSAR-3 or CSAR-4, Helicopter Required).** Mission Objectives: Demonstrate procedures and tactics necessary to coordinate and control an unopposed CSAR. Specific Mission Tasks: Lead a CSAR to include search, on-scene command, helicopter escort, and survivor preparation and pick-up.

6.11.4.4. **CSAR-4 (Two to Four Aircraft, Survivor Required on CSAR-3 or CSAR-4, Helicopter Required).** Mission Objectives: Practice procedures and tactics necessary to coordinate and control an opposed CSAR. Specific Mission Tasks: Lead a CSAR to include search, OSC, threat suppression, helicopter escort, and survivor preparation and pick-up. The CSAR scenario should include as many outside assets as possible. These may include ground aggressors, strike fighters, FAC(A)s, etc.

6.12. Forms Adopted. AF Form 8, *Certification of Aircrew Qualification*. AF Form 847, *Recommendation for Change of Publication*. AF Form 4348, *USAF Aircrew Certifications*.

HERBERT J. CARLISLE, Lt Gen, USAF
DCS, Operations, Plans and Requirements

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

- AD 75-6, *Special Weapons Training for Strike Aircrew*, 30 September 2009
- AFI 10-419, *Dual Capable Aircraft Nuclear Tasking, Planning and Operational Procedures: F-15E/F-16*, 1 September 2003
- AFI 10-704, *Military Deception Program*, 30 August 2005
- AFPD 11-2, *Aircraft Rules and Procedures*, 14 January 2005
- AFPD 11-4, *Aviation Service*, 1 September 2004
- AFI 11-2F-15E, Volume 1, *F-15E--Aircrew Training*, this publication
- AFI 11-2F-15E, Volume 2, *F-15E--Aircrew Evaluation Criteria*, 9 December 2005
- AFI 11-2F-15E, Volume 3, *F-15E--Operations Procedures*, 11 September 2009
- AFI 11-202, Volume 1, *Aircrew Training*, 22 November 2010
- AFI 11-202, Volume 2, *Aircrew Standardization/Evaluation Program*, 13 September 2010
- AFI 11-202, Volume 3, *General Flight Rules*, 22 October 2010
- AFI 11-214, *Air Operations Rules and Procedures*, 22 December 2005
- AFI11-215, *USAF Flight Manuals Program (FMP)*, 22 December 2008
- AFI 11-290, *Cockpit/Crew Resource Management Training Program*, 11 April 2001
- AFI 11-301, Volume 1, *Aircrew Flight Equipment (AFE) Program*, 25 February 2009
- AFI 11-401, *Aviation Management*, 10 December 2010
- AFI 11-404, *Centrifuge Training for High-G Aircrew*, 28 October 2005
- AFI 16-402, *Aerospace Vehicle Programming, Assignment, Distribution, Accounting and Termination*, 1 December 2009
- AFI 16-1301, *Survival, Evasion, Resistance, and Escape (SERE) Program*, 6 September 2006
- AFI 33-360, *Publications and Forms Management*, 18 May 2006
- AFMAN 33-363, *Management of Records*, 1 March 2008
- AFTTP 3-1, *Mission Employment Tactics* (various dates)
- AFTTP 3-3, *Combat Aircraft Fundamentals* (various dates)

Abbreviations and Acronyms

A/A—Air to Air

A/G—Air to Ground

AAR—Air to Air Refueling

AAMD—All Aspect Missile Defense
(D)ACBT—(Dissimilar) Air Combat Training
ACC—Air Combat Command
ACDE—Aircrew Chemical Defense Ensemble
(D)ACM—(Dissimilar) Air Combat Maneuvers
ACMI—Air Combat Maneuvering Instrumentation
(D)ACT—(Dissimilar) Air Combat Tactics
AEF—Air & Space Expeditionary Force
AF—Air Force
AFE—Aircrew Flight Equipment
AFRC—Air Force Reserve Command
AFSC—Air Force Specialty Code
AGL—Above Ground Level
AGM—Air-to-Ground Missile
AGSM—Anti G-Straining Maneuver
AGTS—Aerial Gunnery Target System
AHC—Aircraft Handling Characteristics
AI—Air Intercept, Air Interdiction
AOA—Angle of Attack
AOC—Air Operations Center
AOS—Air Operations Squadron
API—Aircrew Position Indicator
ARC—Air Reserve Components
ARMS—Aviation Resource Management System
ASC—Air Strike Control
ATC—Air Traffic Control
ATP—Advanced Targeting Pod (LITENING AT, SNIPER, and subsequent pods)
AWACS—Airborne Warning and Control System
BAQ—Basic Aircraft Qualification
BD—Battle Damage
BDA—Battle Damage Assessment
(D)BFM—(Dissimilar) Basic Fighter Maneuvers

BMC—Basic Mission Capable
BSA—Basic Surface Attack
BSAN—Basic Surface Attack Night
BVR—Beyond Visual Range
CAF—Combat Air Forces
CAP—Combat Air Patrol, Critical Action Procedures
CAS—Close Air Support
CAT—Category
CA-Coded—Designated Aggressor Aircraft
CB-Coded—Designated Test Aircraft
CC—Commander
CC-Coded—Designated Combat Aircraft
CD—Deputy Commander
CDIP—Continuously Displayed Impact Point
CFT—Cockpit Familiarization Trainer, Conformal Fuel Tank
CFTR—Composite Force Training
CMR—Combat Mission Ready
COMM-JAM—Communications Jamming
COMSEC—Communications Security
CPT—Cockpit Procedures Trainer
CRM—Cockpit/Crew Resource Management
CSAR—Combat Search and Rescue
CT—Continuation Training
CV—Vice Commander
DART—Deployable Aerial Reflective Target
DB—Dive Bomb
DCA—Defensive Counter Air
DEAD—Destruction of Enemy Air Defenses
DMPI—Desired Mean Point of Impact
DNIF—Duty Not Involving Flight
DOC—Designed Operational Capability
DRU—Direct Reporting Unit

DVR—Digital Video Recorder
EC—Electronic Combat
ECCM—Electronic Counter Countermeasures
ECM—Electronic Countermeasures
ECR—Electronic Combat Range
EEL—Essential Elements of Information
EGBU—Enhanced Guided Bomb Unit
EGI—Embedded INS/GPS
EID—Electronic Identification
EO—Electro-Optical
EP—Emergency Procedure
EPE—Emergency Procedures Evaluation
EW—Electronic Warfare
EWWS—Electronic Warfare Warning Set
EXP—Experienced
FAC(A)—Forward Air Controller (Airborne)
FAM—Familiarization
FCF—Functional Check Flight
FCP—Front Cockpit
FDL—Fighter Data Link
FE—Flight Examiner
FEB—Flight Evaluation Board
FEBA—Forward edge of the Battle Field
FEF—Flight Evaluation Folder
FENCE—Firepower, Emitters, Navigation, Communications, and Electronic Countermeasures
FL—Flight Lead
FLIR—Forward Looking Infrared
FLUG—Flight Lead Upgrade
FOV—Field of View
FP—First Pilot
FS—Fighter Squadron, Flight Surgeon
FSWD—Full Scale Weapons Delivery

FTU—Formal Training Unit
FW—Fighter Wing
G—Gravitational Load Factor
GBU—Guided Bomb Unit
GCI—Ground Controlled Intercept
GLO—Ground Liaison Officer
GLOC—G-induced Loss of Consciousness
GP—General Purpose, Group
GPS—Global Positioning System
GS—Ground Speed
HADB—High Altitude Dive Bomb
HARB—High Altitude Release Bomb
HAS—High Angle Strafe
HHQ—Higher Headquarters
HUD—Head Up Display
IADS—Integrated Air Defense System
IAGTS—Improved AGTS
IAM—Inertially Aided Munition
IAW—In Accordance With
ID—Identify, Identification
IFE—In-flight Emergency
IFF—Identification Friend or Foe
IFR—Instrument Flight Rules
ILS—Instrument Landing System
IMC—Instrument Meteorological Conditions
INS—Inertial Navigation System
IOS—Instructor Operator Station
IP—Instructor Pilot, Initial Point
IPUG—Instructor Pilot Upgrade
IQT—Initial Qualification Training
IR—Infrared
IWSO—Instructor WSO

IWUG—Instructor WSO Upgrade
JAAT—Joint Air Attack Team
JDAM—Joint Direct Attack Munition
JFT—Joint Force Training
JHMCS—Joint Helmet Mounted Cueing System
JMO—Joint Maritime Operations (Air)
JTAC—Joint Terminal Air Controller
JTS—Joint Tactics Squadron
KIO—Knock It Off
LAHD—Low Angle High Drag
LALD—Low Angle Low Drag
LANTIRN—Low Altitude Navigation and Targeting Infrared for Night
LAO—Local Area Orientation
LASDT—Low Altitude Step Down Training
LAT—Low Altitude Toss
LATN—Low Altitude Tactical Navigation
LIMFACS—Limiting Factors
LGB—Laser Guided Bomb
LOC—Lines of Communication
LOW A/A—Low Altitude Air-to-Air
LOW ALT—Low Altitude
LOWAT—Low Altitude Training
LTDSS—Laser Target Designator Scoring System
MAJCOM—Major Command
MC—Mission Commander
MDS—Mission Design Series
MDT—Mission Directed Training
MIL—Military Power
MOA—Military Operating Area
MP—Mission Pilot
MQT—Mission Qualification Training
MRM—Medium Range Missile

MSA—Minimum Safe Altitude
MTC—Mission Training Center
MW—Mission WSO
N/A—Not Applicable
NAAR—Night Air-to-Air Refueling
NAF—Numbered Air Force
NAV—Navigation
NCO—Noncommissioned Officer
NE—Non-effective
NLT—Not Later Than
NT—Night
NVG—Night Vision Goggles
OCA—Offensive Counterair
OG—Operations Group
OPR—Office of Primary Responsibility
OPS—Operations
ORI—Operational Readiness Inspection
PAI—Primary Aircraft Inventory
PC-ATD—Personal Computer-Based Aviation Training Device
PCS—Permanent Change of Station
PDAI—Primary Development/Test Aircraft Inventory
PGM—Precision Guided Munitions
QUAL—Qualification
RAP—Ready Aircrew Program
RCO—Range Control Officer
RCP—Rear Cockpit
ROE—Rules of Engagement
RTB—Return to Base
RTRB—Realistic Training Review Board
RWR—Radar Warning Receiver
SA—Situational Awareness, Strategic Attack
SAFE—Selected Area For Evasion

SAR—Search and Rescue
SAT—Surface Attack Tactics
SATN—Surface Attack Tactics Night
SCL—Standard Conventional Load
SDB—Small Diameter Bomb
SEAD—Suppression of Enemy Air Defenses
SEFE—Stan/Eval Flight Examiner
SELO—Stan/Eval Liaison Officer
SEPT—Situational Emergency Procedure Training
SIF—Selective Identification Feature
SIM—Simulator
SLD—Systems Level Delivery
SNP—Student Non-Progression
SOCC—Sector Operations Control Center
SOF—Supervisor of Flying
SORTS—Status of Resources and Training System
SQ/CC—Squadron Commander
SRM—Short Range Missile
SSE—Simulated Single Engine
TA—Terrain Avoidance
TAC—Tactics, tactical
TACAN—Tactical Air Navigation
TAI—Total Active Inventory
TD—Tactical Deception
TDY—Temporary Duty
TES—Test & Evaluation Squadron
TEWS—Tactical Early Warning System
TF—Terrain Following
TF—Coded—Designated Training Aircraft
TFR—Terrain Following Radar
TGP—Target Pod
TGT—Target

TO—Technical Order
TOD—Time of Detonation, Time of Day
TOT—Time Over Target
TPC—Two Person Control
TR—Training Rules
TST—Time-sensitive Targeting
TTR—Tactics and Training Range
TX—Transition
UCML—Unit Committed Munitions List
UE—Unit Equipped
UIP—Upgrading Instructor Pilot
UIW—Upgrading Instructor WSO
UMD—Unit Manning Document
USAF—United States Air Force
USAFAWC—United States Air Force Air Warfare Center
USAFE—United States Air Forces in Europe
USAFWS—United States Air Force Weapons School
USAFWTC—United States Air Force Weapons Test Center
UTD—Unit Training Device
VFR—Visual Flight Rules
VID—Visual Identification
VLD—Visual Level Delivery
VMC—Visual Meteorological Conditions
VTR—Video Tape Recorder
WCMD—Wind Corrected Munitions Dispenser
WD—Weapons Delivery
WDL—Weapon Data Link
WG—Wing
WIC—Weapons Instructor Course
WOD—Word of Day
WSEP—Weapon Systems Evaluation Program
WSO—Weapon Systems Officer

WX—Weather

Terms

Air Combat Tactics (ACT)—Training in the application of BFM, ACM, and tactical intercept skills to achieve a tactical air-to-air objective.

Air Combat Training (ACBT)—A general term which includes (D)BFM, (D)ACM, and (D)ACT.

Basic Mission Capable (BMC)—Status of aircrew familiarized in all the primary missions tasked to their assigned or attached flying unit. See paragraph 1.4.4 for detailed definition. BMC requirements are listed in paragraph 4.1

Basic Aircraft Qualification (BAQ)—A status of an aircrew member who has satisfactorily completed training prescribed to maintain the skills necessary to fly the unit aircraft. The member must perform at the minimum frequency necessary to meet the most recent sortie and flight standards set for the weapons system. BAQ will only be carried by aircrew until completion of MQT. BAQ is not a permanent status except for General Officers above the wing level, and any other crew members specifically authorized by MAJCOM/A3. BAQ aircrew are not authorized to perform RAP-tasked combat missions or events without supervision by instructor aircrew or SQ supervisor. BAQ requirements are listed in para 4.1

Certification—The process of validating and refreshing aircrew tactical employment knowledge in regards to nuclear weapons capabilities, procedures, and rules. See paragraphs 3.2 and 4.2

Circular Error (CE)—Miss distance of a given weapon impact expressed in radial distance from center of target.

Cockpit Familiarization Trainer (CFT)—A training device with controls, switches, and instruments that do not have to respond to trainee inputs. Used for checklist use, normal procedures, and emergency procedures.

Cockpit Procedures Trainer (CPT)—A training device with instruments and displays that activate to respond to trainee inputs. Used for safety of flight, instrument, normal, and emergency procedures.

Combat Mission Ready (CMR)—Status of aircrew qualified/certified, current, and proficient in all of the primary missions tasked to their assigned combat unit. See paragraph 1.4.4 for detailed definition. CMR requirements are listed in paragraph 4.1

Continuation Training (CT)—Training not included in written syllabi, test plans or evaluations; intended to maintain aircrew proficiency and improve ability to perform unit missions.

Currency—The minimum frequency required to maintain proficiency and allow safe performance of an event or mission.

Delivery Parameters—Data reflecting current ordnance delivery considerations, to include tactical survivability where appropriate. Aircraft and weapon TOs must be consulted for safe escape, safe separation, fuzing and recovery altitude criteria.

Dissimilar (D)—Training in conjunction with another MDS aircraft.

Dissimilar ACBT (DACBT)—ACBT in conjunction with another MDS aircraft as adversary. The prefix (D) refers to the type of adversary assets. When the prefix is missing, similar is assumed as flown or required. When the prefix is present in parenthesis, dissimilar is optional. When present without parenthesis, dissimilar is assumed flown or required. This convention corresponds to all facets of ACBT (i.e., BFM, ACM, ACT).

Emergency Procedures Evaluation (EPE)—See AFI 11-202V2 and AFI 11-2F-15EV2.

Experienced Aircrew (EXP)—Management term describing aircrew who meet the requirements of paragraph 1.6

Familiarization—Able to attain proficiency and, if required, certification/qualification in 30 days or less for specific missions/events. Applies to BMC aircrew and is determined by squadron supervision.

Flight Lead (FL)—The individual, designated on flight orders, responsible for overall mission conduct from preflight preparation/brief to postflight debrief, regardless of actual position within the formation. A certified 4-ship FL may lead formations and missions in excess of four aircraft, unless restricted by the unit CC. A 2-ship FL is authorized to lead an element in a larger formation.

Formation Approach—Close or weather formation IAW AFTTP 3-3.F-15E from the FAF/Glide Slope Intercept through the formation low approach go-around point—100' IAW AFI 11-2F15EV3, paragraph 3.22.1.4.

Full Mission Trainer (FMT)—A training device that dynamically simulates flight characteristics--Used for normal, emergency, and instrument procedures, to include safety of flight, warfighting tasks, and skill integration training.

Initial Qualification Training (IQT)—Training to qualify aircrew in basic aircraft flight duties without specific regard to the unit's operational mission. The minimum requirement for BAQ status. Refer to paragraph 1.4 and Chapter 2.

Joint Air Attack Team (JAAT)—Coordinated CAS with helicopters.

Limited-Threat VID—VID of a bogey in a limited threat environment (i.e., counter-drug operations, NORAD procedures, etc.) IAW AFTTP 3-1.F-15E.

Low Altitude Training (LOWAT)—Operations in a certified low altitude block as defined in Table 3.1 LOWAT includes low altitude navigation, tactical formation, defensive maneuvering to avoid or negate threats, skills necessary to search for and offensively engage an aerial target at low altitude, and air-to surface attacks.

Mission—a set of tasks that lead to an (airborne) objective, to include associated planning, brief, enroute, execution, recovery, and debrief events.

Mission Qualification Training (MQT)—Aircrew training required to achieve a basic level of competence in unit's tasked missions at the end of which an aircrew will be qualified (through a formal MSN evaluation IAW AFI 11-202V2 and AFI 11-2F-15EV2) and certified (IAW with SQ/CC guidance) to perform the unit's primary DOC statement missions.

Primary Aerospace Vehicle Authorized (PAA)—Aircraft authorized for performance of the unit's mission (e.g., Combat, Combat Support, Training, Test and Evaluation, etc.). The PAA forms the basis for the allocation of operating resources, to include manpower, support

equipment, and flying hour funds. The operating command determines the PAA required to meet their assigned missions.

Primary Aircraft Inventory (PAI)—Aircraft assigned to meet the PAA.

Proficiency—Demonstrated ability to successfully accomplish tasked event safely and effectively. For purposes of this instruction, proficiency also requires currency in the event, if applicable.

Situational Emergency Procedures Training (SEPT)—A discussion and review of abnormal/emergency procedures and aircraft systems operations/limitations based on realistic scenarios. See paragraph [4.2.2](#)

Sortie—An operational flight by one aircraft (initial takeoff to final full stop landing).

Specialized Training—Aircrew training in specialized tactics, weapons systems, or flight responsibilities. See [chapter 6](#).

Squadron Supervisor—May include all or some of the following depending on specific guidance and SQ/CC concurrence: SQ/CC, SQ/DO, ADOs, and FLT/CCs.

Tactical Deception (TD)—Any activity designed to mislead the enemy operational commander by manipulating, distorting, or falsifying evidence, thereby inducing the enemy to act in a manner favorable to our interests or desires (see AFI 10-704, *Military Deception Program*).

Tactics and Training Range (TTR)—Sites capable of Radar Bomb Scoring (RBS), ECR and special training (also called radar bomb scoring).

Threat VID—VID of a bogey in a threat environment IAW AFTTP 3-1.F-15E.

Time Sensitive Target (TST).—An unplanned highly lucrative target or target of opportunity (TOO) requiring immediate response.

Verification—The process of validating and refreshing aircrew tactical employment knowledge as applicable to conventional weapons delivery and unit tasks. See paragraphs [3.2](#) and [4.2](#)

Visual Identification (VID)—Positive identification of an aircraft (or other object) by visual means.

Weapons Delivery—Simulated or actual expenditure of air-to-ground munitions representing a typical combat configuration or SCL in a tactical scenario.

Attachment 2

GLOSSARY OF MISSION, SORTIE AND EVENT DEFINITIONS

A2.1. Mission and Sortie Definitions:

A2.1.1. **AGM-130 Mission.** Special Capability. Training designed to achieve proficiency in the employment of the AGM-130. Includes tactical mission planning, execution, and simulated or actual weapons delivery.

A2.1.2. **Air Combat Maneuvers (ACM).** Skill-set mission. Training designed to achieve proficiency in element formation maneuvering and the coordinated application of BFM to achieve a simulated kill or effectively defend against one or more aircraft from a pre-planned starting position.

A2.1.3. **Aircraft Handling Characteristics (AHC).** Basic skills mission. Training for proficiency in use and exploitation of the aircraft flight envelope, consistent with operational and safety constraints, including, but not limited to: high/maximum AOA maneuvering, energy management, minimum time turns, maximum/optimum acceleration and deceleration techniques and confidence maneuvers.

A2.1.4. **Attrition Sortie.** Programming tool used to forecast future flight hour and sortie requirements. Attrition sorties are derived from historical data and used to account for sorties cancelled before flight. Launched sorties cannot be considered attrition (see Non-effective Sortie definition).

A2.1.5. **Basic Fighter Maneuvers (BFM).** Skill-set mission. Training (1v1) designed to apply aircraft handling skills to gain proficiency in recognizing and solving range, closure, aspect, angle off, and turning room problems in relation to another aircraft to either attain a position from which weapons may be launched, or defeat weapons employed by an adversary.

A2.1.6. **Basic Surface Attack (BSA).** Skill-set mission. Training designed to achieve proficiency in medium/low altitude tactical navigation and air-to-surface weapons delivery events.

A2.1.7. **Close Air Support (CAS).** Mission flown in support of ground forces under the control of a JTAC or FAC (A), either air or ground. Mission elements include: Intel scenario and mission planning, actual or simulated threats, simulated or actual weapons delivery under positive control of an air or ground FAC, and in-flight report.

A2.1.8. **Collateral Sorties.** Sorties not directly related to combat employment or basic skills training but necessary for accomplishment of unit training programs, such as ferry flights, deployments, incentive flights, orientation flights, airshows, etc. MAJCOMs will normally assign collateral sorties in lump sum adjusted for local conditions and circumstances. These sorties are not required for RAP training purposes.

A2.1.9. **Commander Option Mission.** Mission allocated by the unit commander to support individual training requirements and unit training objectives. BMC pilots may log a Commander Option Mission for any type of mission listed in the "Missions required" table of the RTM. CMR pilots may log any A-G mission from the same table or any other A-G mission deemed necessary by unit commander.

A2.1.10. **Contingency Sortie.** A sortie tasked and flown while deployed for a contingency operation in which training is limited. These sorties are logged as Contingency Operations Sortie (SC13) in ARMS. These sorties and events accomplished on these sorties do not count towards annual RAP requirements, however, the sorties will be used for lookback and the events will be used to update currencies.

A2.1.11. **Defensive Counter Air (DCA).** Mission designed to develop proficiency in Defensive Counter Air mission tactics. Mission elements include: Intel scenario and planning; execution of tactics to detect, engage, and negate aircraft employing adversary tactics and weapons to penetrate protected airspace or target areas, and in-flight report.

A2.1.12. **Demanding Sortie.** Sorties that task the aircrew to the extent that flight frequency and continuity are most critical. Missions and events requiring demanding mission currency are: (D)ACM, (D)ACT, LOWAT (below 1,000 feet AGL), CAS, SAT (except dry level passes at or above 500 feet), CFTR/LFE/COMAO, JFT, night missions, instructor duties, JAAT, aerial demonstrations, etc. SQ/CCs may add missions or events to the demanding list, depending on unit tasking and the individual's capabilities. Also see Non-demanding Sortie.

A2.1.13. **Flight Lead 4-Ship (FL 4-Ship) Sortie.** Special certification. Sortie where FL leads a flight of 4 or more. May be logged in conjunction with baseline training requirements.

A2.1.14. **Force Protection.** Mission designed to develop proficiency in OCA-A force protection tactics. Mission elements include: Intel scenario and integrated planning to support force package objectives: execution of tactics to detect and negate aircraft employing adversary tactics and weapons to disrupt force package employment; and in-flight report.

A2.1.15. **EGBU-15 Mission.** Special Capability. Training designed to achieve proficiency in the employment of the EGBU-15. Includes tactical mission planning, execution, and simulated or actual weapons delivery.

A2.1.16. **Instructor Sortie.** Special qualification (see AFI 11-202V2). Sortie where the crewmember acted in an instructional capacity and valid combat training was secondary to execution of instructor duties.

A2.1.17. **Instrument Sortie.** Basic skills sortie. Training designed to ensure instrument proficiency. RAP events may be accomplished on an instrument sortie provided they do not interfere with the primary goal of instrument training.

A2.1.18. **Mission Commander (MC) Mission.** Special certification. Mission where aircrew acted as MC for a joint/composite mission responsible for two or more types of aircraft with four or more total aircraft, or more than four own MDS aircraft versus a minimum of two pre-planned adversary aircraft. May be logged in conjunction with other RAP mission requirements.

A2.1.19. **Night Sortie.** Sortie where either takeoff or landing, and at least 50 percent of flight duration or 1 hour (whichever is less) occur between the end of evening civil twilight and the beginning of morning civil twilight, as published in the American Air Almanac (night definition IAW AFI 11-401 and AFI 11-202V3).

A2.1.20. **Non-demanding Sortie.** A day sortie that provides aircrew with the opportunity to regain basic flight proficiency without excessively tasking those skills that have been

underused during a non-flying period. Missions and events authorized on a non-demanding sortie are: Instruments, AHC, low level navigation at or above 500 feet AGL, basic weapons delivery, basic intercepts (to include Red Air flown under Limited training rules), BFM, etc. SQ/CCs may delete missions or events from this non-demanding list, depending on unit tasking and the individual's capabilities.

A2.1.21. **Non-effective Sortie.** A sortie planned and launched as a training mission, test mission, Basic Skills sortie, or collateral sortie that, due to some circumstance (weather, IFE, maintenance, etc.), fails to accomplish a sufficient number of planned events.

A2.1.22. **NVG Demanding Event:** Includes: intercepts exceeding 1v1, BSA or SAT below 5,000' AGL or MSA whichever is higher (unless on TFR), opposed SAT and diving deliveries recovering below 5,000' AGL.

A2.1.23. **Red Air Mission.** A/A mission where tactics, aircraft simulation, weapon systems, or maneuvering are limited to the extent that complete own MDS training is not accomplished. Restrictions that limit aircraft capabilities to some level which might be encountered in combat do not require logging the mission as Red Air. Instead of a minimum number required, Red Air mission allocations in the RTM have a maximum cap to limit degraded training.

A2.1.24. **Surface Attack Tactics (SAT).** Mission designed to develop proficiency in A/G tactics in a combat environment. Mission elements include: mission planning, execution with actual or simulated threats, and weapons delivery IAW unit taskings, simulating UCML munitions, and SCLs against a tactical target during the day. Simulated attacks may be conducted against realistic targets IAW local restrictions. Mission types include: Strategic Attack (SA), Air Interdiction (AI), Offensive Counterair Air-to-Surface (OCA-S), Time-sensitive Targeting (TST), and Suppression of Enemy Air Defenses (SEAD).

A2.1.25. **Sweep Mission.** Mission designed to develop proficiency in OCA sweep tactics. Mission elements include: Intel scenario and tactical mission planning, execution of tactics designed to detect, engage, and negate simulated adversary aircraft which are operating within specific commit criteria (i.e., range, airspace corridor, vul time, etc.), and in-flight report. Intercept missions with Limited maneuvering that fulfill the above criteria may be logged as effective RAP training.

A2.2. Weapons Delivery Events. A delivery event is defined as a pass at a target on which ordnance is expended or simulated and meets the criteria defining a specific weapon delivery (EGBU-15, LGB, etc.). These delivery events will be used to update weapons qualifications and currencies. Weapon events are defined in [Chapter 5](#). All deliveries will be documented. If not specified in a description, units will determine the necessary parameters for fulfilling or logging weapons delivery events.

A2.2.1. **Delivery types:**

A2.2.1.1. **Basic Delivery.** A delivery using a conventional box pattern. It may be used as a record event only for initial qualification. There is no restriction on the number of dry passes made before or during basic deliveries in a record event for initial qualification; however, only the first two deliveries per event may be made for record.

A2.2.1.2. **Tactical Delivery.** A delivery using patterns and techniques that minimize final flight path predictability, yet allow sufficient time for accurate weapons delivery. When a tactical delivery is flown for record, dry passes in the event are not permitted before or during the event. Wings level time on final will be limited to 5 seconds or less when aircraft will descend below 4,500 feet AGL. Timing will be from completion of roll-out until initiation of recovery. Exceeding 5 seconds will result in gross error. Level, LGB, and climbing deliveries may exceed 5 seconds. All tactical deliveries will normally include recovery to egress parameters.

A2.2.2. **Documentation:**

A2.2.2.1. **Non-Record.** Basic or Tactical weapons delivery accomplishments not credited toward weapons qualification.

A2.2.2.2. **Record.** Conventional or nuclear delivery scored for individual weapons qualification. Scoring shall be accomplished by ground, air or AVTR scoring, as appropriate. A maximum of two (four for strafe) record deliveries may be accomplished during a mission from a single run-in heading. Additional record deliveries may be accomplished from headings differing by at least 90 degrees or on different targets. The first two (four for strafe) deliveries will be considered record unless otherwise declared prior to the roll-in to final. Record deliveries may not be preceded by non-record deliveries in the same event on the same mission. Scores will be documented by CEP and clock position. Additional guidelines are:

A2.2.2.2.1. **Basic.** Must be scored on a Class A range.

A2.2.2.2.2. **Tactical.** A minimum of 50% must be accomplished on a ground scored range (except for EGBU-15/AGM-130 events). Remaining record hits may be air scored by reference to known distances from the target.

A2.2.2.2.3. **Strafe.** Aircraft rounds limiter will normally be set to deliver at least 100 rounds per sortie. A minimum of 50 rounds per strafe event must be expended to satisfy RAP strafe requirements.

A2.2.2.2.4. **LGB.** Designator and bomber functions may be accomplished simultaneously by a single aircraft or separately using buddy guide techniques. To record a complete LGB delivery, a simulated or actual weapons release and/or guide must be performed. Laser tracker accuracy may be scored by DVR or Laser Target Designator Scoring System (LTDSS).

A2.2.2.3. **RAP Tasking:**

A2.2.2.3.1. **FAM.** Weapons events tasked at FAM may be basic or tactical record deliveries. Each single pass counts as one delivery. Unless otherwise specified in the RTM or formal course syllabi, FAM tasking requires ten weapons deliveries or seven strafe passes per training cycle.

A2.2.2.3.2. **Qual.** Weapons tasked at Qual must be tactical record deliveries. Qual tasking demonstrates the aircrew's capability to put appropriate ordnance on target. Unless otherwise specified in the RTM or formal course syllabi, Qual criteria is established for each event in [Chapter 5](#).

A2.2.3. Miscellaneous Weapons Delivery Definitions to be Considered for Event Descriptions:

A2.2.3.1. **Dry Pass.** Weapons delivery pass during which no ordnance is expended. Such dry passes prior to completion of record deliveries in an event are charged to the aircrew as gross error unless pass was dry because of safety interests, system malfunctions, basic delivery requirements, or directed for flight integrity purposes.

A2.2.3.2. **Foul.** A penalty directed to a specific aircraft and crew for actions inconsistent with established procedures or safety considerations. A foul will result in a gross error for that delivery (except non-accountscored strafe which will be penalized one-half the event score). Verbal warnings will not be substituted for fouls. A second foul or any dangerous pass will result in mandatory expulsion from any further deliveries during that mission and a gross error score for the event. A foul will be charged IAW flying directive publications.

A2.2.3.3. **Full Scale Weapons Delivery (FSWD).** Delivery of live or inert ordnance in a combat configuration.

A2.2.3.4. **Gross Error.** A penalty score or miss assigned to an aircrew's records when a weapons delivery attempt results in: munitions impact outside the range scoring capability; a chargeable dry pass; a foul; an unintentional release; or exceeding tactical delivery time on final requirements.

A2.2.3.5. **Hit.** Any munitions impact within the weapons criteria established for that event.

A2.2.3.6. **Multiple Release.** More than one weapon released against the same target on a single pass.

A2.2.3.6.1. **Intentional.** The aircrew must advise the range officer prior to delivery and designate which impact to be scored.

A2.2.3.7. **Inadvertent.** Ordnance which has released without command by the aircrew. Impact will not be scored.

A2.2.3.8. **System Malfunction.** An undeclared multiple release caused by a verified system malfunction. Score is void after system malfunction verification, otherwise, unintentional rules apply.

A2.2.3.9. **Unintentional.** Ordnance released due to aircrew error. Will be scored as gross error regardless of impact point.

A2.2.3.10. **No Spot.** A weapons release during which no impact was observed. No score or error will be assigned.

A2.2.3.11. **Void Delivery.** Weapons delivery not successfully completed due to: a documented and verified weapons system malfunction; a pass aborted for safety; no spot; or circumstances beyond the control of the aircrew.

A2.3. Tactical Events. The following is a alphabetical listing of tactical events to be used for fulfilling tasked requirements. In the absence of guidance, units will determine the content of tasked events and how often they may be logged.

A2.3.1. **ACMI Event.** An event which uses ACMI range, facilities, or on-board ACMI/URITS (or similar system) for flight and debrief. Only one event may be logged per sortie.

A2.3.2. **Air-to-Air Refueling (AAR).** An AAR event requires tanker rendezvous, hook-up and transfer of fuel or 2 minutes of dry contact. More than one event may be credited if receivers accomplish another rendezvous, hook-up and fuel transfer or dry hook-up.

A2.3.3. **Basic Intercept.** A single or two-ship intercept performed with the express purpose of practicing fundamental radar acquisition and lock-on techniques, controlling intercept geometry against LIMITED maneuvering targets, recognizing weapons employment zones and taking valid shots, practicing proper switchology and radio commentary. Tasks are performed independent of actual or briefed threat capabilities and weapons, and environmental considerations. These intercepts will not update ACBT currency. One event may be logged per engagement.

A2.3.4. **Chaff Event.** In-flight dispensing of chaff during a tactical mission profile in response to an actual or simulated threat. Event requires actual release and is limited to logging of one event per engagement.

A2.3.5. **Comm Jam Event.** An intercept, engagement, or attack performed in a degraded or denied communications environment that provides realistic effects (intervals and duration of noise, buzzer, jam, tones, etc) without use of active anti-jam radios (HaveQuick) and/or chattermark/backup radio procedures to counter jamming. Log only one event per sortie. Minimum duration for an effective event is one complete engagement or attack sequence.

A2.3.6. **Composite Force Training (CFTR).** Scenarios employing multiple flights of the same or different types of aircraft (a.k.a. LFE, COMAO), each under the direction of its own flight leader, performing the same or different roles. Only one event may be logged per mission (if an AAR separates missions, a maximum of two events may be logged per sortie).

A2.3.7. **Datalink Jamming:** Inflight operations with degraded or denied datalink. Log only one event per sortie. Minimum duration for an effective event is one complete engagement or attack sequence. In the absence of systems capable of degrading or denying datalink, the effects may be generated by turning systems OFF or SILENT.

A2.3.8. **Degraded/Denied GPS:** Inflight operations with degraded or denied GPS which impacts navigation and/or weapons capability at a minimum. Log only one event per sortie. Minimum duration for an effective event is one complete engagement or attack sequence. In the absence of actual systems capable of degrading or denying GPS, the effects may be generated by selecting a non-GPS navigational aid or turning GPS OFF.

A2.3.9. **Dynamic A/G Targeting.** An A/G attack or engagement against a non-preplanned TST; relayed by an appropriate command and control (C2) asset, another flight or another member of flight. Track information will be data linked if possible, otherwise sent via normal radio communications. Log no more than 3 events per sortie.

A2.3.10. **EA A/A.** An intercept, engagement, or attack performed against a target employing active or passive electronic countermeasures (ECM), to include embedded and standoff electronic attack and EMCON. Tactics or techniques should be employed on the

intercept to minimize or counter the effects of the adversary ECM. One event may be logged for each complete intercept, engagement or attack performed in the EA environment.

A2.3.11. **EP A/A.** An intercept or engagement during which the blue fighter uses self-protection capabilities (This includes, but it not limited to, ICS/ECM Pod or off-board jamming assets) to negate an A/A threat. One event may be logged for each complete intercept or engagement performed utilizing EP.

A2.3.12. **EW Range.** In-flight operations conducted on an EW range with fixed or mobile surface-to-air emitters operating and detection/threat reaction emphasized. Normally accomplished in conjunction with other EW-type events. The aircrew detects a surface threat via electronic means and reacts with appropriate maneuvers, pod or internal EP switch actuation, or expendables. Sorties flown against Electronic Warfare (EW) Aggressor or mobile threat emitters placed in a Military Operating Area (MOA), range, or along a low level route are acceptable. Only one EC EW range event may be logged per sortie (active EA must be used).

A2.3.13. **Flare Event.** In-flight release of self-protection flares during a tactical mission profile as a threat response. Event requires actual release and is limited to logging of one event per engagement.

A2.3.14. **HAVE QUICK Event.** The practice of loading the combat or MAJCOM HAVE QUICK training net Word of Day (WOD), and world-wide Time of Day (TOD). Requires proper radio configuration for HAVE QUICK operation and successful use during tactical mission accomplishment. Only one event may be logged per sortie.

A2.3.15. **Instructor Event.** An event logged by an instructor when performing instructor duties during the sortie, or a portion thereof. Instructor qualification required and used for the mission or a mission element. Examples include upgrade sorties, updating lost currencies, etc. Evaluators will log this event on evaluation sorties.

A2.3.16. **Joint Force Training (JFT).** Scenarios employing integrated aerospace, land or naval forces. Examples include JAAT, CAS with FAC, airdrop escort, etc. Only one event may be logged per mission (if an AAR separates missions, a maximum of two events may be logged per sortie).

A2.3.17. **Joint Maritime Operations (JMO(A)).** Air event that involves flight of a DOC mission (AI, DCA, OCA, SEAD, CAS, etc.) in support of naval objectives. In all cases, units will employ their weapon system IAW established tactics and procedures found in applicable AFTTP 3-1, 3-3, and flight manuals. The JMO(A) training program is intended to expose aircrew to the challenges of employing their weapon system in a joint maritime environment.

A2.3.17.1. A JMO(A) training event may be logged when the mission is flown in a maritime environment and when the mission is flown in conjunction with Navy/Marine forces, or when the mission is under Navy/Marine command and control. The maritime environment includes the airspace above oceans, seas, bays, estuaries, islands, and coastal areas.

A2.3.17.2. DACT against Navy/Marine aircraft will be considered JMO(A) training when flown in a maritime environment and if the Navy is controlling Air Force fighters

or if other Navy/Marine aircraft are on the same side as (and communicating with) Air Force fighters and have mission/package commander responsibilities.

A2.3.17.3. A JMO(A) training event may be logged when participating with (not against) Navy/Marine aircraft in Strike University exercises at Fallon NAS.

A2.3.17.4. JMO(A) training should emphasize the inherent differences and peculiar problems associated with combat operations in the maritime environment (i.e., command, control, and communications, target detection, location, and identification, political and territorial considerations, electronic warfare, weaponeering, force requirements, and attack tactics and options).

A2.3.18. **Low Air-to-Air (LOW A/A).** An event defined as performing realistic, mission-oriented air-to-air operations while in a LOWAT certified low altitude block (see [Table 3.1](#)). The event includes skills necessary to search for and offensively engage an aerial target at low altitude. Only one event may be logged per mission (if an AAR separates missions, a maximum of two events may be logged per sortie).

A2.3.19. **Low Altitude (LOW ALT).** An event defined as performing realistic, mission-oriented low altitude operations while in a certified LOWAT altitude block (see [Table 3.1](#)). The event includes low altitude navigation, tactical formation, defensive maneuvering to avoid or negate threats, and air-to-surface attacks. Only one event may be logged per mission (if an AAR separates missions, a maximum of two events may be logged per sortie).

A2.3.20. **Low/Slow Speed Threat VID Intercept.** Tactical intercept performed to accomplish the tactical objective (Identify (ID) the bogey, ID and kill the bandit, etc.) on a target below 5000 feet AGL with airspeed less than 250 KIAS. Fighter should counter threat maneuvers and WEZs, consider environmental factors, attain turning room and energy at end game, practice ID and ROE procedures, and terminate when briefed objectives or training rule stops are reached. These intercepts will not update ACBT currency. Two events may be logged per sortie, but not on the same engagement.

A2.3.21. **Medium Altitude Tactics.** Day or night tactical formation above 5,000 feet AGL; ingressing to a target area, employing actual or simulated ordnance, and egressing with mutual support (if appropriate for night mission profiles). A maximum of two medium altitude tactics events may be logged on any air-to-surface tactical sortie.

A2.3.22. **Secure Voice.** Requires proper radio configuration for KY-58 or HAVEQUICK operation and successful use during tactical mission accomplishment. Only one event may be logged per sortie.

A2.3.23. **Surface-to-Air EW Training.** An MTC event where the pilot detects a surface threat via electronic means and reacts with appropriate maneuvers, pod/internal EA switchology and/or expendables. Only one event may be logged per SIM period.

A2.3.24. **Tactical Intercept.** A single-ship or multi-ship intercept performed to accomplish the tactical objective (ID or kill the threat) in a realistic threat scenario. Fighter should counter threat maneuvers and weapons engagement zones, consider environmental factors, attain end game turning room and energy, practice ID/ROE procedures, take valid shots if presented, and terminate when briefed objectives or training rule stops are reached. These intercepts will update ACBT currency. One event may be logged per engagement.

A2.3.25. **Target Mark.** A tactical event used in conjunction with a JTAC/FAC(A)/CSAR target briefing and final ASC. A target mark includes actual expenditure of rockets, strafe, or illumination flares, or directing of lasers and IR pointers to mark or illuminate a target. Only one event may be logged per target marked. Multiple marks on the same target should integrate different fighters or a new target briefing to the maximum extent practical.

A2.3.26. **TFR Event.** A low level event using LANTIRN TFR for navigation and terrain clearance. At least two legs of a planned low level route, or 10 minutes at low altitudes (below the MSA) will be flown. Only two events may be logged per sortie.

Attachment 3

VERIFICATION GUIDE FOR A/G

A3.1. Outlines for Briefs. The following outlines are provided as guidelines for the development of verification briefs:

A3.2. Overview:

A3.2.1. Introduction (participants and brief classification).

A3.2.2. Status of friendly forces (ground, air and support).

A3.3. Area of Operations:

A3.3.1. Geography (topography, population centers, LOCs, chokepoints and natural obstacles, major visual and radar significant identification points).

A3.3.2. Climatology (effects on unit operations, ground troop movements, and in-flight operations).

A3.3.3. Operating base (location, facilities, procedural constraints, strengths and limitations).

A3.4. Status of Enemy Forces:

A3.4.1. Ground forces and accompanying air defense threats (SAMs, AAA, EC, and MIJI), capabilities, strengths and weaknesses.

A3.4.2. Airborne forces (numbers, locations, capabilities and tactics).

A3.5. Mission Employment Brief:

A3.5.1. Ground operations.

A3.5.2. Departure (WX contingencies, options).

A3.5.3. Route of flight (threat analysis, alternatives, fuel requirements, decision points).

A3.5.4. Target ingress (IP-to-target specifics, tactics).

A3.5.5. Weapons employment (target data, DMPI, attack parameters, load, fusing, suitability, delivery modes, backups).

A3.5.6. Sensor management plan.

A3.5.7. Egress plan (route, mutual support agreements).

A3.5.8. Reattack plan, options.

A3.5.9. Downed pilot, wounded bird plan.

A3.5.10. Recovery (safe corridor procedures, IFF procedures, alternate and emergency airfields).

A3.6. Escape and Evasion:

A3.6.1. SAFEs.

A3.6.2. SAR procedures.

A3.7. Essential Elements of Information/Reports:

A3.7.1. EEIs.

A3.7.2. Required reports and reporting procedures.

Attachment 4

VERIFICATION GUIDE FOR A/A

A4.1. Outlines for Briefs. The following outlines are provided as guidelines for the development of verification briefs:

A4.2. Overview:

A4.2.1. Introduction (participants and brief classification).

A4.2.2. Mission overview.

A4.2.3. Status of friendly forces (ground, air and support).

A4.3. Area of Operations:

A4.3.1. Geography (topography, population centers, LOCs, chokepoints and natural obstacles, major visual and radar significant identification points).

A4.3.2. Climatology (effects on unit operations, ground troop movements, and in-flight operations).

A4.3.3. Operating base (location, facilities, procedural constraints, strengths and limitations).

A4.4. Status of Enemy Forces:

A4.4.1. Ground forces and accompanying air defense threats (SAMs, AAA, EC, and MIJI), capabilities, strengths and weaknesses.

A4.4.2. Airborne forces (numbers, locations, capabilities and tactics).

A4.5. Mission Employment Brief:

A4.5.1. Ground operations.

A4.5.2. Departure (WX contingencies, options).

A4.5.3. Enroute (Go/No-go considerations, comm procedures, GCI/AWACS/autonomous control procedures, friendly defenses, ROE).

A4.5.4. Engagement tactics (target data, acquisitions/validations, tactics, weapons parameters, disengagement).

A4.5.5. Sensor management plan.

A4.5.6. Egress plan (route, mutual support agreements).

A4.5.7. Downed pilot/wounded bird plan.

A4.5.8. Recovery (safe corridor procedures, IFF procedures, alternate and emergency airfields).

A4.6. Escape and Evasion:

A4.6.1. SAFEs.

A4.6.2. SAR procedures.

A4.7. Essential Elements of Information/Reports:

A4.7.1. EEIs.

A4.7.2. Required reports and reporting procedures.